APPENDIX A

Final LA-RICS LTE System EA and Finding of No Significant Impact

National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Los Angeles Regional Interoperable Communication System Joint Powers Authority
LA-RICS Long Term Evolution Project

Summary

The Los Angeles Regional Interoperable Communication System Joint Powers Authority (LA-RICS) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to construct a 700 MHz Long Term Evolution (LTE) wireless broadband communications network, consisting of 231 existing telecommunication sites. New monopole structures and associated infrastructure will be installed at up to 223 sites. Antenna structures will be placed on existing buildings at six sites. The remaining two sites will have antennas installed on existing towers. On a site-by-site basis, existing equipment (including existing towers) at the 231 LTE sites will be considered for use to minimize project costs and potential environmental impacts. The new wireless network will provide broadband services for mission-critical communications to support emergency services in Los Angeles County and allow for interoperability among local, state, and federal entities. The network will be located wholly within Los Angeles County, with exception of one site located wholly within in Orange County, and one site straddling the boundary between Los Angeles and San Bernardino counties. The project is referred to as the LA-RICS Long Term Evolution Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded this grant through BTOP, as part of the American Recovery and Reinvestment Act (ARRA). The funding must be obligated and the Project completed within three years. This timeline will comply with the laws and regulations governing the use of this ARRA grant funding.

BTOP supports the deployment of broadband infrastructure in unserved and underserved areas of the United States and its Territories. As a condition of receiving BTOP grant funding, recipients must comply with all relevant Federal legislation, including the National Environmental Policy Act of 1969 (NEPA). Specifically, NEPA limits the types of actions that the grantee can initiate prior to completing required environmental reviews. Some actions may be categorically excluded from further NEPA analyses based on the specific types and scope of work to be conducted. For projects that are not categorically excluded from further environmental review, the grant recipient must prepare an Environmental Assessment (EA) that meets the requirements of NEPA. After a sufficiency review, NTIA may adopt the EA, use it as the basis for finding that the Project will not have a significant impact on the environment, and issue a finding of no significant impact (FONSI). Following such a finding, the BTOP grant recipient may then begin construction or other activities identified in the EA, in accordance with any special protocols or identified environmental protection measures.

LA-RICS completed an EA for this Project in October 2014. The U.S. Forest Service (USFS) is a Cooperating Agency for this Project and has provided information, comments, and technical expertise to LA-RICS and NTIA.

NTIA reviewed the EA, determined it is sufficient, and adopted it as part of the development of this FONSI.

The Project includes:

- Installing a new monopole tower, broadband radio base station (known as eNodeB), network and backhaul equipment, antennas and cabling, and an emergency backup power generator at 223 "non-collocation" sites;
- Installing new antenna structures onto existing buildings, a new outdoor equipment cabinet, cabling, and a backup generator at six other "non-collocation" sites;
- Installing eNodeB equipment, network and backhaul equipment, antennas and cabling, and an emergency backup power generator at two "collocation sites," Claremont Microwave Tower (CLM) and Culver City Communications Tower (CULV001),which have existing tower structures,;
- On a site-by-site basis, possibly utilizing existing space and existing equipment (including existing towers) at the 231 LTE sites rather than installing new equipment and/or towers; and
- Installing underground conduit for sites where a monopole tower is proposed to provide electrical wiring and communications cable pathway between the outdoor system components (i.e., the equipment cabinets and the emergency generator) and the nearest utility supply on site premises, and between the monopole and the equipment cabinets.

Based on a review of the analysis in the EA, NTIA has determined that the Project, implemented in accordance with the preferred alternative and programmatic agreement (PA), and incorporating best management practices (BMPs), construction management requirements (CMRs), and mitigation measures (MM) identified in the EA, will not result in any significant environmental impacts. Therefore, the preparation of an EIS is not required. The basis for this determination is described in this FONSI.

Additional information and copies of the Executive Summary of the EA and FONSI are available to all interested persons and the public through the BTOP website (www2.ntia.doc.gov) and the following contact:

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Purpose and Need

The purpose of this Project is to provide dedicated broadband communication capability and capacity to improve public safety services throughout Los Angeles County. Public safety entities in the Los Angeles region currently use commercial telecommunications services (e.g., cellular phones). These are typically available on a first-come-first-serve basis, without priority to public safety entities, which can become unavailable during large-scale incidents. Additionally many of the local public safety agencies use aging systems, making interagency communication a challenge. The LA-RICS project will provide a system that offers a high degree of reliability when needed most by emergency response providers.

Project Description

LA-RICS will construct a wireless broadband network by using 231 existing publicly owned or administered safety facilities or communications sites, currently developed for use in emergency services and/or as communications structures. Los Angeles County and other county/city public services agencies own or administer 227 of the 231 sites. Nine sites are located within the Santa Monica Mountains National Recreation Area (SMMNRA) and overseen by the National Park Service (NPS). Four project sites are on lands administered by:

- Bureau of Land Management (BLM) Ridgecrest Field Office at site Blue Rock (BRK);
- U.S. Forest Service (USFS) Angeles National Forest (ANF) at sites Burnt Peak (BUR) and Los Angeles County Fire Department Camp 9 (LACFCP09); and
- U.S. Army Corps of Engineers (USACE) Los Angeles District at site Los Angeles Fire Station 088 (LAFD088).

LA-RICS and the USFS are continuing to evaluate the proposed LACFCP09 site, and two alternative sites: Loop Canyon and Contractor's Point. LA-RICS has determined that the Loop Canyon and Contractor's Point sites do not meet the purpose and need. If LA-RICS and the USFS cannot agree on use of the LACFCP09 site, no LTE equipment will be installed at either LACFCP09 or either of these alternative sites within the ANF. LA-RICS is also consulting with the Federal Aviation Administration (FAA) to ensure that the proposed monopoles will not interfere with airports and navigation. Several sites are on or near airport sites and appropriate permitting to be complete before LA-RICS begins project implementation at those sites

For all of the proposed sites, LA-RICS will enter into agreements for lease, special use, right-of-way agreements, or outgrant with the site owners/administrators before beginning construction. No permanent acquisition or change of ownership will be required at any site.

New self-supporting monopoles will be installed at 223 non-collocation LTE sites. Heights of the new monopoles will range from 28 feet to 70 feet above ground level. Maximum diameter of the base of the monopoles will be 7 feet. Lightning rods up to 15-feet long will be affixed to the

apex of each new monopole, resulting in a maximum tower height of 85 feet above ground level. Soil excavation for installation of the monopoles will be approximately 7 feet in diameter and up to 36 feet deep.

Depending on local jurisdiction and LTE site owner requirements, some monopoles will be disguised as palm trees, pine trees, flagpoles, or hose towers, or incorporated into architectural elements. Disguises would be designed in coordination with LA-RICS and local jurisdictions, as well as federal and state land administrators. For USFS lands, LA-RICS will disguise monopoles and other LTE site structures in accordance with the USFS' "Built Environment Image Guide" and other applicable federal guidance. Each LTE site will be equipped with up to four lockable equipment cabinets, used to house the eNodeB and backhaul equipment, network equipment, and backup batteries. The cabinets will be mounted on 12-inch concrete pads, measuring 18 feet by 9 feet. In addition, the LTE sites will be equipped with a 35kW diesel generator installed at ground level on a 12-inch thick concrete pad, measuring 12 feet by 6 feet. If site space is available, the equipment cabinets can be collocated with emergency generators on concrete pads up to 234 square feet.

At six LTE sites, antenna structures will be mounted on rooftops, parapet, or walls of existing buildings. The antenna structures will be up to 34 feet tall (including a 15-foot lightning rod, if one does not already exist) above existing rooflines. An outdoor equipment cabinet will be mounted on the roof near the antennas. Ground disturbance for ancillary equipment and other appurtenances (e.g., generators) at sites with roof- or wall-mounted antenna installation will be similar to that described for monopole sites.

The remaining two sites are the "colocation" facilities, which are existing towers (site names: CLM and CULV001) with capacities to hold new LTE antenna equipment. These sites will receive eNodeB equipment, network and backhaul equipment, antennas and cabling, and an emergency backup power. Existing buildings will be used to house the equipment cabinets indoors. Existing generator equipment will be used for backup power. There will be no ground disturbance at the colocation facilities.

LA-RICS will install new antennas on new monopoles, existing towers, and existing buildings, in accordance with applicable Federal Communications Commission (FCC) regulations and industry standards. Each LTE site is currently served by utility-provided power, and the LTE equipment will remain connected to existing power grids using existing utility infrastructure. LA-RICS will coordinate with site owners and administrators if electrical upgrades are required at any LTE site.

For sites where a monopole tower is proposed, underground conduit will be installed in a trench measuring 2 feet wide by 3 feet deep to provide electrical wiring and communications cable pathway between the outdoor system components and the nearest utility supply on site premises, and between the monopole and the equipment cabinets. Trenching will not exceed 500 feet at any LTE site and will occur only in previously disturbed or developed designated work areas.

For sites where antennas are proposed to be mounted on a rooftop penthouse or to be mounted to the parapet or wall of an existing building, electric connection will be made via electrical metallic conduits surface-mounted to the roof or through existing cable pathways in the building.

Construction at all LA-RICS LTE sites will comply with the applicable building codes and property owner requirements. At Federally owned sites, permits with accompanying construction drawings will be submitted for review and approval by the appropriate Federal land manager/administrator.

Ground disturbance will be less than the 3,600 square feet required at each site, to install LTE system equipment, monopole towers, ancillary components, and cables. All excavation work will be completed within existing property boundaries. Where feasible, excavated earth will be used as backfill; excess material will be removed from the site for proper disposal. Total potential ground disturbance for the Project (231 LTE sites combined) is 19 acres. No new disturbance will occur for storage of equipment or material at any site. No new road improvements or construction are planned.

Alternatives

The EA includes an analysis of the alternatives for implementing the Project to meet the purpose and need. NTIA also requires that an EA include a discussion of the no action alternative. The following summarizes the alternatives analyzed in the EA.

Preferred Alternative. This alternative involves construction of a wireless broadband network by using 231 existing publicly owned or administered safety facilities or communications sites, currently developed for use in emergency services and/or as communications structures. New monopole towers, along with supporting infrastructure, will be installed at 223 non-collocation sites. At six additional non-collocation sites, new antenna structures, including supporting infrastructure, will be installed onto existing buildings. In addition, LA-RICS will install eNodeB equipment, network and backhaul equipment, antennas and cabling at two collocation sites with existing tower structures. On a site-by-site basis during final design, existing space and existing equipment (including existing towers) may be utilized at the 231 LTE sites rather than installing new equipment and/or towers. Also installed at each site would be outdoor system components (i.e., the equipment cabinets and the emergency generator) and conduits for cable connections.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in the Project area. Under the no action alternative, the emergency broadband network would not be constructed and the public service agencies within Los Angeles County would continue to rely upon a variety of existing technologies and radio frequency spectra, limiting their ability to communicate with each other during routine activities or emergency incidents. The EA examined this alternative as a baseline for evaluating impacts relative to other alternatives being considered.

Alternatives Considered But Not Carried Forward. In addition to the Preferred Alternative, LA-RICS considered three alternatives: collocation for all 231 sites, an all-buried network, and an aerial network. The collocation alternative required that sufficient tower and associated infrastructure be available at hundreds of publicly-owned sites throughout the county, and the sites could not be sold, transferred, or abandoned so that continued operation by the LTE system would be secured. This alternative was not carried forward as there was insufficient available infrastructure and, of the available infrastructure, access and security of the LTE equipment could not be guaranteed. The all-buried alternative would require extensive acquisition of easements and/or right-of-way throughout Los Angeles County, which would increase the complexity of and time required for installation. Potentially significant trenching and blasting associated with buried cable installation may also result in environmental impacts in rural and urban areas. Therefore, it was determined that the buried cable alternative would not be a viable alternative. Installation of an all-aerial network was found to be infeasible due to limited capacity on existing poles and towers, the need to install additional utility poles in areas where they currently do not exist, and costs of system-wide installation and ongoing maintenance of aerial cable. Based on these assessments, only the Preferred Alternative and the No Action Alternative were retained for full evaluation in the EA.

Findings and Conclusions

The EA analyzed existing conditions and environmental consequences of the preferred alternative and the no action alternative in 11 major resource areas, including Noise, Air Quality and Greenhouse Gases, Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use, Infrastructure, Socioeconomic Resources, and Human Health and Safety. Cumulative impacts were also evaluated.

Noise

This Project will have short-term impacts on noise due to the use of machinery, such as jackhammers and pile drivers. However, this noise will be restricted to the construction phase of the Project and there are few sensitive noise receptors along the proposed route. In urban areas, where installation and construction equipment may be more disruptive, LA-RICS will restrict construction activities to daylight hours and certain days of the week. Moreover, construction activities are not expected to exceed 30 days, with only intermittent noise generated during that period. Equipment installed at the LTE sites will result in minor increases of noise in the immediate vicinity, due primarily to emergency back-up generator use and heating, ventilating and air conditioning (HVAC) systems for the equipment cabinets. Based on the analysis, no significant noise impacts are expected as a result of project activities and operation.

Air Quality

Operation of equipment and vehicles for site construction activities will result in emissions of air pollutants and fugitive dust. However, these air pollutant emissions will be limited to the construction period, and no significant short-term, direct impacts to regional air quality in the

South Coast Air Basin and Mojave Desert Air Basin are expected. The Project will also result in short-term, minor increases in the use of fossil fuel and associated greenhouse (GHG) emissions during construction. LA-RICS estimates that the Project will result in the release of less than 14,200 metric tons of carbon dioxide equivalent emissions. Thus, GHG emissions are expected to be well under the Council on Environmental Quality's presumptive effects threshold of 25,000 metric tons of carbon dioxide equivalent emissions. Long-term operation and maintenance of the network will result in minimal air emissions. Based on the analysis, no significant impacts on air quality are expected.

Geology and Soils

Four LTE sites (LACF004, LACF140, LACOLV, and REH) are located within an Alquist-Priolo Earthquake Fault Zone. Implementation of the LTE system at these four sites is necessary to provide coverage for Los Angeles County and because other potential nearby sites would not meet the necessary criteria for site selection. Compliance with Los Angeles County building code standards and permit requirements will ensure that these LTE facilities are constructed to avoid hazards from earthquakes. Additionally, a geotechnical investigation will be conducted at each of these four sites to evaluate the foundation conditions of the site and the potential for geologic/seismic hazards affecting the site. A geotechnical report will be prepared by a geotechnical engineer registered in the state of California, in cooperation with a certified engineering geologist and other technical experts, as necessary. Final design of structures will include design criteria specified or recommended in the geotechnical report prior to approval or issuance of construction permits. With implementation of these requirements, no significant impact due to seismic hazards is anticipated.

Ground disturbance will include the excavation of up to 80 cubic yards of earth to construct each new monopole foundation and provide for the installation of ancillary components. Utility installation for new monopole sites will require underground conduit to be placed in a trench measuring 2 feet wide by 3 feet deep, and not exceeding 500 feet in length at any LTE site. After the conduits are installed, the disturbed soil surface will be restored to its original condition. Trenching will occur only in previously disturbed or developed designated work areas. Overall, ground disturbance is expected to be minor and the Project is not expected to result in substantial erosion. The potential for erosion during construction would be minimized through implementation of erosion, sediment, tracking, wind erosion, non-stormwater management, and waste management and material pollution BMPs. Based on these assessments and implementation of the BMPs, no significant impact on geology and soils is expected to occur as a result of this Project.

Water Resources

Surface water, including streams and wetland features, are not present within the project limits for any of the 231 LTE sites. LA-RICS will ensure best practices during Project construction to ensure water quality is not degraded, beneficial uses impaired, and/or water quality standards violated due to erosion, a construction fuel leak, or other pollutant entering a nearby stream or other waterbody. BMPs will be implemented to control sediment and pollutants in storm water

and non-storm water runoff associated with construction according to protocols established by the California Stormwater Quality Association (CASQA). Furthermore, the Project will not contribute to runoff because new construction will take place in previously disturbed areas. Underground utility surveys will be completed to identify and avoid underground pipelines and tanks prior to ground disturbance during construction. Water used during construction will come from existing water connections located at 226 of the LTE sites. Water will be transported to the remaining five LTE sites (BMT, BRK, BUR, PHN, and SVP) where existing plumbing connections might not be available. Ten sites are located wholly or partially in a FEMA Flood Zone A (100-year floodplain). The LTE design at these locations will comply with applicable municipal flood hazard ordinances and will not change potential flood flows compared to existing conditions. The Project will not substantially interfere with groundwater recharge, or alter the course of any stream or river. Based on these assessments and implementation of the BMPs, the Project will have no significant impacts on water resources.

Biological Resources

LA-RICS collected preliminary background information on threatened and endangered species within the Project area through correspondence with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG). They also reviewed the California Natural Diversity Database, the West Mojave Plan Habitat Conservation Plan, and the ANF Land Management Plan. Through these efforts, LA-RICS identified state and federally listed threatened and endangered species, BLM and USDA-USFS sensitive species, and critical habitat. In addition, a reconnaissance field survey was conducted for each Project site, including a 500-foot buffer, to identify the potential occurrence of special-status species, vegetation communities, or habitats that could support these species. Based on this data, 17 federal threatened, endangered, or candidate species were identified as potentially occurring in the Project area. These species are identified in the *Biological Assessment LA-RICS Long Term Evolution Project* report (UltraSystems Environmental, Inc., May 2014). LA-RICS also determined that suitable habitat for the following species is present near or within 11 LTE sites: California condor (*Gymnogyps californianus*), coastal California gnatcatcher (*Polioptila californica*), least Bell's vireo (*Vireo bellii pusillus*), western snowy plover (*Charadrius nivosus nivosus*), and Lyon's pentachaeta (*Pentachaeta lyonii*).

On May 12, 2014, NTIA entered into informal consultation with the USFWS regarding potential significant impacts to federally listed threatened and endangered species from Project activities on the Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*), Arroyo toad (*Anaxyrus californicus*), Desert tortoise (*Gopherus agassizii*), California condor (*Gymnogyps californianus*), coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), and western snowy plover, or their designated critical habitat. A Biological Assessment was submitted to the USFWS on May 12, 2014. In a letter dated July 18, 2014, the USFWS concurred with NTIA's determination that the LA-RICS project may affect, but is not likely to adversely affect the Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*), arroyo toad (*Anaxyrus californicus*), California condor, least Bell's vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), desert tortoise (*Gopherus*

agassizii), coastal California gnatcatcher, and western snowy plover, and their designated critical habitats.

A series of biological CMRs have been developed to minimize or avoid potential effects to biological resources, including federally protected species, during construction and operation of the LTE system and are included in the project design for each site. The construction contractor will be required to provide biologists with appropriate expertise to perform pre-construction surveys and monitor construction activities, and supervise implementation of the biological CMRs. The biologists provided by the construction contractor will be approved by LA-RICS.

Where State or Federal-listed threatened or endangered plants, and plants listed by BLM or USFS as sensitive plant species have a potential to occur on a LTE site, LA-RICS will have a biological monitor onsite whenever project-related activities have the potential to impact sensitive or native species. Habitat protection zones will be established to avoid impacts to sensitive or native habitats outside of, but adjacent to the work area.

In addition to considering potential impacts on listed species, LA-RICS evaluated potential impacts on migratory birds and other wildlife. The Project may temporarily affect wildlife, including migratory birds. Should active bird nests be identified along the Project route, a biological monitor will be present during times of construction in areas containing active bird nests, and a protective buffer will be established around the nest. Non-federally listed species, including the Burrowing owl, Golden and bald eagle, Mohave ground squirrel, Monarch butterfly, and non-listed amphibians, reptiles, and small mammals, were also identified for specific protection through employment of CMRs. Additional protective measures will also be implemented to avoid potential impacts to USFS and BLM sensitive species. The short-term presence of construction vehicles, equipment, and crews may also result in temporary noise and visual impacts to amphibian, reptilian, fish, insect, mollusk, and crustacean species. Direct and indirect impacts to these species will be minimized through the implementation of CMRs.

In an effort to avoid and minimize the spread of invasive plants and their parts, contractor vehicles and equipment will be cleaned prior to the arrival at constructions sites. In addition, biological monitors will identify areas of native vegetation to be protected. Post-construction surveys for noxious weeds shall be conducted during April through May to determine the presence of invasive species. Any populations of noxious weeds shall be immediately treated under the direction of a botanist

LA-RICS will implement additional protective measures and CMRs, which are identified in Appendix A of the final EA. No further impacts from construction, operation, or maintenance of installation equipment are anticipated. Based on this analysis and implementation of the recommended protective measures and CMRs, LA-RICS will be able to construct the wireless network with no significant adverse impacts on biological resources.

Historic and Cultural Resources

In a letter dated November 5, 2010, NTIA initiated consultation with the California State Historic Preservation Offices (SHPO). This letter included a Project map and Project description, and documented the determination that the LA-RICS Long Term Evolution Project had the potential to affect historic properties. Since the original notification, LA-RICS made revisions to the original project description and engaged an archaeologist with UltraSystems to analyze the archaeological and architectural resources within the Project's area of potential effect (APE). In a letter dated August 27, 2013, NTIA provided with the SHPO with an updated project description and associated mapping.

On August 30, 2013, NTIA provided Project details, through a modified version of the Federal Communication Commission's (FCC) Tower Construction Notification System (TCNS), to two tribes interested in the Project's geographical location in California. On February 28, 2014, NTIA issued a subsequent TCNS notification updating the Project area to include San Bernardino and Orange Counties, which included an additional 10 tribal representatives that were not previously identified by TCNS. Nine tribes did not provide a response. The Morongo Band of Mission Indians and Cahuilla Band of Mission Indians responded to TCNS confirming that they have no interest in the Project. On March 21, 2014, the Soboba Band of Luiseño Indians requested additional cultural resources information through TCNS. As requested, LA-RICS provided the Tribe with specific site information and an overview map for 16 requested sites. In letters dated September 3 and 5, 2014, the Tribe concluded that they have no concern about the 16 sites. However, the Tribe requested that a qualified archaeologist be present at Blue Rock and LA County Fire Station 78, 81, and 114 during initial ground disturbing activities and that they be notified in the event that inadvertent discoveries are encountered during construction activities.

In addition, on July 16, 2013 UltraSystems contacted the California Native American Heritage Commission (NAHC) to request a review of their Sacred Lands Inventory to determine if sacred lands or other resources of significance to the Native American community were known to exist in proximity to the proposed Project.

During early Project coordination with the parties involved with Section 106 review, it was determined that the effects on historic properties would not be fully determined prior to approval of the undertaking considering the Project timeline and the number of parties involved. Therefore, a phased process for compliance with the National Historic Preservation Act (NHPA) Section 106 is appropriate. In an effort to meet the ARRA requirement to complete the Project by September 2015, and in light of on-going Project design and engineering, NTIA and LA-RICS decided to pursue a Programmatic Agreement (PA) to streamline Section 106 compliance. Preparation of a Project-specific PA is consistent with the provisions of the NHPA Section 106 implementing regulations (36 CFR Part 800) which permit Federal agencies to use PAs to establish alternative procedures for Section 106 compliance. The PA clearly lays out a process for SHPO concurrence, including addressing individual site comments, and resolution of adverse

effects. On October 3, 2014, NTIA entered into a PA with the SHPO for the Project. LA-RICS must comply with all provisions of the PA, which are hereby incorporated by reference.

By adhering to the process for identifying, evaluating, and resolving any effects to historic properties set forth in the PA, this Project will not have any significant adverse effect on historic properties.

Aesthetic and Visual Resources

The planned telecommunications network will include new towers and wireless network equipment on existing towers and buildings, which are located on ridge tops, in rural and urban areas. Placement of additional wireless antennae on existing towers and structures will not significantly diminish visual quality. The effects of viewing an additional antenna will have minimal impact on local aesthetics and visual resources. The overall height of the new towers planned for this Project will be up to 85-feet high (including a 15-foot lightening rod), self-supporting, and free of guy wires to minimize potential visual impacts. The proposed LTE sites are planned to be placed within existing publicly-owned or administered safety facilities or communications sites. The towers, antennas, and equipment buildings are expected to blend in with existing development, other towers and structures, and/or the surrounding environment.

The Project will cause temporary disturbance at 25 sites located in areas having visual resources that are protected by federal, state or local plans, policies and regulations. Four sites are located on federal land administered by the USFS, BLM or USACE; 15 sites are located in the coastal zone; five sites are near the coastal zone, and one site is located in a locally designated scenic corridor that is not part of the coastal zone. Final design will be consistent with Scenic Integrity Objectives (SIO's) required in the ANF Land Management Plan, BLM's Handbook H-8410-1 for Visual Resource Management, USACE's Detailed Visual Impact Procedure, and visual resource policies and regulations provided in applicable Local Coastal Programs (LCP) and development codes. If upon submission of final design to the USFS it is determined that SIO's are not met, the USFS will supplement the EA and may require an additional plan amendment, or may deny use of the sites. Where appropriate, and in coordination with local jurisdictions, as well as federal land-administering and resource management agencies, mitigation measures will be implemented to disguise the proposed monopole towers as palm trees, pine trees, flagpoles, hose towers, or incorporated into existing architectural elements. Specifically, the proposed monopole structures for sites LACF053 and LACF072 will be disguised as "monopines," and the proposed communication tower will not be used for the purposes of signage to display a message of any kind with the exception of messages required for safety. Additionally, LTE site Lost Hills Malibu Sheriff's Station (LHS) will be adequately set back from the scenic corridor surrounding U.S. Highway 101 and the proposed tower structure will be disguised. LA-RICS is also proposing to disguise the monopole structure at the San Vicente Peak site, which is located on a former military facility along Mulholland Drive, a scenic highway providing views of the Santa Monica Mountains. The ground level LTE structures will also be set back from the scenic corridor, in accordance with AES MM 1 and AES MM 3. However, the NPS has expressed some concern about the height of the tower and the scenic view from the nearby lookout

platform on one of the remnant missile site structures. Therefore, LA-RICS will continue working with the NPS on the design of the SVP tower site to preserve the visual quality of the scenic corridor.

Temporary impacts to visual and aesthetic resources will occur during the construction phase of the Project due to the presence of the construction equipment, materials, and work crews. Because construction vehicle traffic and Project activity will occur for approximately 30 days or less, the viewshed from the Project site will not be permanently affected. Based on these assessments and implementation of the mitigation measures, this Project will not significantly affect aesthetic or visual qualities in the region.

Land Use

Monopole construction is proposed at up to 223 existing telecommunications sites, and wireless equipment will be installed on eight existing towers and buildings; land use at these sites will not change. Minimal ground disturbance is anticipated from tower installation and construction will be temporary in nature. Disturbance at each proposed non-collocation LTE site will be limited to less than 3,600 square feet. Disturbance will be associated with the installation of LTE system equipment, monopole towers, ancillary components, and trenching for placement of conduits for utility connection at sites where a new monopole tower is required.

The land uses for 227 LTE sites under ownership by municipalities, Los Angeles County, and other county/city public services agencies are designated by the California Coastal Commission (CCC) and individual LCPs, Airport Land Use Plans, and the Los Angeles County General Plan. Three sites (LACF078, LACF157, LACFCP14) are located on lands within the contiguous boundary of the ANF, but not administered by the USFS. The County and the USFS will jointly review these sites pursuant to the County General Plan and the underlying zoning, and through the County's development permit process to coordinate compliance with applicable resource management policies. Seven of the County-owned sites (Bald Mountain [BMT], BRK, LACF065, LACF083, LACFCP09, LACFCP14, and San Vicente Peak [SVP]) are located within a County-designated Significant Ecological Area (SEA). These sites will be developed in a manner consistent with SEA policy requirements.

Nine LTE sites are located within boundaries of five County airport land use plan areas, which include the plans for the Los Angeles International, Palmdale, Van Nuys, Long Beach, and Fox Airfield airports. Because these sites are within an airport influence area, development activities will be required to comply with the land use policies of these airport plans. FAA review of these nine airport sites is required to ensure that the final design does not interfere with visual or electronic communications and is consistent with height restriction standards and procedures set forth in FAA Federal Aviation Regulations (FAR) Part 77. Consultation with the FAA is ongoing. These airport sites include: LACF129, LACF162, LACF005, LACF080, LACF095, LACF114, Lennox Sheriff's Station (LASDLNX), LBFD026, and Mira Loma Detention Facility (MLM).

Nine sites are located within the Santa Monica Mountains National Recreation Area, which is overseen by the NPS. These nine sites include: LACF069, LACF071, LACF072, LACF088, LACF097, LACF099, Zuma Lifeguard Headquarters (LALG300), LHS, and San Vicente Peak (SVP).

Fifteen LTE sites are located within the Coastal Zone management area, and therefore must comply with the applicable coastal planning regulations. These sites include: LACF053, LACF069, LACF071, LACF072, LACF088, LACF099, LAFD049, Hermosa Headquarters (LALG100), LALG300, Lifeguard Division (LALG-HQ), Long Beach Fire Station 6 (LBFD006), LBFD021, Manhattan Beach Fire Station 1 (MBFD001), Redondo Beach Police Department (RDNBPD), and Santa Monica Fire Station 2 (SMFD002).

The land uses for the Project sites located on USFS (Sites BUR and LACFCP09) and BLM (Site BRK) lands are guided by the Angeles Forest Land Management Plan and California Desert Conservation Area Plan, respectively, and by the Sepulveda Dam Basin Master Plan for the USACE site LAFD088. With exception of site LACFCP09, the Project does not conflict with the current land uses along the proposed route.

LA-RICS has contacted the USFS, BLM, USACE, NPS, and CCC to determine the appropriate permits and approvals required to construct and operate the proposed Project within their jurisdictions. In a letter dated February 11, 2014, the USFS reported that the initial screening of the two sites had been completed, and the agency has accepted the BUR site, which can proceed through the USFS NEPA process. However, proposed activities at site LACFCP09 was determined not to be consistent with standards and guidelines in the Forest's Land Management Plan since it is not a designated communication site. Approval of the site will require a plan amendment, or the site may be denied and an alternate will have to be proposed. An additional amendment may be necessary if it is determined that the project cannot meet SIO's The USFS has asked LA-RICS to provide additional information and analyze the feasibility of using two alternative sites, Loop Canyon and Contractor's Point, in lieu of site LACFCP09. LA-RICS investigated the two alternate sites and determined that they were not technically feasible as they would not effectively support the LTE system as a whole, and would not meet the criteria for site selection. This report was submitted to the USFS on May 16, 2014. Consultation for site LACFCP09 is still ongoing. LA-RICS will obtain the necessary permits from the USFS prior to the start of construction.

Through correspondence with BLM, confirmation was received that implementation of the Project will likely qualify for a Categorical Exclusion in accordance with BLM guidelines (516 Department of the Interior Manual Part 11). Authorization for an archaeological field investigation at BRK (based on Work Permit CA-11-14) was obtained on February 4, 2014. A new or amended Right of Way grant is required from the BLM prior to construction at BRK. Project activities at site LAFD088 may require a new or amended outgrant from the USACE or a sublease agreement issued by the City of Los Angeles with concurrence from the USACE prior

to construction. The USACE is still determining if they will accept the BTOP EA for their independent NEPA determination or if LA-RICS will need to prepare a separate EA for site LAFD088. LA-RICS will also obtain the necessary permits from the BLM and USACE prior to the start of construction.

In consultation with the NPS, it was determined that that none of the proposed nine sites are located on land administered by the NPS. Therefore, NPS only holds an advisory and review role for the EA, and project activities do not require an NPS-issued right-of-way permit. NTIA provided the NPS with a courtesy copy of the EA for review and comment on May 21, 2014. In a letter dated July 15, 2014, the NPS concurred with the EA's impact level findings for the nine sites within the SMMNRA.

In a letter dated December 12, 2013, LA-RICS submitted a written request for consistency review to the CCC. A statement of jurisdiction and consistency finding was issued by CCC on April 24, 2014. Prior to construction on sites in the coastal zone, coastal development permits (CDPs) are required from CCC and local agencies authorized by the CCC. Consultation with the CCC is ongoing and LA-RICS will obtain all required CDPs for sites within the California coastal zone prior to construction.

Through the respective agency permitting processes, the USFS, BLM and USACE will analyze potential land use impacts and determine whether the Project is consistent with their respective land and resource management plans. LA-RICS has agreed to comply with all permit conditions issued by the respective Federal, State, and local agencies. Based on these consultations and permitting requirements, the Project is not anticipated to result in significant impact on land use.

Infrastructure

Site constraints associated with underground pipelines, communication cables, and similar urban infrastructure may occur when crossing a particular LTE site. Final engineering design consideration will be given to existing utility system constraints, and plans would be made to avoid them as necessary. LTE equipment will remain connected to existing power grids using existing utility infrastructure, although electrical upgrades may be required at some LTE sites. For the new tower sites, electric utilities will be extended from existing locations to provide power to the structures. The total demand for water during construction will be minor compared to the regional water supply estimated by the Integrated Regional Water Management Plan. There will be minor, short term construction impacts on roadways and traffic flow during construction activities. LA-RICS will implement traffic control measures, where necessary, to ensure adequate vehicle movement at all times. Overall, this Project will have a beneficial impact on the public safety communication system within Los Angeles County, and is not anticipated to result in significant adverse impacts on infrastructure.

Socioeconomic Resources

The Project will help to increase public safety for the local communities by providing a single interoperable communication system that can be operated by all agencies and result in a positive

effect that extends beyond Los Angeles County. No residents, minority, or low-income populations or businesses will be disproportionately impacted as a result of Project implementation. Overall, this Project is expected to have a positive impact on socioeconomics in the planned service area, and will not result in significant impacts on socioeconomic resources.

Human Health and Safety

The Project is not expected to have any adverse impacts on human health and safety during normal operation, but may have minimal, short-term impacts during construction. Several hazardous waste sites have been identified within or near the Project area. Twenty-five LTE sites have been identified with an active leaking underground storage tank (LUST) on file in one or more of the regulatory databases. Eight LTE sites are located within one mile of a facility found on the Superfund Program's National Priorities List (NPL). These eight sites include: Alhambra Police Department (ALHPD01), Glendale Water & Power Utility Operations Center (GDWP001), Los Angeles County Fire Department Camp 2 (LACFCP02), Los Angeles County Fire Station 163 (LACF163), LACF028, Monrovia Fire Station 2 (MRFD002), Industry Sheriff's Station (LASDIDT), and Northeast Area Station (LAPDNED). All of these sites are in various stages of the remediation process and have the potential to directly expose workers to contaminated soil and/or groundwater during excavation activity. To address this potential health hazard the construction contractor is required to prepare a Phase I Environmental Site Assessment to investigate and characterize these 33 LTE sites before construction proceeds. If additional study is warranted, then a Phase II investigation will be conducted to determine levels of contamination. If the Phase II determines that human contact with contaminated soils would occur, then LA-RICS must mitigate safety risks prior to undertaking construction activity. In addition, if dewatering is required during soil excavation, the construction contractor would need to obtain a National Pollutant Discharge Elimination System (NPDES) permit from jurisdictional Regional Water Quality Control Board for surface discharge of groundwater.

All trenching or excavation of foundations and utility connections will be conducted consistent with state and Federal safety rules and regulations, including Occupational Health and Safety Administration (OSHA) regulations. The FAA has purview over promotion of air safety and efficient use of navigable airspace in the United States, which includes evaluating potential obstructions such as communication towers. A total of 129 sites met FAA's obstruction evaluation criteria requiring notification under 14 CFR Part 77 and filing of FAA Form 7460-1, Notice of Proposed Construction or Alteration. FAA has recommended that voluntary notification be made for all proposed LTE antenna structures as best practice and therefore all 231 proposed LTE sites have been submitted to FAA for further review. In addition, the FAA has requested that 1A Level surveys be conducted at each of the four on-airport LTE sites and these surveys are being conducted by LA-RICS. Only those proposed antenna structures that receive "no hazard" to air navigation determinations from the FAA will be constructed.

The Project is not expected to have direct impacts on human health and safety during normal operation. BMPs for workplace safety will be implemented to protect workers and the public within the Project area. LA-RICS will adhere to all federal, state, and county laws, ordinances,

rules, and regulations that pertain to prevention, pre-suppression, and suppression of fires, and will develop and implement a fire management plan for use during construction activity on those LTE project sites proposed in areas designated as high fire hazard severity zones. Furthermore, LA-RICS will include methane gas collection, ventilation, or other commercially available control measures into the design of the fifteen LTE Project sites located in a Methane Hazard Zone. With implementation of these protection measures, the Project is not expected to have direct impacts on human health and safety during normal operation

Cumulative Impacts

LA-RICS did not identify any significant cumulative impacts that will result from Project implementation. LA-RICS has identified other telecommunication projects that will occur or are proposed at the same Project sites or adjacent to some of the LTE sites. If simultaneous projects do occur, LA-RICS assumes that each of the cumulative projects will be designed and operated in a manner consistent with pertinent land use management plans, as necessary, and comply with federal, state and county requirements, codes and permit conditions to avoid construction conflicts. Although construction at the 231 LTE sites presents some potential for overlap and impact with current built infrastructure and future development, the cumulative impacts from the Project were found negligible and are not expected to exceed the threshold of significance.

Decision

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, identified BMPs, CMRs, and mitigation measures, will not require additional mitigation. A separate mitigation plan is not required for the Project. The analyses indicate that the proposed action is not a major Federal action that will significantly affect the quality of the human environment. NTIA has determined that preparation of an EIS is not required.

Issued:

Douglas Kinkoph
Associate Administrator
Office of Telecommunications and Information Applications (Acting)
National Telecommunications and Information Administration

10-15-14
Date

Broadband Technology Opportunities Program (BTOP)

Final Environmental Assessment

LOS ANGELES REGIONAL INTEROPERABLE COMMUNICATIONS SYSTEM (LA-RICS) PROJECT

Lead Agency:

National Telecommunication and Information Administration
Broadband Technology Opportunities Program
1401 Constitution Avenue NW
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October 14, 2014

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ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Term
AGL	Above ground level
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Comprehensive Plan
ALUP	Airport Land Use Plan
AMI	Area Median Household Income
ANF	Angeles National Forest
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
ARPA	Archaeological Resources Protection Act
ARRA	American Recovery and Reinvestment Act
ASR	Antenna-structure registration
ASTM	American Society for Testing Materials
Authority	The Los Angeles Regional Interoperability Communications System Joint Powers Authority
AVAQMD	Antelope Valley Air Quality Management District
Basin Plan	Sepulveda Dam Basin Master Plan
BFE	Base Flood Elevation
BE	Biological Evaluation
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BLMS	Bureau of Land Management Sensitive
BMP	Best Management Practice
BTOP	Broadband Technology Opportunities Program
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCA	California Coastal Act
CCAA	California Clean Air Act
CCC	California Coastal Commission
CCMP	California Coastal Management Program
CCR	California Code of Regulations
CDCA	California Desert Conservation Area
CDP	Coastal Development Permit
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code

ACRONYMS AND ABBREVIATIONS (continued)

Acronym/ Abbreviation	Term
CFP	California Fully Protected
CFR	Code of Federal Regulations
CLUP	Comprehensive Land Use Plan
CMR	Construction Management Requirement
CNEL	Community Noise Equivalent Level
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CRM	Cultural Resource Management
CSD	Community Standards District
CSS	Coastal Sage Scrub
CUP	Conditional Use Plan
CWA	Clean Water Act
CZ	Coastal Zone
CZMA	Coastal Zone Management Act
dB	Decibel
dBA	A-weighted Frequency-Dependent Decibel Scale
DC	Direct Current
DHS	California Department of Health Services
DOC	U.S. Department of Commerce
DOGGR	State Division of Oil, Gas and Geothermal Resources
DPM	Diesel Particulate Matter
DNL(L_{dn})	Day-Night Average Sound Level
DTSC	California Department of Toxic Substances Control
EA	Environmental Assessment
EFH	Essential Fish Habitat
EPA	Environmental Protection Agency
EPC	Evolved Packed Core
ESA	Federal Endangered Species Act
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FirstNet	First Responder Network Authority
FLPMA	Federal Land Policy and Management Act
FONSI	Finding of No Significant Impact
Forest Plan	Angeles Forest Land Management Plan
FSA	Field Survey Area

ACRONYMS AND ABBREVIATIONS (continued)

Acronym/ Abbreviation	Term
FSM	Forest Service Manual
FSS	Forest Service Sensitive
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GWP	Global Warming Potential
HAP	Hazardous Air Pollutant
HAPC	Habitat Areas of Particular Concern
HC	Hydrocarbons
HCPs	Habitat Conservation Plans
HFC	Hydrofluorocarbons
HUD	U.S. Department of Housing and Urban Development
HVAC	Heating, Ventilating and Air Conditioning
JPA	Joint Powers Agreement
LACDPW	Los Angeles County Department of Public Works
LADWP	Los Angeles Department of Water and Power
LA-RICS	Los Angeles Regional Interoperable Communications System
LCP	Local Coastal Plan, Local Coastal Program
L_{eq}	Equivalent Sound Level
LMP	Land Management Plan
LOMC	Letter of Map Change
LOMR	Letter of Map Revision
LTE	Long Term Evolution
LUP	Land Use Plan
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
MIS	Management Indicator Species
MM	Mitigation Measure
MMPA	Marine Mammal Protection Act
MOU	Memorandum of Understanding
MSA	Metropolitan Statistical Area
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSAT	Mobile Source Air Toxics
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program

ACRONYMS AND ABBREVIATIONS (continued)

Acronym/ Abbreviation	Term
NFMA	National Forest Management Act
NFS	National Forest System
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
N_2O	Nitrous Oxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	California Native Plant Protection Act
NPS	National Park Service
NRHP	National Register of Historic Places
NTIA	National Telecommunications and Information Administration
O_3	Ozone
OPR	California Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PCE	Primary Constituent Element
PEL	Permissible Exposure Level
PFC	Perfluorocarbons
PM	Particulate Matter
PM_{10}	Particulate Matter Smaller Than or Equal to 10 Micrometers in Aerodynamic Diameter
$PM_{2.5}$	Particulate Matter Smaller Than or Equal to 2.5 Micrometers in Aerodynamic Diameter
POPs	Points of Presence
ppm	Particle Per Million
PPV	Peak Particle Velocity
PSBN	Public Safety Broadband Network
RCRA	Resource Conservation and Recovery Act
RF	Radio Frequency
ROG	Reactive Organic Gases
RPZ	Runway Protection Zone
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SEA	Significant Ecological Area
SF_6	Sulfur Hexafluoride

ACRONYMS AND ABBREVIATIONS (continued)

Acronym/ Abbreviation	Term
SHPO	California State Historic Preservation Office
SIO	Scenic Integrity Objective
SLF	Sacred Lands File
SMM	Santa Monica Mountains
SMMNRA	Santa Monica Mountains National Recreation Area
SMLA	Spectrum Manager Lease Agreement
SMS	Scenery Management System
SNPL	Western Snowy Plover
SOI	Secretary of the Interior
SOON	Surplus Off-Road Option for NO_x
SOP	Species Occurrence Potential
SRAs	Source Receptor Areas
SUP	Special Use Permit
TAC	Toxic Air Contaminant
TCNS	Tower Construction Notification System
TOG	Total Organic Gases
UL	Underwriter Laboratories
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USDOC	U.S. Department of Commerce
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VdB	Vibration Decibel
VMT	Vehicle Miles Traveled
VOC or VOCs	Volatile Organic Compounds
VRAP	Visual Resource Assessment Procedure
VRM	Visual Resource Management
WEMO	West Mojave Plan
WOUS	Waters of the United States
WTF	Wireless Telecommunication Facility

EXECUTIVE SUMMARY

Overview

The Los Angeles Regional Interoperability Communication System (LA-RICS) Joint Powers Authority (Authority) has applied for funding from the National Telecommunications and Information Administration (NTIA) under the NTIA-administered Broadband Technology Opportunities Program (BTOP) to support a significant upgrade to public safety communication systems. The program funds would be used to design and construct a 700 MHz Long Term Evolution (LTE) wireless broadband communications system dedicated to public safety use (the LTE project). The project would be implemented throughout Los Angeles County, California, enabling broadband interoperability among the region's public safety entities. The Authority has prepared this Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) and NTIA requirements.

As part of this EA 231 LTE sites were evaluated. Extensive reports included in Appendix B of the EA provide site specific details of the affected environment and a summary of impact analysis for each site, and include detailed maps, photographs, and discussions. Tables in Chapters 3 and 4 summarize the affected environment and analyses of environmental impact.

Proposed Action

The Proposed Action would involve construction and operation of a 700 megahertz (MHz) LTE wireless mobile communications system that would bring broadband capabilities to public safety personnel, allowing for interoperability among local, state, and federal entities. It would provide for faster and greater quantities of information on a dedicated basis to critical users.

The design calls for installation of a total of 231 new monopoles and antennas on existing buildings and towers. New monopole structures, along with supporting infrastructure, would be installed at up to 223 sites. At six sites, antennas and supporting infrastructure would be installed on existing buildings, and at least two additional sites, but potentially more depending on final project design, would have antennas and supporting infrastructure installed on existing towers. .

The standard monopole would be 70 feet tall, approximately seven feet in diameter at the base. At sites with height restrictions, monopoles would be as short as 28 feet. Lightning rods would be attached at the apex of each monopole and microwave backhaul antennas and LTE panel antennas would be attached at varying heights along the monopole. Up to four climate-controlled equipment cabinets would house the backhaul equipment, network equipment, and backup batteries at each of the 231 LTE sites, although existing shelters would be used where available and appropriate. The LTE radio base stations would be interconnected wirelessly through microwave backhaul rings to network nodes or aggregation points. High-capacity optical fibers or microwave systems would connect the aggregation points to the Evolved Packet Core (EPC) which are central routers, switches, databases and servers that provide data and security management.

The LTE system components would require backup electrical power to provide continuity of service during failure of the primary (i.e., commercial utility) power. It is anticipated that each site

would receive a 35-kW diesel emergency generator inside a noise-reducing enclosure, equipped with an integrated approximately 300-gallon sub-base diesel fuel tank.

For the sites receiving new monopoles and auxiliary facilities, construction would require approximately 3,600 square feet of ground disturbance during soil excavation for geotechnical investigation and installation of concrete foundations to support new monopoles, and provide foundations for backup generators, equipment cabinets, and ancillary equipment. Most proposed LTE site construction would occur on previously disturbed ground, necessitating only minor grading and removal of existing pavement to install most system components.

Alternatives

In addition to the Proposed Action, this EA analyzes the No Action Alternative. The No Action Alternative maintains the status quo. The narrow bandwidth available on existing data systems restricts communications between users to text based messages, limiting the ability to convey mission critical information to emergency responders in times of crises. The No Action Alternative would not address several statutory purposes for broadband outlined in Section 6001 of the American Recovery and Reinvestment Act of 2009 (ARRA), including provisions for broadband access to public safety agencies and improved access to and use of broadband service by community anchor institutions. In addition, residents, businesses and institutions would continue to operate without the benefit of increased public safety, welfare, or more efficient, higher speed and capacity data communication capabilities.

There is no alternative technology, e.g., buried or aerial cable, that would accomplish the purpose of the Proposed Action to provide broadband access to public safety agencies while meeting BTOP grant funding conditions. Deploying an aerial or buried fiber network would not avoid or minimize, and in fact may increase, environmental impacts due to greater ground disturbance than anticipated under the Proposed Action. Separate agreements would also be required with numerous different land owners to secure rights-of-way and leases to accommodate deploying an aerial or buried cable network. The time needed to negotiate the necessary agreements would put the BTOP grant funds in jeopardy. For these reasons, the buried and aerial cable alternatives were removed from further consideration.

Impact Summary

A summary of the analysis contained in Section 4.0, Environmental Consequences, is provided below in Table EX-1.

Table EX-1
Summary of Environmental Impacts

Environmental Topic	Evaluation Summary	
	Proposed Action	**No Action**
Noise	No significant direct and no indirect impacts would occur.	No direct or indirect impacts would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.
Air Quality	No significant direct and no indirect impacts would occur.	No direct or indirect impacts would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.
Geology & Soils	The Proposed Action is located in seismically active southern California, which is subject to earthquakes and related hazards. Four LTE sites are within an Alquist-Priolo Earthquake Fault Zone. Compliance with building codes would ensure that no direct or indirect impact during construction and operation of the Proposed Action would occur. No cumulative impacts are anticipated as a result of construction or operation of the Proposed Action. With implementation of GEO MM 1, no significant impacts to geology and soils are anticipated.	No direct or indirect impacts would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.
Water Resources	No significant direct and no indirect impacts would occur.	No direct or indirect impacts would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.
Biological Resources	Consultation with U.S. Fish and Wildlife Service has been concluded.	No direct or indirect impacts would occur.
	No significant impacts to biological resources are anticipated.	No cumulative impacts are anticipated as a result of the No Action Alternative.

Table EX-1 (continued)
Summary of Environmental Impacts

Environmental Topic	Evaluation Summary	
	Proposed Action	**No Action**
Historic and Cultural Resources	The Proposed Action is covered under a Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the FCC (FCC PA) of 2004, and the Nationwide Programmatic Agreement for the Collocation of Wireless Antennas (FCC Collocation PA) of 2001. Section 106 consultation with the State Historic Preservation Office (SHPO) is ongoing. No significant impacts to cultural resources are anticipated.	No direct or indirect impacts to biological resources would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.
Aesthetic and Visual Resources	Construction and operation of the Proposed Action would place equipment in the Angeles National Forest and on BLM and U.S. Army Corps of Engineers administered lands. For National Forest System lands, the proposed LTE infrastructure would be consistent with Scenic Integrity Objectives required in the Angeles National Forest Land Management Plan (ANF LMP), with implementation of design techniques described on page 2-7 and shown in Figure 2.1-6.No direct or indirect impacts are anticipated. Site LACF 053 lays along a designated a scenic corridor in the Rancho Palos Verdes Coastal Specific Plan. Introduction of an 85 foot structure (with appurtenances) would directly impact visual quality and scenic views in the area if not property sited and designed. At this location mitigation measures will be used to avoid direct impacts to the visual quality and scenic views in the area. Sites LHS and SVP lay along a designated scenic route (U.S. Highway 101 corridor and Mulholland Scenic Parkway, respectively). To preserve the visual quality of the scenic corridor, mitigation measures are included to ensure the LTE structure would be adequately set back from the scenic corridor and stealth technology would also be used.	No direct or indirect impacts to visual resources would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.

Table EX-1 (continued)
Summary of Environmental Impacts

Environmental Topic	Evaluation Summary	
	Proposed Action	**No Action**
Aesthetic and Visual Resources (cont.)	With implementation of AES MM 1, AES MM 2, and AES MM 3, no significant impacts to aesthetic and visual resources are anticipated. No cumulative impacts are anticipated as a result of construction or operation of the Proposed Action.	
Land Use	Construction and operation of the Proposed Action at LA County Fire Camp 9, which is not a designated communications site, would be inconsistent with the ANF LMP. An amendment for the final design of the LTE infrastructure is required before installation can proceed at this location. Communication facilities developed under the Proposed Action are not a prohibited use and fall within the height restrictions set forth by local coastal plans. Therefore, the land uses of the Proposed Action would be consistent with Chapter 3 policies of the Coastal Act, and the Proposed Action would have no direct impact related to the land use policies of these coastal programs. Nine of the proposed LTE sites fall within the influence area of five airports. None of the proposed sites lies within a runway protection zone nor exceeds applicable height restrictions of any plan. No direct or indirect impacts are associated with the Proposed Action. No cumulative impacts are anticipated as a result of construction or operation of the Proposed Action. No significant impacts to land use are anticipated.	No direct or indirect land use impacts are associated with the No Action Alternative. No cumulative impacts are anticipated as a result of the No Action Alternative.

Table EX-1 (continued)
Summary of Environmental Impacts

Environmental Topic	Evaluation Summary	
	Proposed Action	**No Action**
Infrastructure	All 231 LTE sites are public facilities served by existing infrastructure, including power, solid waste collection and disposal, and roadway access. Utility and service providers are able to accommodate increased demand generated by construction and operation of the proposed action. Potential to disrupt access to public facilities during construction can be mitigated through use of a construction traffic control plan. No direct or indirect impacts are anticipated. No cumulative impacts are anticipated as a result of construction or operation of the Proposed Action. With implementation of TRANS MM 1, no significant impacts to infrastructure are anticipated.	No direct or indirect impact on infrastructure would occur as a result of the No Action Alternative. No cumulative impacts are anticipated as a result of the No Action Alternative.
Socioeconomic Resources	No significant direct and no indirect impacts would occur.	No direct or indirect impacts would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.
Human Health and Safety	The Proposed Action has potential to expose workers to contaminated soil and/or groundwater during excavation activity at the 25 LTE sites with an active leaking underground storage tank (LUST) on file and the eight LTE sites within one mile of a national priority list (Superfund) site. Mitigation measures will be implemented to investigate these locations to determine the nature and extent of contamination and to conduct actions to avoid human exposure. No direct or indirect impacts are anticipated.	No direct or indirect impacts would occur.

Table EX-1 (continued)
Summary of Environmental Impacts

Environmental Topic	Evaluation Summary	
	Proposed Action	**No Action**
Human Health and Safety (continued)	Installation of monopole towers at 129 LTE sites or additional sites submitted to FAA for obstruction evaluation on voluntary basis as best practice must comply with Federal Aviation Administration (FAA) notification procedures outlined in Part 77 of the Federal Aviation Regulations. This process would be used in determining measures for safety (if needed) of air navigation to be included in the design of the Proposed Action beyond any FAA recommendations made pursuant to the current FAA Advisory Circular AC 70/7460.'' No direct or indirect impacts on health and safety would occur. Installation of monopole towers at 42 LTE sites located within a high fire hazard severity zone requires preparation and execution of a fire management plan. No direct or indirect impacts would occur. Installation of equipment at 22 LTE sites would place structures within 200 feet of an oil well, 1,000 feet from a landfill, or within a Methane Hazard or Buffer Zone. The design of the Proposed Action would be subject to state regulations on methane gas collection, ventilation, or other commercially available control measures to avoid hazards to human health associated with wells and landfills. A mitigation measure is identified to address construction in a local methane hazard or buffer zone. No direct or indirect impact would occur. No cumulative impacts are anticipated as a result of construction or operation of the Proposed Action. With implementation of HS MM 1, HS MM 2, and HS MM 3, no significant impacts to human health and safety are anticipated.	The No Action Alternative would not represent a potential hazard to air navigation and no direct or indirect impacts would occur. The No Action Alternative would not expose structures to wild fire or methane hazards and no direct or indirect impacts would occur. No cumulative impacts are anticipated as a result of the No Action Alternative.

1.0 PURPOSE AND NEED

This EA examines the potential for impacts to human health and the environment as a result of the issuance of a federal Broadband Technology Opportunities Program (BTOP) grant, and resultant development of a Public Safety Broadband Network (PSBN) using Long Term Evolution (LTE) technology to support public safety broadband communications and emergency services in the greater Los Angeles area of southern California. This document has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality (CEQ) regulations implementing NEPA found at Title 40 of the Code of Federal Regulations, Parts 1500-1508 (40 CFR 1500-1508). The U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) is the agency responsible for determining whether to issue grant funds, and is lead agency for NEPA.

1.1 Background and History

To explore the development of a single, shared communications system for all public safety agencies in the greater Los Angeles region, the Regional Interoperable Steering Committee was formed in April 2005. Initial feasibility studies indicated that by leveraging the various agency efforts currently underway, a shared regional communications system would not only be possible, but would best meet the needs of the entire regional public safety community. As a result, the County of Los Angeles, 82 municipalities and three other public sector entities in the region drafted a Joint Powers Agreement (JPA). The JPA established the Los Angeles Regional Interoperability Communication System (LA-RICS) Joint Powers Authority (Authority) to create a wide-area interoperable public safety communications network. Community anchor institutions associated with the project include police, sheriff, and fire stations and hospitals.

In 2009, the Authority submitted an application for ARRA grant funding to support design and construction of a countywide wireless broadband data network using LTE technology under the BTOP. A BTOP grant of $154 million was awarded to the Authority in 2010 to fund the design and installation of a LTE broadband data network (also known as PSBN under LA-RICS).

In February 2012, Congress enacted "The Middle Class Tax Relief and Job Creation Act of 2012" (the Act), which created the First Responder Network Authority (FirstNet) as an independent authority within the NTIA. The Act directs FirstNet to establish a single, nationwide, interoperable public safety broadband network. The FirstNet Board of Directors is responsible for making strategic decisions regarding FirstNet's operations and is charged with taking "all actions necessary" to build, deploy, and operate the network, in consultation with federal, state, tribal, and local public safety entities, and other key stakeholders.

On February 12, 2013, the FirstNet Board of Directors approved Resolution 18, which directed the FirstNet Board to negotiate a spectrum management lease agreement with the BTOP grant recipients to use the 700 MHz public safety broadband spectrum for further development of the Nationwide PSBN. On July 1, 2013, FirstNet entered into a Spectrum Manager Lease Agreement (SMLA) with the Authority. The SMLA authorizes the Authority to operate in the 700 MHz public safety broadband spectrum under call sign WQQE234.

NEPA promotes efforts to prevent or mitigate environmental damage resulting from federal actions. The Proposed Action qualifies for a limited statutory exemption, which expires January 1, 2017, from the California Environmental Quality Act (CEQA).[1] In adopting this exemption, the California Legislature found it was "an urgency statute necessary for the immediate preservation of the public peace, health, or safety within the meaning of Article IV of the [California] Constitution…" The Authority sought this exemption to ensure its ability to meet the BTOP grant funding deadlines. To qualify for this CEQA exemption, an action must meet certain criteria, including:[2]

- The project site must be publicly owned.
- The site must either already have an antenna support structure and either an antenna or equipment enclosures or be a police, sheriff, or fire station, or other public facility that transmits or receives public safety radio signals.
- Construction and implementation must not harm species or habitats protected under specific federal and state laws, or have substantial impact on defined historic resources.
- Operations must not exceed specific maximum permissible exposure standards established for radio frequency (RF) emissions established by the Federal Communications Commission.
- New antenna support structures must comply with applicable state and federal height restrictions, and any height restrictions mandated by an applicable comprehensive plan adopted by affected Airport Land Use Commissions (ALUCs).

Additionally, the action seeks to minimize impacts on the environment to facilitate project permitting and implementation in accordance with applicable regulations governing land management agency and resources agency actions. Unnecessary environmental impacts could result in delays in project implementation, resulting in loss of available authorities and funds.

1.2 Need for Action

The greater Los Angeles region has experienced many man-made and natural incidents that required rapid, coordinated response among multiple emergency medical, fire, and law enforcement agencies. The entire county is located in a seismically active region. Since 1800, over 90 significant earthquakes have jolted the Los Angeles region.[3] Wildfire is a common occurrence in the rugged San Gabriel and Santa Monica mountains. Man-made incidents affecting the urban environment include accidents and crime.

Examples of large incidents include the 2009 Station Fire (160,577 acres burned, 209 structures destroyed, two deaths), 2007 Griffith Park wildfire (817 acres burned), 2005 Metrolink train crash (11 deaths), and 1994 Northridge quake (57 deaths, over 8,700 injured, and $20 billion in damage). Smaller incidents requiring coordinated response among the various agencies occur daily across the Los Angeles metropolitan area.

1 California Public Resources Code § 21080.25.
2 California Public Resources Code § 21080.25(c).
3 County of Los Angeles Public Review Draft 2035 General Plan, Safety Element.

Public safety services in the Los Angeles County region are provided by more than 80 public safety agencies represented by approximately 34,000 first responders and 17,000 secondary responders. Many of these agencies use aging systems, making interagency communication a challenge. The narrow bandwidth available on existing systems restricts communications between users to text based messages, limiting the ability to convey mission critical information to emergency responders in times of crisis.

There are major gaps in the public safety communications system in Los Angeles County. These gaps include lack of dedicated broadband service prioritized to meet the needs of public safety service providers, and the lack of a communications system that can provide greater functionality than is currently available on existing emergency response communications infrastructure. Emergency services personnel require new and improved data-intensive situational awareness applications that cannot be supported by existing networks. Common interagency access to this type of information is needed to support management of large and small incidents.

Public safety entities in the Los Angeles region currently use commercial telecommunications services (e.g., cellular phones). These are typically available on a first-come-first-serve basis, without priority to public safety entities. In the event of a large scale incident, the amount of cellular traffic typically increases greatly, and there is high potential to overwhelm the existing commercial system capabilities, at precisely the time that emergency first responders need the system the most, resulting in system failure. Consider for example, the Boston Marathon bombing, which resulted in capacity induced outages in the existing commercial system. No existing system and little existing infrastructure capable of supporting the system are currently in place to provide this type of dedicated service for public safety entities.

1.3 Purpose of the Action

The purpose of the Proposed Action is to provide dedicated broadband communication capability and capacity to improve public safety services throughout Los Angeles County and environs. In order to be effectively implemented, the action needs to be completed prior to expiration of the BTOP grant which would require application of the limited statutory CEQA exemption and meet certain interrelated objectives, which include:

Provide emergency first responders and mission-critical personnel with improved voice and data communications that support day-to-day, mutual aid and task force operations.

Provide data-intensive situational awareness applications not supported by existing networks, such as real-time streaming video, medical telemetry, patient information and tracking, and geographic information systems technology.

The purpose of the proposed project is to provide a system that offers a high degree of reliability when needed most by emergency response providers. System development would require construction of supporting infrastructure, including monopoles, equipment cabinets, antennae, and other appurtenances. Once developed, the proposed LTE system would reach data speeds of 768 kilobits per second downlink (from the network out to the user) and 256 kilobits per second uplink (from the user to the network). These speeds would deliver good quality of service for most of the

applications the public safety community requires, and would be dedicated to public service entities. This would in turn prevent a loss of critical communication capability at times when most needed (i.e., during major incidents).

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Implementation of the Proposed Action would result in development of a PSBN using LTE technology to bring broadband services to enhance mission critical communications capability to support emergency services in Los Angeles County. This new LTE system would provide day-to-day data communications service for individual public safety agencies, give emergency responders high-speed access to life saving multimedia information, and support the National Broadband Initiative.

Two alternatives have been identified for evaluation in this EA: the Proposed Action (described in Section 2.1) and the No Action Alternative (described in Section 2.2). Alternatives considered but eliminated from further evaluation (and the rationale for elimination) are discussed in Section 2.3.

2.1 Proposed Action

Implementation of the Proposed Action would result in the development of a Public Safety Broadband Network using LTE technology to bring broadband services that enhance mission-critical communications capability to support emergency services in Los Angeles County. Once implemented, the new LTE system would provide day-to-day data communications service for individual public safety agencies, give emergency responders high-speed access to life saving multimedia information, and support the National Broadband Initiative. While funding the proposed LTE system would not result in environmental impacts, development of the system would be expected to result in construction and operation activities that could have environmental effects. If implemented, the Proposed Action would satisfy the need for improved common-use, interoperable and reliable high-speed broadband communications that is capable of being prioritized to support the operations of emergency responders. The Proposed Action has been designed to accomplish this in a timely, cost-effective, environmentally-sensitive manner, while providing maximum communications coverage for emergency response support.

Included within the design for the Proposed Action, and stipulated in the construction contract, are a series of Construction Management Requirements (CMRs) that have been developed to avoid or minimize impacts to environmental resources that may be present on some potential LTE sites. These CMRs are presented in their entirety in Appendix A, and discussed throughout this EA. The following definitions are provided to distinguish between CMRs and other terms used in this EA:

- **CMR.** CMRs are included as part of the project design, and are enforceable by the Authority through contract provisions with the construction contractor.

- **BMP.** Best management practices (BMPs) represent best professional practices and/or use of accepted technology to ensure desired regulatory compliance is achieved, and are often included in permit or other regulatory conditions.

- **MM**. Mitigation measures (MMs) are measures identified by the specialists that have performed the analysis in this EA to help avoid or minimize anticipated impacts.

2.1.1 Overview

Implementation of the Proposed Action would result in development of LTE technology at 231 sites. The sites were selected because they are appropriately spaced to provide radio coverage over the Authority's service area (i.e., Los Angeles County). The LTE system is designed with performance criteria meeting or exceeding California building codes (which takes into consideration seismic probability and severity in the region). Additionally, the system is designed with redundant, multiple wireless communications paths to provide connectivity between LTE sites and the geographically-redundant EPCs to maintain system resiliency so that, should any one path fail, localized system repair and restoration can be performed without affecting most system users. During the process of selecting the sites that make up the Proposed Action, other potential sites were eliminated from further consideration, because of potential environmental or other technical concerns.

Among the 231 proposed LTE project sites,

- 223 non-collocation sites would receive a new monopole tower, broadband radio base station (known as eNodeB), network and backhaul equipment, antennas and cabling, and an emergency backup power generator.

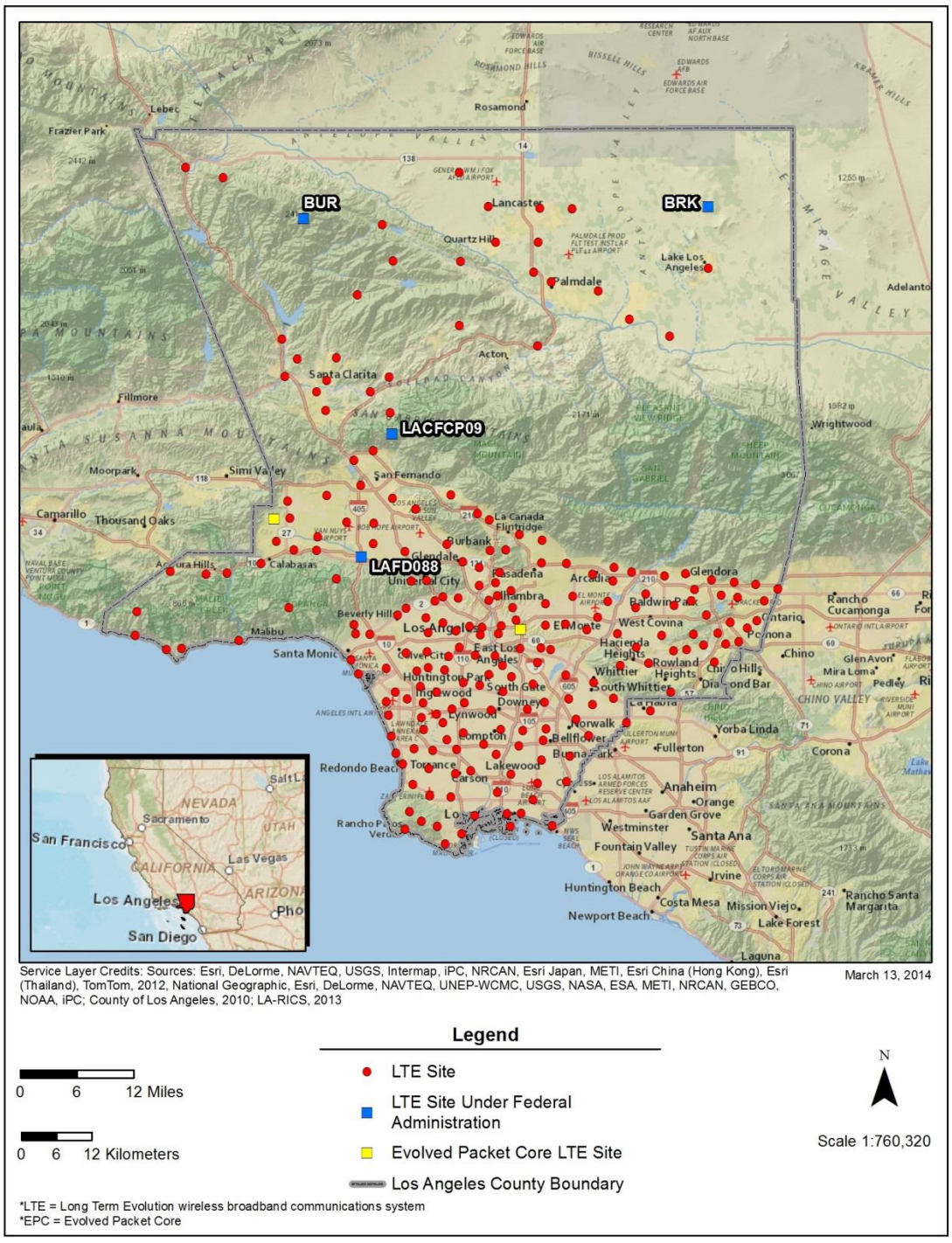
- Two collocation sites, with existing tower structures (CLM and CULV001), would receive eNodeB equipment, network and backhaul equipment, antennas and cabling, and an emergency backup power generator.

- Six non-collocation sites would receive antenna structures installed onto existing buildings, a new outdoor equipment cabinet, cabling, and a backup generator.

- On a space-available basis, other existing space and existing equipment (including existing towers) at the 231 LTE sites would be considered for use under the Proposed Action to minimize project costs and potential environmental impacts.

Under the Proposed Action, 229 of the 231 sites would be located wholly within Los Angeles County, one site would be located wholly within in Orange County, and one site would straddle the boundary between Los Angeles and San Bernardino counties. All project activities would occur at existing publicly-owned or administered safety facilities or communications sites, currently developed for use in emergency services and/or as communications structures. Entities with control (ownership and/or administration) of 227 sites include municipalities, Los Angeles County, and other county/city public services agencies. The remaining four project sites are on lands administered by federal agencies, including the Bureau of Land Management (BLM) at site BRK; the U.S. Forest Service (USFS) at sites BUR and LACFCP09; and the U.S. Army Corps of Engineers (USACE) at site LAFD088. In order to use these sites, the Authority would enter into agreements for lease, special use, right-of-way agreements, or outgrant with federal and other public agencies controlling the site. No permanent acquisition or change of ownership would be required at any site. A detailed description of the 231 sites potentially affected by implementation of the Proposed Action is found in Appendix B. Figure 2.1-1 illustrates locations of the 231 LTE sites, as well as the two EPC sites in the Proposed Action.

Figure 2.1-1
Proposed LA-RICS LTE Site Location Map



Several terms are used to aid describing resources analyzed for this EA. The terms are described below and illustrated in Figure 2.1-2.

Figure 2.1-2
Conceptual LTE Site, Work Area, Project Footprint, and FSA

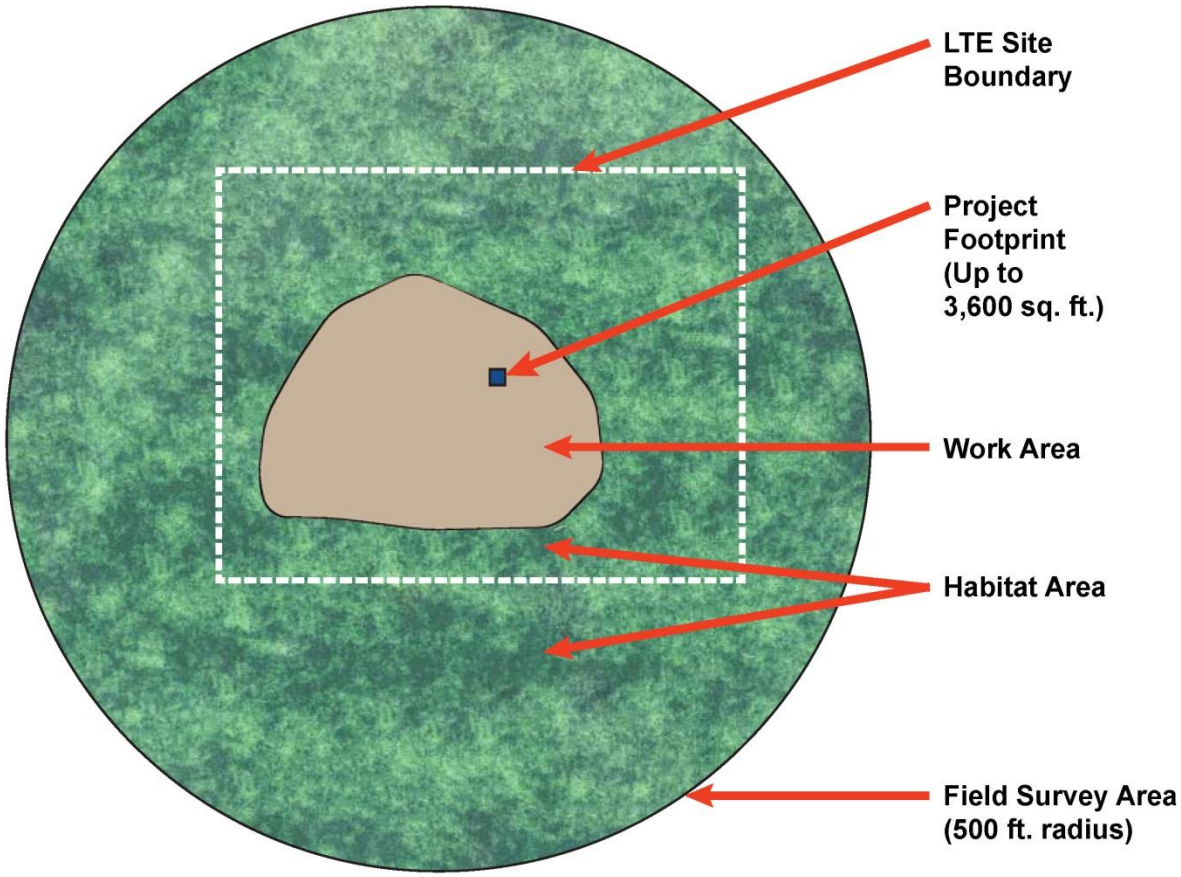


Figure is intended for illustrative purposes only, and does not represent any individual LTE site.

LTE Site. Each LTE site is a publically-owned real property parcel, portion of a parcel, or combination of parcels available to the Authority for proposed development. The LTE site boundary defines the outer bound where work could occur for this proposed project. Each LTE site has been pre-designated by the Authority, and each contains the work area and project footprint.

Work Area. This is an area generally defined as that contained within an LTE site that does not contain native vegetation or serve as habitat for special status species. The work area on each site will be refined during the site lease agreement discussion with the land-administering agency and during the course of planning, design, and construction permitting processes. The work area contains the project footprint.

Project Footprint. The project footprint is defined as the actual area that would be potentially disturbed for construction and staging during the process of site development. The project

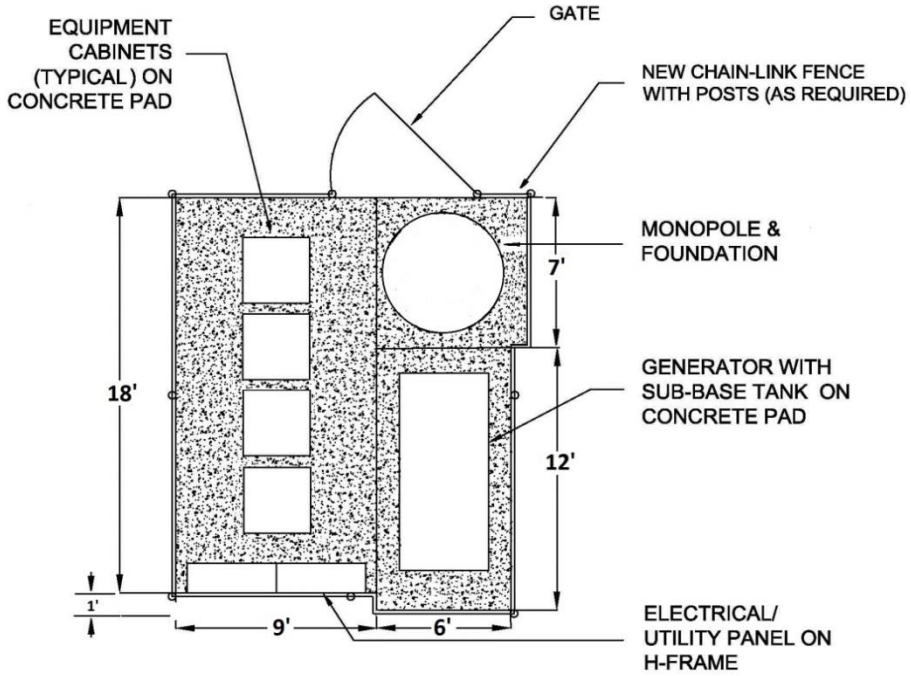
footprint is limited to a maximum of 3,600 square feet per site, and it cannot exceed the boundary of the work area on a site. On federally-administered sites, the permit application and construction drawing to be filed with each federal agency will include a project footprint to be reviewed and approved by the authorized federal representative during the permitting process.

Field Survey Area (FSA). An FSA is used primarily for the analysis of biological resources in this EA and was identified on maps using a 500-foot radius circle centered on a presumed LTE antenna location within the site boundary. The FSA encompasses the LTE site, work area, and project footprint. At some larger LTE sites the boundary of the FSA and the LTE site boundary coincide. Also, for some sites, the FSA was increased beyond 500 feet to account for species that could be potentially affected at those distances.

Because the exact location of proposed new ground disturbance would be determined during the detailed design process, the analysis in this EA relies on reasonable assumptions and approximations based on the anticipated design at each site.

A plan view of a generic LTE site consisting of a monopole tower, outdoor electronic equipment cabinets, and ancillary equipment is shown in Figure 2.1-3. Not shown, but included in the ground disturbance estimate identified above and integral to LTE site development, electrical and network interconnection components would be required at many sites.

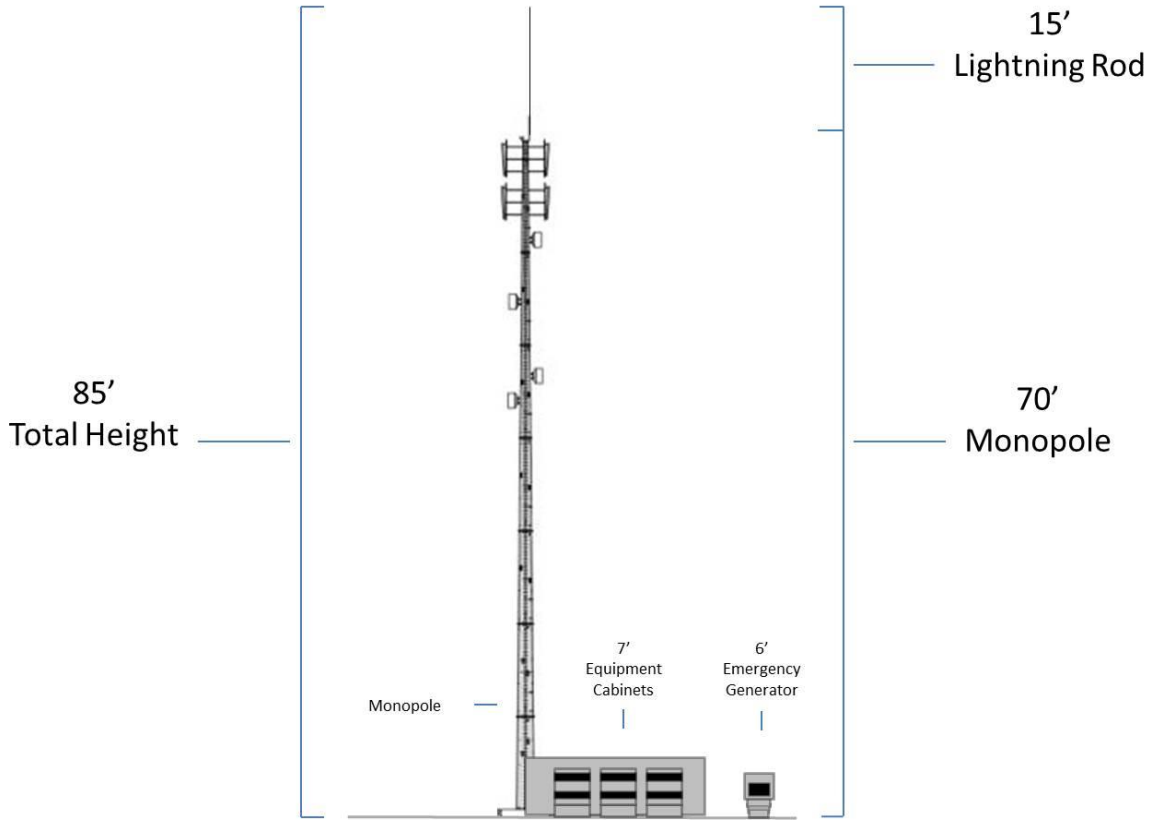
Figure 2.1-3
Plan View of Generic Proposed LA-RICS LTE Site with New Monopole Installation



Source: LA-RICS Authority

Figure 2.1-4 provides an example elevation drawing of a typical monopole with lightning rod attached, and illustrates equipment cabinets and an emergency generator. The individual components associated with the Proposed Action are intended to support new eNodeB and/or microwave communications equipment (i.e., radio and antenna) infrastructure.

Figure 2.1-4
Example of Typical Site Installation Components



Source: LA-RICS Authority

2.1.2 Site Equipment

Major infrastructure components of the Proposed Action are summarized below.

A. Monopoles

Monopole installation is proposed at up to 223 LTE sites under the Proposed Action. The monopole would be a self-supporting hollow steel structure up to 70 feet tall, approximately seven feet in diameter at the base. At sites with height restrictions, monopoles would be as short as 28 feet. Lightning rods ranging from one foot to 15 feet would be attached at the apex of each monopole, and the overall height of the monopole with appurtenance would be up to 85 feet above ground level. Excavation for the monopole would be approximately seven feet in diameter and up to 36 feet deep for the construction of concrete pier foundation. At completion, the foundation's above-grade concrete cap would be approximately 7 feet by 7 feet.

Some monopoles would be disguised as palm trees, pine trees, flagpoles, or hose towers, or incorporated into architectural elements. Disguises would be designed in coordination with the appropriate jurisdiction, including federal, state, and local land-administering agencies. On sites identified for construction on federal lands, LA-RICS will disguise monopoles and other LTE site structures in accordance with the USFS' "Built Environment Image Guide" and other applicable federal guidance. Figure 2.1-5 depicts a typical undisguised monopole, while Figure 2.1-6 shows examples of disguised monopoles.

Figure 2.1-5
Typical Undisguised Monopole

Source: LA-RICS Authority. Note: photo depicts typical 70-foot monopole with transmission/receiving equipment, and 15-foot lightning rod.

Mounted on each new monopole would be antennas and appurtenances similar to those illustrated in Figure 2.1-7 and Figure 2.1-8, and described below.

- Up to four panel antennas would be installed on each of three T-arms (i.e., up to 12 panel antennas per monopole). The three T-arms would be installed 120 degrees apart at the same elevation near the top of the monopole.
- Up to eight microwave backhaul antennas or dishes would be installed on each monopole, each approximately three feet in diameter. The number of microwave antennas that would be placed on a specific antenna support structure would depend on system requirements, the unobstructed backhaul paths or line-of-sight from the site, and the availability of

existing fiber to use for backhaul instead of microwave. No new LTE-dedicated fiber installation would be required.

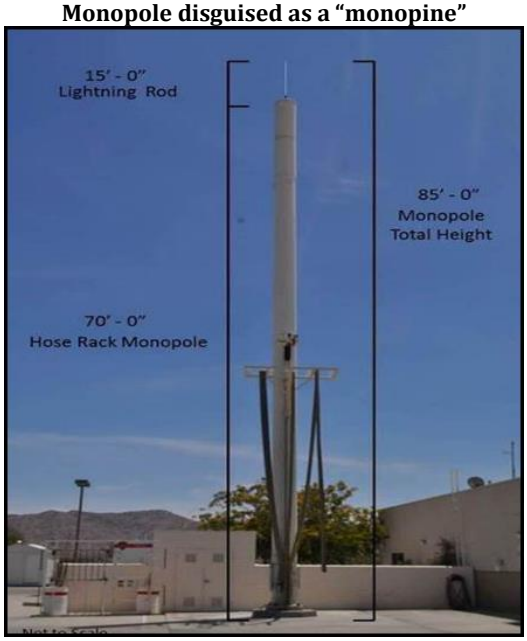
- A lightning rod that is no taller than 15 feet would be installed on top of each monopole.
- Other appurtenances and attachments include step bolts, safety-climb/fall arrest system, coaxial and other types of antenna cables, and ground wire for lightning protection. Some tower-top electronics would also be included in the installation.

Figure 2.1-6
Disguised Monopole Examples

Monopole disguised as a "hose tower" at a fire station

Monopole disguised as a "monopine"

Monopole disguised as flagpole



Monopole disguised as hose tower

Source: LA-RICS Authority

Figure 2.1-7
Example of Panel Antenna Arrays on T-Arms

Source: LA-RICS Authority

Figure 2.1-8
Example of Microwave Dish Mounted on Monopole

Source: LA-RICS Authority

B. Roof-Mounted/Wall-Mounted Antennas

At six sites (Table 2.1-1), antenna structures would be mounted on the rooftop penthouse, parapet, or the wall of an existing building. They would be up to 34 feet (including a 15-foot lightning rod, if one does not already exist) above existing rooflines. Figure 2.1-9 provides an illustration of wall-mounted broadband panel antennas. Structural analysis conducted during later design phases of this action would also dictate whether a roof-mount or wall-mount would be the preferred application. An outdoor equipment cabinet would be mounted on the roof near the antennas. Ground disturbance for ancillary equipment and other appurtenances (e.g., generators) at sites with roof- or wall-mounted antenna installation would be similar to that described for monopole sites.

Table 2.1-1
Proposed LA-RICS LTE Sites with Rooftop or Wall-mounted Installation

Site ID	Facility Name
CCT	Criminal Courts Building
LACHAR	LAC/Harbor + UCLA Medical Center
LACOLV	LAC/Olive View + UCLA Medical Center
LACUSC	LAC/USC Medical Center
LBPDHQ	Long Beach Police Department Headquarters
SCH*	San Pedro City Hall
TOTAL SITES: 6	

Note: * Building listed in National Register of Historic Places
Source: LA-RICS Authority

Figure 2.1-9
Example of Wall-mounted Broadband Panel Antennas

Source: LA-RICS Authority

C. Equipment Cabinets

Each LTE site would be equipped with up to four lockable equipment cabinets, used to house the eNodeB and backhaul equipment, network equipment, and backup batteries. The number of cabinets would depend on the number of backhaul links at each site for the PSBN. At up to 223 sites, the cabinets would be located on new concrete pads outdoors. Standard outdoor cabinets would be 3 feet wide, 3 feet deep, and 7 feet high, and mounted on 18-foot by 9-foot (162 square feet), 12-inch thick concrete pad foundations (see Figure 2.1-3). Figure 2.1-10 depicts an example of typical LTE outdoor equipment cabinets. If site space were available, the equipment cabinets could be collocated with emergency generators (described below) on concrete pads up to 234 square feet, 12 inches thick. At the remaining six non-collocation sites, equipment cabinets would be installed outdoors on the roof of existing buildings, and at two collocation sites, existing shelters or buildings would be used to house the equipment cabinets indoors. No ground disturbance would be anticipated for indoor cabinet installations.

The cabinets would be designed to provide steady power, ensure proper electrical grounding, afford appropriate security, and provide protection from the elements for the electrical equipment. Each cabinet would be climate controlled to maintain interior conditions of temperature (64° to 75°F) and relative humidity (30% to 55%). Each cabinet would be equipped with a service light. The equipment cabinets would have at least three feet of front and rear access space to perform repairs.

Figure 2.1-10
Typical Outdoor Communication Equipment Cabinets

Source: LA-RICS Authority

D. Utility Connections

Each LTE site identified for use under the Proposed Action is currently served by utility-provided power. Approximately 222 of the 231 sites are served by either Los Angeles Department of Water

and Power (LADWP) or Southern California Edison (SCE), with the remaining nine sites served by four other local area providers. The LTE equipment would remain connected to existing power grids using existing utility infrastructure, although electrical upgrades may be required at some LTE sites. As part of later project design, a power study report would be prepared for each of the sites to help guide where specific upgrades are required.

For sites where a monopole tower is proposed, underground conduit would be placed in a trench measuring 2 feet wide by 3 feet deep. The underground conduit would be installed to provide electrical wiring and communications cable pathway (1) between the outdoor system components (i.e., the equipment cabinets and the emergency generator) and the nearest utility supply on site premises, and (2) between the monopole and the equipment cabinets if they are placed a distance apart due to site configuration or space limitations. In the first case, electrical conductors to be buried would be run in a minimum 4-inch PVC conduit encased in concrete, and conduit would be run from the H-frame pedestal on the equipment cabinet concrete pad to the utility points of entry or the nearest utility connection with adequate capacity in an existing building or shelter onsite. In the second case, an appropriately sized underground pull-box or "hand-hole," dug by hand or with backhoe, would be installed just below grade next to the monopole towers. The pull-box would be used as a demarcation to interconnect any optical fiber and electrical or communications cables from the monopole to the outdoor LTE equipment cabinets. It is not anticipated that trenching would exceed 500 feet at any LTE site. Like all other site activities, trenching would occur only in previously disturbed or developed designated work areas.

Subject to system design, at a few sites alternate communications cable pathways, such as aboveground ice bridges, might be used between the monopole and the equipment cabinets if the bridge length is sufficiently short and would not obstruct ingress/egress within the site premises. For sites where antennas are proposed to be mounted on a rooftop penthouse or to be mounted to the parapet or wall of an existing building, electric connection would be made via electrical metallic conduits surface-mounted to the roof or through existing cable pathways in the building.

E. Backup Power Supply

The LTE system components would require backup electrical power to provide continuity of service during failure of the primary (i.e., utility-provided) power. To ensure continuous network operations during power emergencies, each LTE site would rely on backup batteries (Figure 2.1-11) and diesel-powered generators (Figure 2.1-12).

For use during times of commercial power outage, redundant strings of -48 volt direct current (DC) batteries, equipped with rectifiers, power control modules, low-voltage disconnect, breakers, and potentially DC-DC converters and inverters would be used to power eNodeB and the backhaul microwave equipment. Battery equipment would be rack-mounted inside the equipment cabinets at 231 sites.

The batteries could deeply discharge (i.e., use most of their capacity) and provide power to the communications equipment until an emergency generator is electromechanically switched on to charge the batteries, supply power to the LTE equipment and maintain system operation. If the

generator does not switch on, the batteries would provide continuity of service during the initial eight hours of commercial power failure.

Up to 229 sites would be equipped with a 35kW diesel generator at ground level; at the two collocation sites, existing generator equipment would be used. Each new emergency generator would be enclosed in a noise-reducing structure, and supplied with diesel fuel from an integrated, double-walled sub-base fuel tank (approximately 300 gallons) or from existing tanks already onsite that provide up to five days of backup power. The fuel tank would meet or exceed industry standards, such as Underwriter Laboratories (UL) standards, for aboveground tanks for flammable and combustible liquids, and would comply with applicable codes, ordinances, and regulatory requirements. As mentioned previously, where space is available, at sites where monopole towers are proposed, emergency generators and their underlying fuel tanks would be collocated with proposed equipment cabinets on a single 234-square-foot concrete pad. Where site space is not available for this configuration, each generator and fuel tank would require a 12-inch thick concrete pad of approximately 72 square feet (12 feet by 6 feet).

F. Security

A number of security features would be provided at the LTE sites to prevent tampering or damaging of equipment and to ensure that the system remains operational in the event of a power outage. These features include fencing, lighting, alarms and sensors, and signage.

Figure 2.1-11
Batteries for Backup Power (Representative Illustration)

Source: LA-RICS Authority

Figure 2.1-12
Emergency Generator with Sub-base Fuel Tank (Representative Illustration)

Source: LA-RICS Authority

Fencing

Most of the proposed LTE sites are existing public safety facilities and would not require additional fencing. At 10 or fewer sites, existing fencing may require minor upgrades or modifications. Where no or insufficient perimeter fencing currently exists at the project location, up to 100 feet of new fencing would be provided around the monopole, outdoor equipment cabinets and supporting infrastructure to limit access to LTE components. In these circumstances, a 7-foot tall chain link fence topped by 1½ feet of barbed wire would be constructed to surround project components. New fence would be attached to standard steel pipe posts at 7- to 10-foot intervals. Each post would be embedded in a concrete post footing 9 to 12 inches in diameter and 38 inches deep.

Lighting

For the LTE equipment cabinets that would be installed at ground level at non-collocation sites, exterior security lighting would be provided by a 100-watt (equivalent) energy efficient fluorescent luminaire, secured in a weatherproof protective casing, mounted on the electrical panelboard H-frame pedestal near the equipment cabinets. Lighting on sites located adjacent to residential or other sensitive uses would be shielded and downcast.

Alarms

An alarm system that includes monitors and sensors would be provided at each cabinet location and connected to an existing Network Operation Center**.** Monitors and sensors would have an ability to detect smoke, battery issues, intrusion, temperature, and humidity.

Signage

Warning and informational signs including the following content would be furnished and installed in appropriate locations at the project site and on the exterior of the outdoor equipment cabinet and fence: FCC Antenna Structure Registration number if applicable; BTOP sign (only during the construction period); a sign designating the emergency contact telephone number; the international symbol of electrical shock hazard; "No Trespassing;" and "Maximum Permissible Exposure."

G. Evolved Packet Cores

EPCs are central routers, switches, databases and servers which provide subscription information and authentication, data routing, security key management, policy enforcement, and mobility management (e.g., establishing sessions, handovers, and mobility between Third-Generation Partnership Project (3GPP) and non-3GPP networks). EPC components would be installed in up to two existing facilities that have adequate capacity to support the equipment. Therefore, no new structures or ground disturbance would be required for installation and deployment of the PSBN EPC components.

2.1.3 Construction Activities

This section provides an overview of the anticipated impact-influencing factors associated with construction activities.

A. Ground Disturbance

Implementation of the Proposed Action would require soil excavation for geotechnical investigation and installation of concrete foundations to support new monopoles, and provide foundations for backup generators, equipment cabinets, and ancillary equipment. Disturbance at each proposed LTE site would be limited to less than 3,600 square feet. Total ground disturbance at all 231 LTE sites (combined) would be approximately 19 acres. Most proposed LTE site construction would occur on previously disturbed ground, necessitating only minor grading and removal of existing pavement to install most system components. The exact location and amount of new ground disturbance would not be known until later in the design process. The maximum 3,600 square feet would include disturbance associated with the installation of LTE system equipment, monopole towers, ancillary components and trenching for placement of conduits for utility connection at sites where a new monopole tower is required. Excavation of up to 80 cubic yards of earth, old asphalt and concrete may be required for monopole installation, underground electrical trenching, and preparation for installation of ancillary components. All excavation work would be completed within existing property boundaries. Where feasible, excavated earth would be used as backfill, and any excess earth, asphalt or concrete would either be exported to sites that require import of earth, or taken to a facility authorized to accept such waste. Broken asphalt or concrete would be patched to match the adjacent area, and graded unpaved area would be re-seeded for erosion control as necessary. Water would be applied during construction to reduce potential fugitive emissions. It is anticipated that no more than 1,000 gallons of water would be used at any site.

B. Impervious Surfaces

New concrete would be poured for monopole foundations and caps, for use in pads to support equipment cabinets and emergency generators, and for fence posts. Up to 300 square feet of new concrete could be installed at a given LTE site, although in most instances it is expected that new concrete would replace existing impervious surfaces. Exact locations of proposed new impervious surfaces would not be known until later in the design process.

C. Site Cleanup

The contractor would restore all areas that are disturbed by project activities to near-preconstruction conditions following the completion of construction. This would include grading and restoration of sites to original contours and reseeding, as appropriate. In addition, all construction materials and debris would be removed from the project area and recycled, or properly disposed of off-site. The contractor would conduct a final survey to ensure that cleanup activities are successfully completed as required.

D. Equipment

Vehicles, earth moving equipment, concrete trucks, cranes, and water trucks are among the equipment that would be required to implement the Proposed Action (Table 2.1-2). The major construction activity at most sites would be monopole installation. At these 223 sites, the steel monopoles would be delivered via flatbed truck in one or more sections to each site requiring new monopoles, and assembled onsite using a small truck-mounted crane. After assembly, a large crane would be used to lift and set the pole sections into place on the anchor bolts embedded in the concrete foundation. The nuts on the foundation would then be tightened and secured. Appurtenances would be affixed to the monopoles, and ancillary equipment installed, as needed at individual sites. Installation of eNodeB and microwave antennas and monopole appurtenances would be done via a combination of tower climbers and aerial man-lift, depending on the type and elevation of appurtenances being installed. No ground disturbance would be required.

Table 2.1-2 lists the typical construction equipment and the anticipated use with respect to the Proposed Action. Construction crews generally would work up to 10-hour days, up to seven days per week during daylight hours where permitted by local jurisdictions. Appropriate approval from the proper agency would be obtained prior to construction on weekends. It is anticipated that site construction would be phased, but work at any individual site is expected to be completed within 30 days from start to completion. Overall construction activity at all sites is expected to occur within a one-year window.

Table 2.1-2
Proposed LA-RICS Typical LTE Site Construction Equipment Activity*

Equipment	Spec [a]	# / site	Hrs / Day	Days / Site	# Sites	Usage
Demolition						
Concrete Saw	27 hp	1	7	1	231	Break up existing concrete
Mini-excavator/ Loader / Backhoe	73 hp	1	5	1	231	Debris handling
Dump truck	400 hp	1	3	1	224	Haul demolition material
500 gallon water trailer	5 hp	1	7	1	224	Dust control
Site Preparation						
Mini excavator / Loader / Backhoe	73 hp	1	5	2	231	Cut and fill work
Excavation						
Drill rig with augers	206 hp	1	3	2	223	Install fences, excavate foundation holes and bores
Mini excavator / Loader / Backhoe	73 hp	1	5	2	223	Move excavated soil on site
500 gallon water trailer	5 hp	1	7	3	223	Dust control
Pad Construction						
Concrete truck	400 hp	1	4	2	223	Pour concrete
Monopole and Equipment Installation						
3-ton flatbed truck	400 hp	1	3	2	231	Haul materials
25-ton crane	226 hp	1	6	1	231	Set monopole
Aerial man-lift		1	6	6	231	Access structures, string conductor, modify structure arms, tree trimming/removal, etc.
Pickup truck	250 hp	1	3	17	231	Transport construction personnel
Portable generator	7 hp	1	6	10	231	Operate power tools

Source: Equipment assumptions provided by LA-RICS Authority
[a]Horsepower ratings derived from defaults developed for California Emissions Estimator Model®.

E. Materials Storage and Staging Areas

System components would be staged and pre-installed at manufacturers' facilities and shipped and stored locally with the construction materials at a central location or multiple warehouses. At sites with limited laydown areas, all construction material would be shipped to each system site for just-in-time field installation with minimal field staging. If sufficient developed, landscaped or

previously disturbed areas exist on site, material could be staged onsite. No new disturbance would occur for storage of equipment or material at any site.

F. Site Access

Under the Proposed Action, access to each of the LTE sites would be provided via existing dirt or paved roads. No new road improvement or construction is anticipated.

2.1.4 Operations

Following completion of the project, no full-time staff would be required onsite to operate the equipment, although the constructed facilities and installed equipment would be inspected, maintained, and repaired as necessary. Operation and maintenance activities would involve both routine preventive maintenance and emergency procedure testing to maintain service continuity. Aboveground facilities and system components would be inspected annually, at a minimum, for corrosion, equipment misalignment, loose fittings, and other common mechanical problems. Maintenance activities would be conducted utilizing bucket trucks (man-lifts), standard vans, or utility pickup trucks, depending on the scope of maintenance. At most remote sites, vegetation clearance practices would not change from current practice. However, some National Forest System (NFS) land vegetation clearance may be needed beyond areas currently cleared to maintain defensible space for new infrastructure. At all sites, clearance activities would be conducted in accordance with applicable plans, guidelines, and/or regulations.

Operations would generate RF emissions, both from the LTE antenna and from any microwave backhaul antenna. The Proposed Action would comply with FCC guidelines on Maximum Permissible Exposures for both worker safety and the public.

The LTE system components may need to be repaired or replaced to maintain uniform, adequate, safe, and reliable service. Equipment replacement or repair that cannot be diagnosed and performed remotely may require a technician onsite, typically in a standard van or utility pickup truck. Where replacement or repair involves installed antennas, a four-person crew with one truck, a boom (aerial lift) truck, and an assist van or SUV might be required.

A summary of impact influencing factors associated with operation of the LTE system at each site is provided in Table 2.1-3.

Table 2.1-3
Proposed LA-RICS Typical LTE Site Operational Activity*

Activity	Frequency	Intensity	Purpose
Drive to site using passenger vehicle, van, or pickup truck	Once per month	50 miles each way per trip	Site equipment inspection, maintenance and repair. Emergency generator testing.
RF Radio frequency (RF) emissions generated from LTE antenna and backhaul microwave antenna	Continuous	RF emissions in compliance with FCC Maximum Permissible Exposure guidelines	Functional LTE and backhaul signal for day-to-day operations and emergency response
Power draw from utility grid	Continuous	12,500 watts continuous load	Functional site equipment
Monopole lighting emissions	Continuous blinking	No lighting; steady or blinking red; or blinking white lighting per site per FAA guidelines	Compliance with FAA guidelines (monopole lighting) and security (ground-based, down-cast, and shielded)
Security lighting emissions	Sporadic	100 watts	Security lighting would be down-cast, shielded, and either motion-or heat-detection operated (with manual override)

*All assumptions developed by LA-RICS Authority

2.2 No Action Alternative

Under the No Action Alternative, the emergency broadband network would not be constructed. The approximately 50 law enforcement and 31 fire service agencies within Los Angeles County would continue to rely upon a variety of existing technologies and radio frequency spectra, limiting their ability to communicate with each other during routine activities or emergency incidents. The narrow bandwidth available on existing systems would continue to restrict communications between users to simple character-based messaging and database queries, and service, if available through commercial means, would not be prioritized for public safety needs in man-made and natural disasters. While no construction activities would occur, operational activities to maintain, protect, and repair existing communication sites would continue, likely in a manner similar to that discussed for the Proposed Action. These activities are not new and are therefore not analyzed in this EA.

The No Action Alternative would not alter current voice and data communications and would not provide dedicated, reliable high-speed broadband communication support to emergency services personnel.

The No Action Alternative is analyzed in this EA to comply with NEPA requirements and serve as a baseline for comparison of impacts associated with the Proposed Action.

2.3 Alternatives Considered but Eliminated from Further Discussion

Four alternatives to the Proposed Action were considered for development and implementation of an LTE system and evaluated for their ability to meet the Purpose and Need of the project in a feasible manner. The discussion below briefly describes these alternatives and explains why none of them sufficiently and feasibly meet the project's purpose and need and were therefore eliminated from further discussion in the EA.

During the process of selecting sites for inclusion in the Proposed Action, 24 other potential site locations were considered but excluded from the LTE system. In order to meet the aggressive timeline required for construction of the Proposed Action, it would not be feasible to include any site not meeting the stringent environmental criteria required to determine the site(s) eligible for the exemption from CEQA as described in Chapter 1. These 24 sites were therefore eliminated at the early screening stage based on their potential for environmental impacts, or other factors that could make them ineligible for exemption from CEQA.

2.3.1 Collocation

A collocation alternative for all 231 sites would require that sufficient tower and associated infrastructure be available at hundreds of publicly-owned sites throughout the county, as privately-owned parcels would not qualify for the statutory CEQA exemption, a key purpose and need consideration. Additionally, privately-owned telecommunications sites and buildings could be sold, transferred or abandoned, which could compromise the security and continuity of service of FirstNet LTE infrastructure.

Design and maintenance of privately-owned infrastructure may not be sufficiently hardened to meet reliability and survivability performance criteria for public safety operation and could cause reliability issues during an incident if the infrastructure fails.

Existing publicly-owned communications towers in Los Angeles County are currently congested with antennas and earmarked installations. Sufficient space and structural capacity for installation of an entire network is inadequate, especially given that the vertical separation and location on the tower and desired coverage azimuth and backhaul paths would have to be optimized on each of the hundreds of towers involved to accommodate the eNodeB sector antennas and the minimum 3-foot diameter microwave backhaul antennas anticipated for the LA-RICS LTE system. In addition, equipment shelters or existing buildings with sufficient space to house related infrastructure or adequate ancillary building systems (such as environmental control systems) do not exist at many sites meeting other LTE performance requirements. As a result, it was determined that using existing infrastructure for collocation of LTE antennas and appurtenances at all 231 sites would not be a viable option for this proposed project. Therefore, the collocation alternative is not discussed further in this EA.

2.3.2 Buried Cable

While the Proposed Action does rely on the use of buried cable where it currently exists, the buried cable alternative would result in construction of hundreds of miles of new, buried fiber optic cable

using traditional installation techniques. The buried cable alternative is similar to the Proposed Action with respect to overall network architecture, end points, core routes, lateral extensions, splice points, fiber drop, Points-of-Presence (POPs), interconnect points, and community anchor institutions. The primary difference would be that this scheme would rely upon below ground fiber optic cable rather than a primarily wireless network. The fiber cable would be buried at an approximate depth of 36 inches, or deeper if needed. All trenches would be backfilled and re-vegetated immediately after installation of the fiber cable.

Several factors eliminated using buried cable as a viable option for project implementation. Construction of new underground cable would require extensive acquisition of easements and/or right-of-way. Trenching and blasting (in areas where bedrock is encountered) associated with buried cable installation would result in substantial environmental impacts in rural and urban areas. System-wide costs of installing buried cable would be expected to be much greater than those anticipated for activities described under the Proposed Action. In addition, the time required to obtain real property rights and environmental clearance would prevent project development to occur before BTOP grant's deadline, and the major funding source for the project would be eliminated. Therefore, the buried cable alternative could not be developed quickly, in an environmentally-sensitive manner, or affordably. For these reasons it was determined that the buried cable alternative would not be considered feasible, and it is not discussed further in this EA.

2.3.3 Aerial Cable

This alternative would result in construction of hundreds of miles of new, aerial fiber optic cable using traditional installation techniques on existing or new utility poles or towers. Under this alternative, the Authority would enter into a joint pole/tower agreement with existing utility providers (e.g., SCE, LADWP, and at least four other local providers) in order to attach fiber optic cabling to the existing utility pole infrastructure. Aerial installation would utilize metal hardware attachments to hang fiber optic cable to existing wood utility poles carrying existing power and communications cables. If necessary, poles or towers incapable of holding additional infrastructure (i.e., that have deteriorated due to age, or lack sufficient strength or space due to existing cable attachments), would be repaired, upgraded, or replaced to allow for installation of the fiber optic cable.

The aerial cable scenario is similar to the Proposed Action with respect to overall network architecture, end points, core routes, lateral extensions, splice points, fiber drop, POPs, interconnect points, and community anchor institutions. The primary difference is that this alternative relies upon aerial fiber optic cable for backhaul rather than a primarily wireless network as in the Proposed Action.

Several factors led to elimination of using aerial cable as a viable option for project implementation. For instance, the capacity for existing poles and towers to hold additional cable associated with this project could not be ascertained without a detailed system study by the affected utilities. Further, application of new cable to existing or new poles and towers has its own inherent environmental impacts and permitting process, affecting urban and rural areas. The costs of system-wide installation and ongoing maintenance of aerial cable would be expected to be much greater than

reliance on existing infrastructure and new microwave backhaul as described under the Proposed Action. The requirement to assess infrastructure capability and impacts, perform additional permitting associated with that infrastructure, and secure access rights to use the infrastructure would prevent project development to occur before BTOP grant's deadline, and the major funding source for the project would likely be eliminated. Therefore, the aerial cable alternative could not be developed quickly, in an environmentally-sensitive manner, or affordably. For these reasons it was determined that the aerial cable alternative would not be considered feasible, and is not discussed further in this EA.

3.0 AFFECTED ENVIRONMENT

This chapter provides a description of the current conditions of environmental resources analyzed in this EA, and serves as a baseline against which analysis of impacts associated with implementation of the Proposed Action and the No Action Alternative can occur. Each resource described in this chapter has been determined to have some reasonable potential to be impacted by activities associated with the Proposed Action. The geographic extent of this description varies by resource, but is generally characterized as where direct or indirect impacts associated with implementation of the Proposed Action or the No Action Alternative might reasonably be expected to occur.

Resources analyzed include noise, air quality, geology and soils, water resources, biological resources, historic and cultural resources, aesthetic and visual resources, land use, infrastructure, socioeconomic resources, and human health and safety.

3.1 Noise

This section discusses existing noise conditions and regulations in the study area.

3.1.1 Characteristics of Sound

Sound is a pressure wave transmitted through the air. The decibel (dB) scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. Because the human ear is not equally sensitive to all frequencies, a special frequency-dependent rating scale, the "A-weighted" decibel scale (dBA) provides this compensation by discriminating against upper and lower frequencies in a manner approximating the sensitivity of the human ear.

It is widely accepted that the average healthy ear can barely perceive noise level changes of 3 dBA (Caltrans, 2009). The normal sound level range of conversation is between 34 and 66 dBA. Between 70 and 90 dBA, sound is distracting and presents an obstacle to conversation, thinking, or learning. Above 90 dBA, sound can cause permanent hearing loss.[4] Examples of various sound levels in different environments are shown in Table 3.1-1.

Table 3.1-1
Typical Sound Levels

Common Sounds	A-Weighted Sound Level in Decibels	Subjective Impression
Oxygen torch	120	Pain Threshold
Rock band	110	
Pile driver at 50 feet	100	Very Loud
Ambulance siren at 100 feet	90	

[4] U.S. Department of Health and Human Services, National Institute of Health. http://www.nidcd.nih.gov/health/hearing/pages/noise.aspx

Table 3.1-1 (continued)
Typical Sound Levels

Common Sounds	A-Weighted Sound Level in Decibels	Subjective Impression
Garbage disposal	80	Quiet
Quiet urban daytime	50	
Quiet urban nighttime	40	
Bedroom at night	30	
Recording studio	20	Just Audible
	10	Threshold of Hearing
	0	

Sources: Aviation Planning Associates. 1978.

A. Noise Metrics

Several rating scales have been developed to analyze effects of noise on people. Those that apply to this analysis include the following:

- L_{eq}, the equivalent noise level, is an average of sound level over a defined time period (such as 1 minute, 15 minutes, 1 hour or 24 hours). Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.

- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with an approximately 5-dBA "penalty" added to noise during the hours of 7:00 p.m. to 10:00 p.m., and a 10-dBA penalty added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime. The logarithmic effect of these additions is that a 60-dBA 24-hourL_{eq} corresponds to 66.7 dBA CNEL.

- L_{dn}, the day-night average noise, is a 24-hour average L_{eq} with an additional 10-dBA "penalty" added to noise that occurs between 10:00 p.m. and 7:00 a.m. The L_{dn} metric yields values similar to (within 1dBA of) the CNEL metric. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment.

When evaluating environmental community noise levels, a 3-dBA increase over 24 hours is barely perceptible to most people. A 5-dBA increase is readily noticeable. A 10-dBA increase is perceived as a doubling of loudness and would be considered substantial.

B. Typical Noise Attenuation

The noise level from a particular source generally declines as the distance to the receptor increases. Other factors such as the weather and reflecting or shielding also intensify or reduce the noise level at any given location. Typically, a single row of buildings between the receiver and the noise source reduces the noise level by about 5 to 10 dBA. Exterior noise levels can normally be reduced by 15 dBA inside buildings constructed with no special noise insulation (HUD, 1985).

A commonly used rule of thumb for traffic noise is that for every doubling of distance from the road, atmospheric spreading over "hard" or "soft" ground surfaces reduces the noise level by about 3 or

4.5 dBA, respectively. For a stationary source, such as a piece of construction equipment that moves in a limited area,[5] the noise is reduced by at least 6 dBA for each doubling of distance. Further, because of the logarithmic nature of the decibel scale, a doubling of the number of identical pieces of equipment would cause a noise increase of approximately 3 dBA.

3.1.2 Fundamentals of Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of building interior surfaces is called ground-borne noise. Vibration can be described in terms of displacement, velocity, or acceleration. Vibration displacement is the distance that a point on a surface moves away from its original static position. A vibration's velocity is the instantaneous speed at which a point on a surface moves. The acceleration is the rate of change of speed. These vibration descriptors, displacement, velocity, and acceleration, can be used to predict human response, building damage and acceptable equipment vibration. However, vibration velocity and acceleration are most often used in seismic or ground-borne vibration analyses. The ground motion caused by vibration is measured as peak particle velocity (PPV) in inches per second and is expressed as vibration decibels (VdB).[6] Typical outdoor sources of perceptible ground-borne vibration are construction equipment and traffic on rough roads.

3.1.3 Sensitive Receivers

"Noise-sensitive" land uses are those (a) for which quiet is an essential element (e.g., recording studios, outdoor amphitheaters); (b) places where people sleep (e.g., residences, hotels); or (c) institutional land uses where it is important to avoid interference with such activities as speech, meditation and concentration on reading material (e.g., schools, libraries) (FTA, 2006). The regulatory definition of sensitive receivers varies among jurisdictions. For the present analysis, sensitive receivers were defined to include:

- Residential areas (including hotels and motels).
- Schools.
- Child care centers.
- Libraries.
- Parks.
- Religious institutions.
- Medical facilities.

The site data sheets in Appendix B list, for each LTE site, the locations of the three nearest sensitive receivers. They also identify the receiver type for the nearest of the three.

3.1.4 Regulatory Basis for Evaluating Noise

This section addresses short-term noise (i.e., typically associated with construction activity) and long-term noise (typically associated with operations).

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5 Although construction equipment is mobile, it is normally treated as if it were a stationary source, with spherical spreading of sound energy, since movement is over a restricted area.

6 Vibration decibels (VdB) = 20 x log10 (PPV/PPVref), where PPVref = 1 x 10-6 inch per second.

A. Short-term Noise (Construction)

Construction activities, including use of equipment and transportation of building materials and waste, can generate high noise levels for hours at a time. Typically, an analysis of construction noise considers estimated noise emissions from construction sources and, after taking attenuation into account, estimates exposures experienced by nearby sensitive receivers. These exposures are then either compared to a governmental standard or are compared with existing ambient noise levels to determine the amount of increase due to construction activities.

There is no federal standard for *short-term* noise exposure, and none of the federal agencies that manage lands upon which LTE sites are proposed has agency- or facility-specific short term noise exposure standards.

For this analysis, the threshold of concern for short-term noise exposure was 55 dBA L_{eq}, which is the median value of the residential exterior noise exposure limits in the municipal codes of the 44 cities in the study area that have such limits. Most of these limits are also defined in the local codes as "assumed ambient" levels, i.e., ambient noise values to be used when measurement data are unavailable. If a new source of noise added 55 dBA L_{eq} to an existing ambient level of 55 dBA L_{eq}, the new ambient noise level would be about 58 dBA L_{eq}, or an increase of about 3 dBA L_{eq}. The criterion is therefore somewhat conservative, because, as noted above, the increase needs to be 3 dBA L_{eq} to be noticeable.

The site data sheets in Appendix B include, for each site, the local jurisdiction's limits on residential exterior noise levels.

B. Long-Term (Operational) Noise

The California Department of Health Services (DHS) has studied the correlation of noise levels with their effects on various land uses. The most current guidelines were issued in 1987 and are contained in the "General Plan Guidelines" issued by the Governor's Office of Planning and Research in 2003 (OPR, 2003). These guidelines establish four categories for judging the severity of noise intrusion on specified land uses:

- Normally Acceptable: Is generally acceptable, with no mitigation necessary.
- Conditionally Acceptable: May require some mitigation, as established through a noise study.
- Normally Unacceptable: Requires substantial mitigation.
- Clearly Unacceptable: Probably cannot be mitigated to a less-than-significant level.

The types of land uses addressed by the state standards and the acceptable noise categories for each are presented in Table 3.1-2. There is partial overlap between acceptable and unacceptable noise exposures for each land use category, which indicates that judgment is required in determining the acceptable noise exposure for different situations. Long-term noise exposures resulting from the project were compared with these criteria.

Table 3.1-2
Land Use Compatibility for Long-Term Community Noise Sources

Land Use Category	Noise Exposure (dBA, CNEL)						
	55	60	65	70	75	80	
Residential – Low-Density Single-Family, Duplex, Mobile Homes							
Residential – Multiple Family							
Transient Lodging – Motel, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							

Table 3.1-2 (continued)
Land Use Compatibility for Long-Term Community Noise Sources

Land Use Category	Noise Exposure (dBA, CNEL)					
	55	60	65	70	75	80
Industrial, Manufacturing, Utilities, Agriculture						

	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.
	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 included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.
	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.
	Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: State of California, General Plan Guidelines, Governor's Office of Planning and Research, 2003.

3.1.5 Existing Ambient Noise Levels

Ambient noise levels vary depending on land use type. The 231 LTE site locations range from undeveloped forest to highly urbanized industrial areas. Of the 231 sites, six are in remote areas, where sounds of infrequent aircraft, light highway traffic, and occasional wildlife contribute most of the ambient sound levels. Ambient sound levels in such remote areas typically range from about 30 to 50 dBA. Twenty-two sites are in rural areas, where highway traffic and farm machinery are predominant; ambient noise levels in these areas are generally about 50 to 60 dBA. For the 203 sites in urban areas, the sound generated by automobiles and trucks, construction activities, machinery, rail and air traffic, and other human activities, can result in ambient levels of 60 dBA to 70 dBA during the daytime.

3.2 Air Quality and Greenhouse Gases

This section presents information on air pollutants of interest to the LTE project, the regulatory setting, existing air quality, and sensitive receptors.

3.2.1 Description of Pollutants of Concern

This evaluation addresses three general categories of air pollutants that would be associated with project construction and/or operation: criteria pollutants, hazardous air pollutants, and greenhouse gases (GHG).

A. Criteria Pollutants and Their Precursors

Criteria air pollutants are those for which both federal and state ambient air quality standards (as maximum ambient concentrations) have been established to protect public health and welfare. The criteria pollutants of concern to the project are nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter (PM), and ozone (O_3).[7] Presented below are descriptions of the criteria pollutants of concern and their health effects. Hydrocarbons (HC) are also discussed; although they are not criteria pollutants *per se*, they react in the atmosphere with nitrogen oxides and sunlight to form ozone, which is a criteria pollutant.

Nitrogen Oxides (NO_x). Nitrogen oxides are essential ingredients in the chemical reactions that lead to formation of ozone (see below) in air. They can also combine in the atmosphere with various types of airborne compounds to form particulate matter (see below). Emissions of NO_x from the proposed project could lead to violation of ambient air quality standards for several pollutants. The two major forms of NO_x are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2, which is a criteria pollutant, is a reddish-brown pungent gas formed by the combination of NO and oxygen in the atmosphere. NO_2 is an acute respiratory irritant and eye irritant, and increases susceptibility to respiratory illness. A third form of NO_x, nitrous oxide (N_2O), is a GHG, and is discussed below.

Carbon Monoxide (CO). Carbon monoxide is a colorless, odorless non-reactive pollutant produced by incomplete combustion of carbon substances (e.g., gasoline or diesel fuel). The primary health effect associated with CO is its binding with hemoglobin in red blood cells, which decreases the ability of these cells to transport oxygen throughout the body. Prolonged exposure can cause headaches, drowsiness or loss of equilibrium, and high concentrations are lethal.

Particulate Matter (PM). Particulate matter consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes and mists. Two forms of PM, respirable particles and fine particles, are regulated. Respirable particles, or PM_{10}, include that portion of the particulate matter with an aerodynamic diameter of 10 micrometers (i.e., 10 millionths of a meter or 0.0004 inch) or less. Fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 micrometers (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial,

[7] Sulfur dioxide (SO_2) and lead are also criteria pollutants. Because the proposed project would have no significant sources of emissions of these pollutants, however, they are not included in this analysis.

agricultural, construction, and transportation activities. However, wind action on the arid landscape also contributes substantially to the local particulate loading. Fossil fuel combustion accounts for a significant portion of $PM_{2.5}$. In addition, ammonia reacts in the atmosphere with NO_x to form inorganic nitrates, a type of particulate matter. Both PM_{10} and $PM_{2.5}$ may affect the human respiratory system, especially in those persons who are naturally sensitive or susceptible to breathing problems.

Ozone (O_3). Ozone is a secondary pollutant produced through a series of photochemical reactions involving reactive organic gases (ROG) and NO_x. O_3 creation requires ROG and NO_x to be available for approximately three hours in a stable atmosphere with strong sunlight. Because of the long reaction time, peak ozone concentrations frequently occur downwind of the sites where the precursor pollutants are emitted. Thus, O_3 is considered a regional, rather than a local, pollutant. The health effects of O_3 include eye and respiratory irritation, reduction of resistance to lung infection, and possible aggravation of pulmonary conditions in persons with lung disease. O_3 is also damaging to vegetation and untreated rubber.

Hydrocarbons (HC). Hydrocarbons are compounds comprised primarily of atoms of carbon and hydrogen. Emissions of both total organic gases (TOG) and ROG are inventoried by the state and local agencies. ROG, also known as volatile organic compounds (VOC), have relatively high photochemical reactivity. The principal nonreactive[8] HC is methane (CH_4), which is also a greenhouse gas, and is discussed below. The major source of ROG associated with the project is the incomplete combustion of fossil fuels in internal combustion engines. Effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants. ROG are also transformed into organic aerosols in the atmosphere, contributing to higher levels of fine particulate matter and lower visibility.

B. Hazardous Air Pollutants

A toxic air contaminant (TAC) is defined by California law as an air pollutant that "may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health" (California Health and Safety Code § 39655a). The Environmental Protection Agency (EPA) uses the term hazardous air pollutant (HAP) in a similar sense. The main stationary source of TACs from LA-RICS operations would include combustion of diesel fuel in standby electrical generators. Emissions of mobile source air toxics (MSAT) (EPA, 2001; Burbank, 2006; EPA, 2007) are often associated with on-road motor vehicle traffic.

C. Greenhouse Gases

Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth and therefore contribute to the greenhouse effect and global warming. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. Global temperatures are expected to continue to rise as human activities continue to add carbon dioxide, methane, nitrous oxide, and other greenhouse (or

[8] Almost all HC are photochemically reactive to some extent. State and local emission inventories include TOG because "nonreactive" HC, in sufficient atmospheric concentrations, have some photochemical reactivity.

heat-trapping) gases to the atmosphere. Since 1900, the Earth's average surface air temperature has increased by about 1.2 to 1.4°F. The warmest global average temperatures on record have all occurred within the past 10 years, with the warmest years being 2005 and 2010 (EPA, 2012a). Most of the U.S. is expected to experience an increase in average temperature. Precipitation changes, which are also very important to consider when assessing climate change effects, are more difficult to predict. Whether rainfall will increase or decrease remains difficult to project for specific regions (EPA, 2012a, 2012b, 2012c, 2012d; IPCC, 2007a). The extent of climate change effects, and whether these effects prove harmful or beneficial, will vary by region, over time, and with the ability of different societal and environmental systems to adapt to or cope with the change. Human health, agriculture, natural ecosystems, coastal areas and heating and cooling requirements are examples of climate-sensitive systems. Rising average temperatures are already affecting the environment. Some observed changes include shrinking of glaciers, thawing of permafrost, later freezing and earlier break-up of ice on rivers and lakes, lengthening of growing seasons, shifts in plant and animal ranges and earlier flowering of trees (EPA, 2012a, 2012b, 2012c, 2012d; IPCC, 2007a).

For the purpose of this analysis, GHG are defined as carbon dioxide (CO_2), CH_4, N_2O (a form of NO_x), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Associated with each GHG species is a "global warming potential" (GWP), which is defined as the ratio of degree of warming to the atmosphere that would result from the emission of one mass unit of a given GHG compared with one equivalent mass unit of CO_2 over a given period of time. By this definition, the GWP of CO_2 is always 1. The GWPs of methane and nitrous oxide are 21 and 310, respectively (California Climate Action Registry, 2009). "Carbon dioxide equivalent" (CO_2e) emissions are calculated by weighting each GHG compound's emissions by its GWP and then summing the products.

3.2.2 Regulatory Setting

This section will focus upon those federal, state and local standards and regulations that can be used to judge the intensity of public exposure to air pollutants generated by the LTE project.

A. Relevant Provisions of the Federal Clean Air Act and the California Clean Air Act

The federal Clean Air Act (CAA), as amended, establishes federal policies and programs for regulating air pollution, although in the project area, air pollution management has largely been delegated to the California Air Resources Board (CARB) and two local agencies: the South Coast Air Quality Management District (SCAQMD) and the Antelope Valley Air Quality Management District (AVAQMD).

As required by the CAA, national ambient air quality standards (NAAQS) have been established for criteria pollutants. Through the California Clean Air Act (CCAA), the State of California has also established ambient air quality standards, known as the California Ambient Air Quality Standards (CAAQS).[9] These standards are generally more stringent than the corresponding federal standards

[9] California Health and Safety Code § 39606 mandates adoption of the CAAQS; the standards themselves are listed in California Code of Regulations § 70200.

and cover four additional pollutants or pollutant classes (sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles). NAAQS and CAAQS are summarized in Table 3.2-1.

Table 3.2-1
Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standards[1]	Federal Standards[2]	
		Concentration[3]	Primary[3,4]	Secondary [3,7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	—	Same as Primary Standard
	8 Hour	0.07 ppm (137 µg/m³)	0.075 ppm (147 µg/m³)	
Respirable Particulate Matter (PM_{10})[6]	24 Hour	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	—	
Fine Particulate Matter ($PM_{2.5}$)[6]	24 Hour	No Separate State Standard	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	12.0 µg/m³	15 µg/m³
Carbon Monoxide (CO)	8 Hour	9 ppm (10 mg/m³)	9 ppm (10 mg/m³)	—
	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)	—	—
Nitrogen Dioxide (NO_2)[7]	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	Same as Primary Standard
	1 Hour	0.18 ppm (339 µg/m³)	0.1 ppm (188 µg/m³)	None
Sulfur Dioxide (SO_2)[8]	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[8]	—
	3 Hour	—	—	0.5 ppm (1300 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)[8]	—
Lead[9, 10]	30 Day Average	1.5 µg/m³	—	—
	Calendar Quarter	—	1.5 µg/m³(for certain areas)[10]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m³	
Visibility Reducing Particles[11]	8 Hour	Extinction coefficient of 0.23 per kilometer–visibility of 10 miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70%.	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)		
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 µg/m³)		

Table 3.2-1 (continued)
Ambient Air Quality Standards for Criteria Air Pollutants

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter–-PM_{10}, $PM_{2.5}$, and visibility reduction particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
5. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
6. As of December 14, 2012, the annual primary PM2.5 standard changed from 15 $\mu g/m^3$ to 12.0 µg/m3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
7. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
8. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
9. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
10. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
11. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board, "Ambient Air Quality Standards." Internet URL: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. (June 4, 2013).

The primary standards have been established to protect the public health. The secondary standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation and other aspects of the general welfare.

As will be discussed below, both the South Coast Air Basin (SCAB), which includes the non-desert portion of Los Angeles County, and the Mojave Desert Air Basin (MDAB), which includes the rest of the project area and surrounding desert region, are "nonattainment" or "maintenance" areas for at least one of the NAAQS.[10] Pursuant to the General Conformity Rule,[11] a federal agency must perform a general conformity analysis[12] for any federal action in nonattainment or maintenance areas where

[10] In a nonattainment area for a given priority pollutant, ambient concentrations of that pollutant exceed the corresponding standard. A maintenance area for a given priority pollutant is a former nonattainment area that now meets that pollutant's ambient air quality standard but must continue implementing the control measures that resulted in attainment.

[11] 40 CFR Part 93, "Determining Conformity of Federal Actions to State or Federal Implementation Plans."

[12] Prescribed in 40 CFR § 93.158 but not described here because it does not apply. (See Section 4.2.)

the total of direct and indirect emissions of the applicable criteria pollutants or their precursors exceeds certain thresholds. The LA-RICS project is considered a federal action since it requires federal approval and will receive federal funding. It is therefore potentially subject to a general conformity analysis.

The emission thresholds that trigger a general conformity determination for nonattainment and maintenance pollutants in the project area are identified in Table 3.2-2.

Table 3.2-2
Applicability Thresholds for General Conformity Analysis

Pollutant	Emissions Threshold (tons per year)	
	SCAB	MDAB
VOC	10	25
NO_x	10	25
CO	100	100
PM_{10}	70	
$PM_{2.5}$	100	

Source: 40 CFR § 93.153(a)(1) and 40 CFR § 93.153(a)(2).

Note that, because the MDAB is unclassified for PM_{10} and $PM_{2.5}$, no thresholds are defined for those pollutants.

A project may have emissions below the criteria in Table 3.2.2-2, yet still require a general conformity determination if it would[13]

- ”Cause or contribute to any new violations of any standard in any area;
- “Interfere with provisions in the applicable State Implementation Plan [see below] … ;
- “Increase the frequency or severity of any existing violation of any standard in any area; or
- “Delay timely attainment of any standard or any required interim emissions reductions or other milestones …”

B. Air Quality Attainment Plans

South Coast Air Basin. The SCAQMD is required to produce plans to show how air quality will be improved in the region. A multilevel partnership of governmental agencies at the federal, state, regional, and local levels implements the programs contained in these plans. Agencies involved include the EPA, CARB, local governments, the Southern California Association of Governments (SCAG), and SCAQMD. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the SCAB. Following a requirement of

[13] 40 CFR 93.153(j).

the CCAA,[14] the SCAQMD updates its AQMP every three years. The 2012 AQMP, which is the latest, was adopted by the SCAQMD Board on December 6, 2012 and submitted to the CARB and the EPA for concurrent review on December 20, 2012 (Wallerstein, 2012). The plan identifies control measures needed to demonstrate attainment with the federal 24-hour standard for $PM_{2.5}$ by 2014 in the South Coast Air Basin. In addition, the 2012 AQMP provides updates on progress towards meeting the 8-hour ozone standard for 2023, an attainment demonstration for the revoked 1-hour ozone standard, a vehicle miles traveled (VMT) offset demonstration for ozone standards, and a report on the health effects of $PM_{2.5}$ (SCAQMD, 2013a).

To achieve its attainment goals, the Final 2012 AQMP includes 21 stationary and 17 mobile source emission control measures. A review of all the control measures identified only one that potentially applies to the proposed project:[15]

> **OFFRD-01 – EXTENSION OF THE SOON PROVISION FOR CONSTRUCTION/INDUSTRIAL EQUIPMENT:** This measure seeks to continue the Surplus Off-Road Option for NO_x (SOON) provision of the statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2014 through the 2023 timeframe. In order to implement the SOON program in this timeframe, funding of up to $30 million per year would be sought to help fund the repower or replacement of older Tier 0 and Tier 1 equipment, with reductions that are considered surplus to the statewide regulation with Tier 4 or cleaner engines.

Participation in the SOON program is mandatory for offroad mobile equipment fleets with more than 20,000 total horsepower; for smaller fleets, the program is voluntary (SCAQMD, 2013b). Where applicable, this program could be used to reduce NO_x emissions from project construction. (See Section 4.2.)

Mojave Desert Air Basin

The AVAQMD's latest plan for attaining the federal 8-hour ozone standard is the *AVAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area)* (AVAQMD, 2008), which was approved by CARB on June 26, 2008 as part of the Western Mojave Desert 8-Hour Ozone Attainment Plan, a joint effort of the AVAQMD and the Mojave Desert Air Quality Management District (Goldstene, 2008). The joint agency plan projects attainment of the federal 8-hour ozone standard by 2021. On July 22, 2009, the CARB submitted the Western Mojave Desert 8-Hour Ozone Attainment Plan and supporting documentation to EPA, Region 9, as a revision to the California SIP. Until the EPA approves this SIP revision, the *2004 Southeast Desert Modified Ozone State Implementation Plan* (AVAQMD, 2004) is in effect.

The *AVAQMD Federal 8-Hour Ozone Attainment Plan* (AVAQMD, 2008) relies primarily upon the enforcement of statewide CARB regulations to achieve compliance within the District. Regulations applicable to construction projects include those that limit emissions from off-road heavy equipment, such as construction equipment. These are discussed below.

[14] California Health and Safety Code § 40925.
[15] SCAQMD (2013a), p. 4-38.

C. Off-Road Equipment Requirements

A discussion of federal and California off-road equipment emissions regulations, focusing on portions of the regulations in effect between June 2014 and June 2015, is provided below.

Federal Off-Road Equipment Regulations

Beginning in 1994, the EPA has issued increasingly stringent emission standards for new diesel-fueled off-road engines, including the types that are used in construction equipment (EPA, 2013b). The sets of standards, called "tiers," include limits on both exhaust emissions and, more recently, on the sulfur content of fuels.[16] "Tier 4," the latest set of standards, is required for nearly all new diesel-fueled off-road engines as of January 1, 2014.[17] Therefore, new engines purchased by the project's construction contractor will have to meet those requirements during the 2014-2015 construction phase. Tier 4 standards represent a substantial reduction in pollutant emissions. For a 208-horsepower crane, for example, Tier 4 NO_x and PM emissions are each reduced by about 96% from the Tier 1 limits that were introduced in 1996.[18]

California Off-Road Equipment Regulations

From 2007 to 2010, the CARB promulgated and amended its In-Use Off-Road Diesel Vehicle Regulation, whose purpose is to reduce PM and NO_x emissions from off-road diesel equipment, including construction equipment (CARB, 2011). However, the main emissions-reducing provisions of the regulation could not be enforced without EPA authorization, which was received on September 13, 2013. The CARB began enforcing these provisions on January 1, 2014 (CARB, 2013).

The In-Use Off-Road Diesel Vehicle Regulation applies to existing equipment greater than 25 horsepower. Vehicles must be intended (by the manufacturer) to operate off-road only. Water trucks do not qualify, because they are intended to travel on roads, even if they might actually be towed from site to site. Most of the equipment subject to the regulation consists of self-propelled, single-engine vehicles. The regulation also applies to double-engine cranes and certain other double-engine equipment.

The regulation's emission reduction requirements will be phased in over about ten years. Until 2016, performance requirements only apply to "large" off-road equipment fleets, i.e., those with a total horsepower of 5,000 or more. The regulation sets NO_x emission targets in the form of horsepower-weighted fleet average emission factors (grams per horsepower-hour). The targets are lowered every year. To comply with the targets, fleet owners must replace older engines with higher-tier engines, add new high-tier engines, eliminate low-tier engines, and/or install NO_x controls.

16 Part of the sulfur in fuel, after combustion and atmospheric reaction, becomes particulate matter.
17 40 CFR Part 1039, "Control of Emissions From New and In-Use Nonroad Compression-Ignition Engines."
18 Calculated by UltraSystems from emission limit data in http://www.dieselnet.com/standards/us/nonroad.php.

D. Local Air Quality Regulations

Both the SCAQMD and the AVAQMD have developed criteria for determining whether emissions from a project are regionally significant. The criteria are useful for estimating whether a project is likely to result in a violation of the NAAQS and/or whether the project is in conformity with plans to achieve attainment. A project is considered to have a regional air quality impact if emissions from its construction and/or operational activities exceed the corresponding significance thresholds.

The two districts' thresholds are not directly comparable. For example, the SCAQMD thresholds are all in terms of daily emissions, while those of the AVAQMD include both daily and annual emissions. The SCAQMD has separate thresholds for construction and operation, while the AVAQMD's thresholds are for either type of activity, whether alone or in combination.

South Coast Air Quality Management District

The SCAQMD has published thresholds of significance for regional impacts, which are summarized in Table 3.2-3, for criteria pollutant emissions during construction activities and project operation. A project is considered to have a regional air quality impact if emissions from its construction and/or operational activities exceed the corresponding SCAQMD significance thresholds.

The SCAQMD has also published guidance on determining the localized significance of construction activities (Chico et al., 2003). The SCAQMD has prepared lookup tables to indicate emission rates presumed to satisfy the ambient thresholds. These tables are applicable for construction projects that affect less than 5 acres per day.

As do all air pollution control districts in California, the SCAQMD issues permits to construct and permits to operate for many categories of air pollutant emission sources. Analysis of SCAQMD Rule 219,[19] however, determined that most construction equipment is exempt from the need to obtain a permit to construct or permit to operate from the District. Sources exempt from permits must, nevertheless, follow applicable District rules.

An important SCAQMD rule that applies to construction activities is Rule 403 (Fugitive Dust).[20] This rule prohibits visible dust emissions from leaving the boundaries of a construction site. It also prescribes a variety of measures that construction contractors must take to reduce dust emissions from excavation, grading, construction vehicle traffic and other dust sources.

[19] South Coast Air Quality Management District, Rule 219 (Equipment Not Requiring a Written Permit Pursuant to Regulation II). Amended May 3, 2013.

[20] South Coast Air Quality Management District, Rule 403 (Fugitive Dust). Amended June 3, 2005.

Table 3.2-3
South Coast Air Quality Management District Significance Thresholds for Regional Impacts

Pollutant	Mass Daily Thresholds (Pounds/Day)	
	Construction	Operation
Nitrogen Oxides (NO_x)	100	55
Volatile Organic Compounds (VOC)	75	55
Respirable Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55
Sulfur Oxides (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Lead	3	3

Source: "SCAQMD Air Quality Significance Thresholds." 2009. Diamond Bar, CA: South Coast Air Quality Management District, http://www.aqmd.gov/ceqa/handbook/signthres.pdf. March 2011. Accessed January 17, 2014.

Antelope Valley Air Quality Management District

The AVAQMD has prepared its CEQA and Federal Conformity Guidelines (AVAQMD, 2011) to assist project applicants and to help District staff evaluate the air quality impacts of proposed activities. According to the AVAQMD, a project has a significant impact if it:

- Generates total emissions (direct and indirect) exceeding the thresholds given in Table 3.2-4; and/or
- Generates a violation of any ambient air quality standard when added to the local background; and/or
- Does not conform with the applicable attainment or maintenance plan(s); and/or
- Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.

Table 3.2-4
Antelope Valley Air Quality Management District Significance Thresholds for Regional Impacts

Pollutant	Pollutant Emission Threshold	
	Annual Emissions (Tons)	Daily Emissions (pounds)
Nitrogen Oxides (NO_x)	25	137
Volatile Organic Compounds (VOC)	25	137
Respirable Particulate Matter (PM_{10})	15	82
Fine Particulate Matter ($PM_{2.5}$)	15	82
Sulfur Oxides (SO_x)	25	137
Carbon Monoxide (CO)	100	548
Lead	0.6	3

Source: CEQA and Federal Conformity Guidelines. AVAQMD, Lancaster, California. August 2011.

AVAQMD Rule 403 (Fugitive Dust) would apply to project construction activities in the District's jurisdiction.[21] This district's Rule 403 is similar to the SCAQMD Rule 403 discussed above.

E. Greenhouse Gas Emissions Control Strategies

Federal Control Strategy

Executive Order 13514 of October 5, 2009 established a strategy towards sustainability within the Federal Government and made reduction of GHG emissions a priority for federal agencies.[22] The order is limited to GHG reduction strategies and measures within federal operations. On February 18, 2010, the CEQ issued draft guidance on consideration of the effects of climate change and GHG emissions in NEPA documents (Sutley, 2010). CEQ does not propose to make this guidance applicable to federal land and resource management actions, but seeks public comment on the appropriate means of assessing the GHG emissions and sequestration that are affected by federal land and resource management decisions.

Although the guidance does not establish thresholds for significance, it proposes that federal agencies consider 25,000 metric tons[23] or more per year of CO_2-equivalent direct GHG emissions "as an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public."[24] The CEQ guidance has not been formally adopted or amended since its issue.

The NTIA's *Environmental Assessment Guidance for BTOP Award Recipients* (USDOC, 2010) acknowledges CEQ's "presumptive effects threshold of 25,000 metric tons of CO_2 equivalent emissions" for when federal agencies should consider GHG emissions and climate change in NEPA.[25]

21 Antelope Valley Air Quality Management District, Rule 403 (Fugitive Dust). Amended April 20. 2010.
22 "Federal Leadership in Environmental, Energy, and Economic Performance." Executive Order 13514 of October 5, 2009. 74 Federal Register 52117-52127 (October 8, 2009).
23 One metric ton equals 1,000 kilograms (about 2,205 pounds).
24 Sutley (2010), p. 1.
25 USDOC (2010), p.10.

The draft CEQ guidance states, "Specifically, if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO_2-equivalent GHG emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public."[26] The CEQ emphasizes that the 25,000 metric tons "is not an indicator of a threshold of significant effects;"[27] rather it is a threshold for considering GHG emissions and climate change in a NEPA document.

Throughout the CEQ memo, the 25,000-metric ton value is referred to as *direct* CO_2-equivalent (CO_2e) emissions. The word "direct" is omitted from the BTOP guidance. The current state of the art of GHG emissions estimation includes indirect GHG sources as well.

California Control Strategy

California has one of the most comprehensive and proactive state government approaches to addressing climate change. The following are the major state policies and regulations that potentially apply to the LA-RICS LTE project.

Executive Order S-3-05 (GHG Emissions Reductions).[28] Executive Order #S-3-05, signed by Governor Arnold Schwarzenegger on June 1, 2005, calls for a reduction in statewide GHG emissions to 1990 levels by 2020 and to reduce GHG emissions to below 80% of 1990 levels by 2050.

The California Global Warming Solutions Act of 2006 (AB 32).[29] The California Global Warming Solutions Act of 2006 (Health and Safety Code § 38500 et seq.) directs the CARB to, among other things, develop a 1990 GHG emission inventory; adopt a statewide GHG emissions limit that is equivalent to the 1990 level (an approximately 25% reduction in existing statewide GHG emissions); adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020; and monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

Executive Order S-01-07 (Low Carbon Fuel Standard).[30] Executive Order #S-01-07 (January 18, 2007) establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020 through establishment of a Low Carbon Fuel Standard. Carbon intensity is the amount of CO_2e per unit of fuel energy emitted from each stage of producing, transporting and using the fuel in a motor vehicle. On April 23, 2009 CARB adopted a regulation to implement the standard.

26 Sutley (2010), p. 1.
27 Sutley (2010), p .2.
28 State of California Executive Department. Executive Order S-3-05. 2005. Internet URL: http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm. Last accessed January 17, 2014.
29 California State Legislation. Assembly Bill No. 32. 2006. Internet URL: http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf. Last accessed January 17, 2014.
30 State of California Executive Department. 2007. Executive Order S-01-07. Internet URL: http://www.arb.ca.gov/fuels/lcfs/eos0107.pdf. Last accessed January 17, 2014.

3.2.3 Existing Ambient Air Quality

Southern California has long been known for its poor air quality, although significant improvements have occurred in recent years. The California Air Resources Board has defined air basins as land areas with generally similar meteorological and geographic conditions throughout. (CARB, 2014). To the extent possible, air basin boundaries are defined along political boundary lines and include both the source and receptor areas. California is currently divided into 15 air basins. All the proposed LTE sites are in either the SCAB or the MDAB, which are shown in Figure 3.2-1. As seen in Figure 3.2-1, the SCAQMD has jurisdiction over all of the SCAB.[31] The AVAQMD has jurisdiction over the Antelope Valley portion of the MDAB.

Air pollution in Los Angeles County is monitored by the SCAQMD and the AVAQMD. Figure 3.2-2 shows the locations of the SCAQMD and the AVAQMD ambient air quality monitoring sites nearest the LA-RICS LTE sites. These monitoring stations collect air quality data to verify that the surrounding regions comply with local, state, and federal air regulations.

A. South Coast Air Basin

Table 3.2-5 shows the area designation status of the SCAB for each criteria pollutant for both the NAAQS and CAAQS. Based on regional monitoring data, the SCAB is currently designated as a nonattainment area for O_3 and $PM_{2.5}$; a federal maintenance area for CO, NO_2, and PM_{10}; and an attainment area for SO_2. Designation of the SCAB as a maintenance area means that, although the SCAB has achieved compliance with the NAAQS for CO, NO_2, and PM_{10}, control strategies that were used to achieve compliance must continue. The federal ozone classification is "extreme" (U.S. EPA, 2012e). An extreme nonattainment area has an 8-hour ozone design value of 0.175 particle per million (ppm) and has an attainment deadline of 20 years after December 31, 2012. (EPA, 2012f.)

Table 3.2-5
Federal and State Attainment Status for the South Coast Air Basin

Pollutants	Federal Classification	State Classification[b]
Ozone (O_3)	Nonattainment (Extreme)[a]	Nonattainment
Particulate Matter (PM_{10})	Maintenance[c]	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Maintenance	Attainment
Nitrogen Dioxide (NO_2)	Maintenance	Nonattainment
Sulfur Dioxide (SO_2)	Attainment	Attainment

Sources: [a]EPA, 2012e.
[b]California Air Resources Board, "Area Designations Maps/State and National." [www.arb.ca.gov/desig/adm/adm.htm]. Accessed December 23, 2013.
[c]EPA, 2013a.

[31] The SCAQMD also has jurisdiction over a portion of the Salton Sea Air Basin (SSAB), which is east of the South Coast Air Basin. Because no LTE sites are in the SSAB, it is not shown in Figure 3.2.1.

Figure 3.2-1
Air Basins and Air Districts in Which LTE Sites are Located

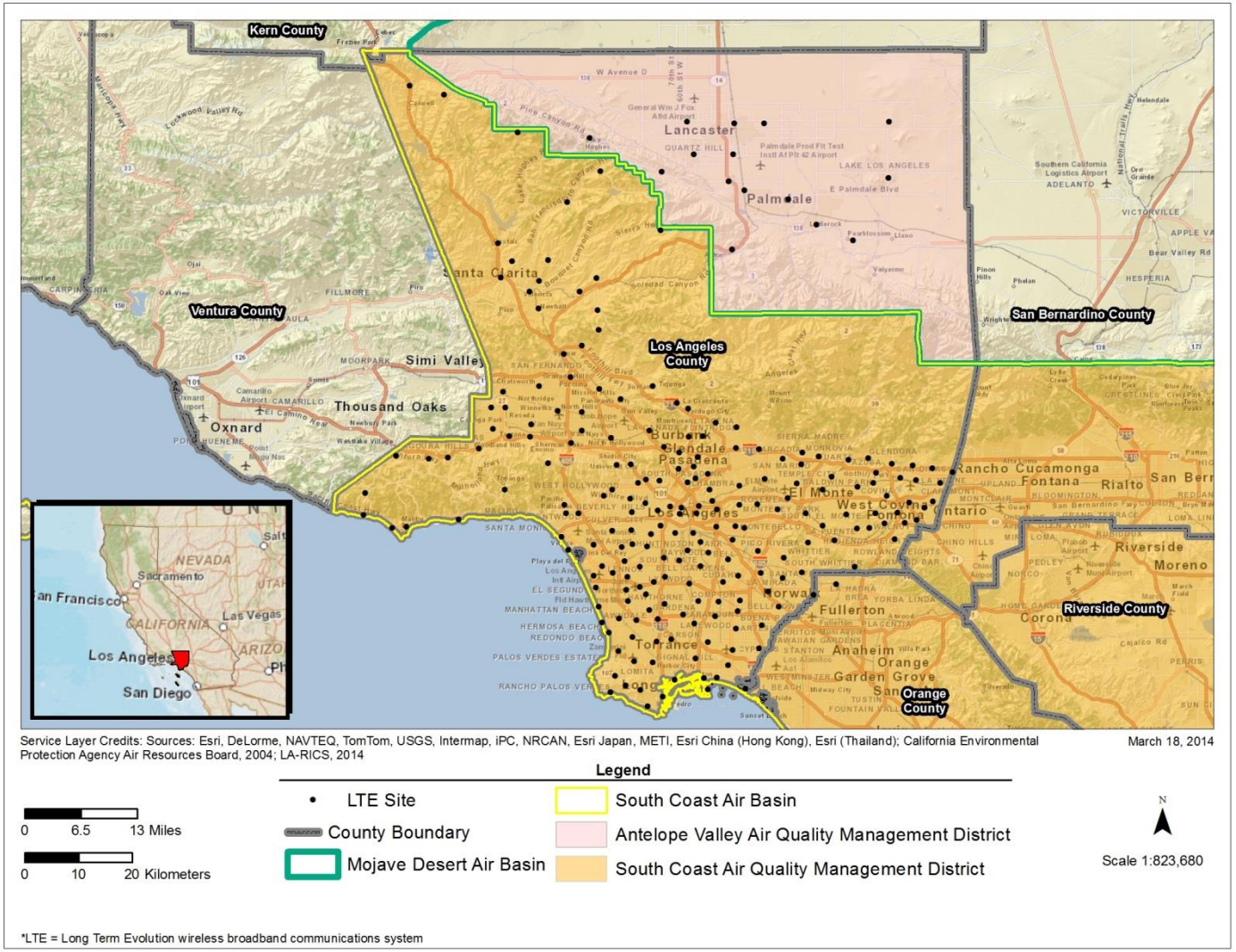
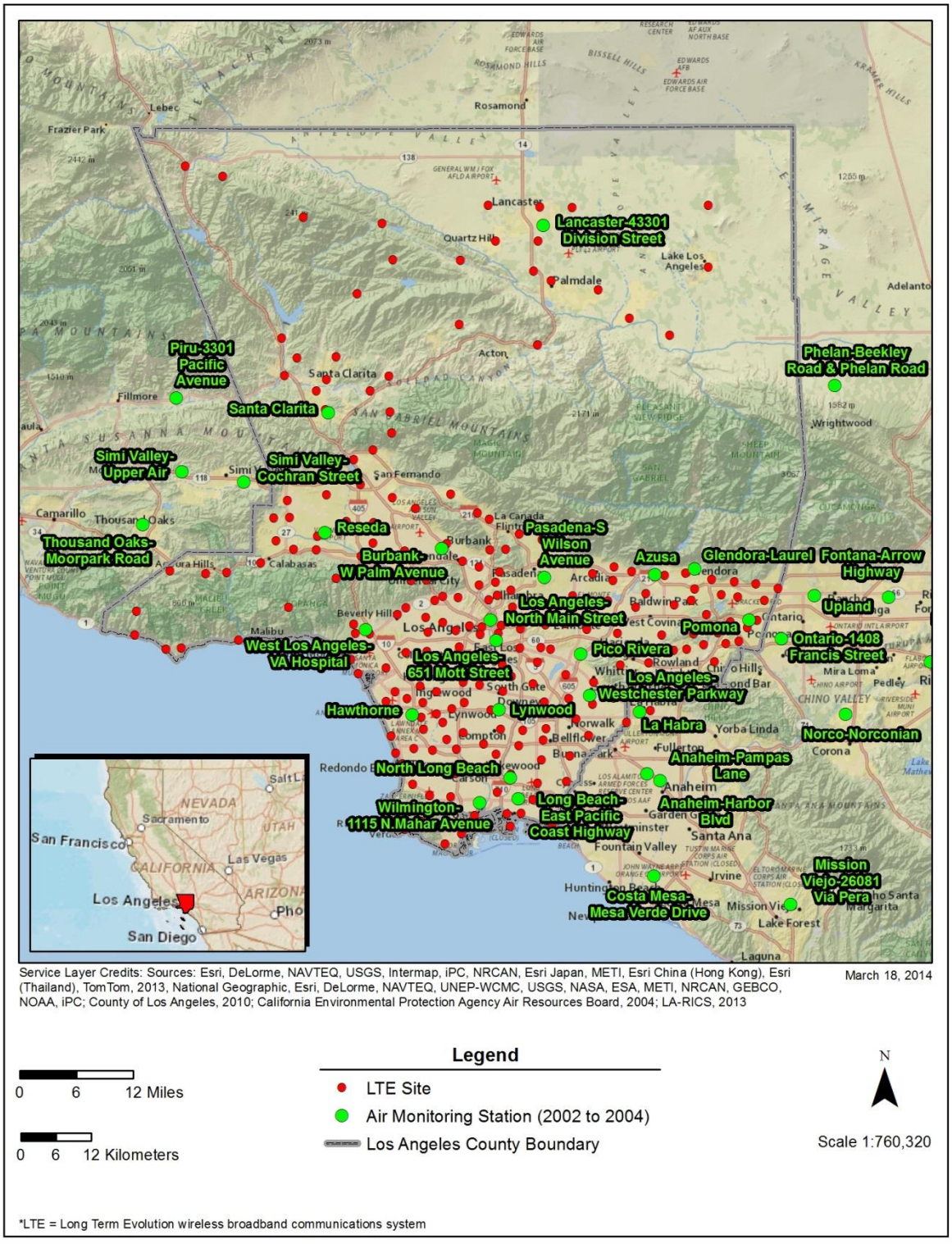


Figure 3.2-2
Air Quality Monitoring Stations Near LTE Sites



B. Mojave Desert Air Basin

Table 3.2-6 summarizes the MDAB's attainment status for criteria pollutants. The MDAB is nonattainment for the state ozone and respirable particulate matter (PM_{10}) ambient air quality standards. The Antelope Valley portion of the MDAB is in attainment for CO, NO2, and SO2. The attainment status for the CAAQS is similar to that for the NAAQS, except that the MDAB is nonattainment for the California PM_{10} standard, while the MDAB attainment status vis-à-vis the NAAQS is not yet classified.

Table 3.2-6
Federal and State Attainment Status for the Mojave Desert Air Basin

Pollutants	Federal Classification	State Classification
Ozone (O_3)	Nonattainment (Severe -15)	Nonattainment (Extreme)
Particulate Matter (PM_{10})	Unclassified	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Unclassified	Unclassified
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment

Sources: Environmental Protection Agency, "California 8-Hour Ozone Nonattainment Areas (2008 Standard)." Green Book. Internet URL: www.epa.gov/air/oaqps/greenbook/ca8.html. Updated December 2013. Last accessed: December 23, 2013; AVAQMD. 2013. "Attainment Status. AVAQMD Designations and Classification." Internet URL: http://www.avaqmd.ca.gov/index.aspx?page=289. Last accessed December 23, 2013.

3.2.4 Sensitive Receptors

This analysis' definition of sensitive receptors for air pollutants is taken from the SCAQMD's methodology for localized significance analysis (Chico et al., 2003), which was used to evaluate the effects of construction emissions. (See Section 4.2.1.A.) Receptor locations are off-site locations where persons may be exposed to the emissions from project activities. Receptor locations include residential, commercial and industrial land use areas; and any other areas where persons can be situated for an hour or longer at a time. These other areas include parks, bus stops, and sidewalks but would not include the tops of buildings, roadways, or permanent bodies of water.

3.3 Geology and Soils

Geologic formations and soils are the oldest and most common foundation material for man-made structures, and, under certain conditions, develop into ideal farmlands. Faults, landslides and underlying geologic formations may affect the stability of overlying structures. Erosion potential may be high in some areas and low in others. Lowland soils derived for a suitable geologic provenance may provide for unique fertile farmlands. This section provides an overview of seismic hazards, soil erosion potential, and potential impacts to farmlands associated with construction and operation of LTE sites.

3.3.1 Regulatory Setting

Below is a summary of regulations that apply to seismic hazards, soil erosion and farmlands for LTE sites.

A. Seismic Safety

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to homes, commercial buildings, and other structures. The Seismic Hazard Mapping Act of 1990 was enacted, in part, to address seismic hazards not covered in the Alquist-Priolo Earthquake Fault Zoning Act, including strong ground shaking, landslides, and liquefaction (quicksand). The Los Angeles County Building Code[32] provides standards and requirements for structures from these damaging effects. The most stringent standards and requirements are applied within "Alquist Priolo Earthquake Fault Zones" where faults are known to have ruptured in the past 11,000 years (Holocene time).

B. Soil Erosion

Section 402 of the Federal Water Pollution Control Act of 1972 (33 USC 1251) (Clean Water Act (CWA)) requires dischargers of potential pollutants, including soil from construction areas, to implement best management practices BMPs to eliminate or reduce pollutants in these discharges. In cases where groundwater discharge is needed, a permit would be required from the Regional Water Quality Control Board (RWQCB) that would specify conditions to minimize soil erosion and the discharge of potential pollutants.[33]

C. Farmland

Section 1541(b) of the federal Farmland Protection Policy Act (FPPA)[34] requires federal agencies to: (1) identify potential farmlands using criteria developed by the National Resource Conservation Service (NRCS) of the Department of Agricultural in cooperation with other federal agencies; (2) identify and take into account adverse effects of their programs on the preservation of farmland; (3) consider appropriate alternative actions that could lessen adverse effects to farmlands; and (4) ensure that their programs, to the extent practicable, are compatible with state and units of local government and private programs and policies to protect farmland. The California Department of Conservation (CDOC)

[32] Title 26, Los Angeles County Building Code, http://library.municode.com/index.aspx?clientId=16274. Accessed January 2014

[33] http://www.swrcb.ca.gov/losangeles/board_decisions/tentative_orders/general/npdes/cag994004a/index.shtml. Accessed January 2014

[34] 7 U.S.C §4201 et seq.

identifies prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance on "Important Farmland Maps," as part of the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code.

3.3.2 Existing Resource

Alquist-Priolo Earthquake Fault Zones occur throughout the project area. Seismic damage to structures within and outside Earthquake Fault Zones depends on the underlying foundation materials. Structures on competent geologic formations, such as igneous and metamorphic rock, may experience intense shaking but no liquefaction, whereas structures on unconsolidated hillsides and alluvium would be prone to landslides and liquefaction. Erosion potential depends on soil grain size, texture and cohesiveness, and important farmlands occur within Los Angeles County. Earthquake Fault Zones, foundation materials, soil erosion potential, and important farmlands associated with LTE sites are discussed below.

A. Earthquake Fault Zones

Four LTE sites are within an Alquist-Priolo Earthquake Fault Zone. These are listed it Table 3.3-1, and shown in Figure 3.3-1.

Table 3.3-1
LTE Sites Within an Alquist-Priolo Earthquake Fault Zone

Sites	Facility	City
LACF004	Los Angeles County Fire Station 4	Rosemead
LACF140	Los Angeles County Fire Station 140	Leona Valley
LACOLV	County of Los Angeles/UCLA Olive View Hospital	Sylmar
REH	Reservoir Hill	Long Beach

Source: California Department of Conservation, California Geological Survey

Distances to the nearest Alquist-Priolo Earthquake Fault Zone for individual LTE sites are provided in Appendix B.

B. Potential Foundation Materials

Typically, older (pre-Pliocene/Pleistocene) igneous, metamorphic and consolidated sedimentary rocks occur in highlands or mountain peaks, and younger (Pliocene/Pleistocene and Holocene) alluvial deposits occur on flat plains or basins, and within intermountain valleys. A summary of geological units for LTE sites is provided in Table 3.3-2.

Table 3.3-2
Geological Units

Symbol	Description	Period or Epoch	LTE Sites	
			No.	%
Q	Quaternary alluvium and marine deposits	Pliocene to Holocene	110	47.6
Qa	Alluvial gravel, sand and silt of valleys and floodplains	Pliocene to Holocene	25	10.8
Qoa	Old alluvial flood plain deposits, undivided (dissected gravel, sand, silt, and clay-bearing alluvium)	Late to Middle Pleistocene	11	4.7
M	Miocene marine rocks	Oligocene to Pliocene	10	4.3
Qyfa	Young alluvial fan and valley deposits, undivided	Holocene and Late Pleistocene	7	3.0
Qay2	Undifferentiated alluvium, gravel, sand, silt, and clay in active drainages; unconsolidated and uncemented; underlies areas flooded historically	Holocene	5	2.2
Qyf	Young alluvial fan and valley deposits, undivided	Holocene and Late Pleistocene	5	2.2
grMz	Granitic rocks	Permian to Tertiary	4	1.7
Qae	Older surficial sediments: alluvial gravel, sand and clay slightly elevated and dissected	Pliocene to Holocene	4	1.7
Qal	Unconsolidated alluvium: gravel, sand silt and clay	Pliocene to Holocene	3	1.3
Other	Various or undifferentiated lithologies	Various	47	20.3
TOTAL			231	100%

Source: California Department of Conservation, California Geological Survey map data.[35]

Younger alluvial deposits are often less consolidated and competent foundation materials than older alluvial deposits, sedimentary rocks and granitic rocks. Additional geologic data for individual LTE sites are provided in Appendix B.

C. Soil Erosion

Surface soils are composed of sands, silts and clays derived from mechanical and chemical weathering of igneous, metamorphic and sedimentary rocks. Fine-textured soils that are high in clay have low soil-erodibility because the particles are resistant to detachment (cohesive soils). Coarse-textured soils, such as sandy soils, are easily detached but have low soil-erodibility because water infiltrates them rapidly, resulting in low runoff. Medium-textured soils, such as a silt loam, have moderate soil-erodibility because they are moderately susceptible to particle detachment and have low infiltration rates. Runoff from medium textured soils is moderate. Soils having high silt content are especially susceptible to erosion and have a high soil-erodibility. Silt-size particles are easily detached and tend to crust, producing high runoff rates and large runoff volumes.

The NRCS classifies soils according to the proportion of sand, silt and clay. A summary of USDA soil classifications for LTE sites is provided in Table 3.3-3.

[35] http://www.consrv.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx. Accessed December 2013

Table 3.3-3
LTE Site Distribution by Soil Classification

USDA Soil Classification	Description	LTE Sites		
		Erodibility	No.	%
Coarse Sand	Contains 25% or more of very coarse and coarse sand and less than 50% of any other one division of sand	Low	82	35.5
Clay	Contains 40% or more clay, less than 45% sand, and less than 40% silt	Low	81	35.1
Clay Loam	Contains 27% to 40% clay and 20 to 45% sand	Low	20	8.7
Loamy Sand	Contains 25% or more of very coarse, coarse, and medium sand and less than 50% fine or very fine sand	Low	11	4.8
Sandy Loam	Contains 35% or more clay and 45% or more sand	Low	9	3.9
Variable	Variable texture	Varies	8	3.5
Coarse Sandy Loam	Contains 25% or more very coarse and coarse sand and less than 50% of any other one subdivision of sand	Low	5	2.2
Loam	Contains 7% to 27% clay, 28% to 50% silt, and less than 52% sand	Moderate	5	2.2
Sand	Contains 85% or more of sand, and the percentage of silt multiplied by the percentage of clay shall not exceed 15	Low	5	2.2
Loamy Fine Sand	Contains 50% or more fine sand; or less than 25% very coarse, coarse, and medium sand and less than 50% very fine sand	Moderate	4	1.7
Unweathered Bedrock	Unweathered bedrock	Low	1	0.4
TOTAL			231	100

Source: United States Department of Agriculture, National Resources Conservation Service.[36]

NRCS soil classification data for individual LTE sites are provided in Appendix B.

D. Farmland

No proposed LTE sites are within areas identified by NRCS or CDOC as prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance.[37]

[36] http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed December 2013
[37] California Department of Conservation. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx. Accessed January 2014.

Figure 3.3-1
LTE Sites within an Alquist-Priolo Earthquake Fault Zone

*LTE = Long Term Evolution wireless broadband communications system

3.4 Water Resources

Water resources are integrally related to the delivery of water sources to water users. In natural systems, surface water primarily supports flora and fauna, including economically and recreationally important fish and wildlife. The removal or degradation of a water supply by either natural (i.e., drought) or anthropogenic (human-made) (i.e., waterway diversion) processes can change an ecological community. This section discusses surface and groundwater resources throughout the project areas.

3.4.1 Regulatory Setting

The State Water Resources Control Board, Los Angeles RWQCB, Lahontan RWQCB, and Santa Ana RWQCB are the resource agencies that implement water quality laws and would regulate LTE activities that could potentially impact surface water and groundwater. Of the 231 proposed LTE sites, 216 are under the jurisdiction of the Los Angeles RWQCB, 13 are under the jurisdiction of the Lahontan RWQCB, and two are under the jurisdiction of the Santa Ana RWQCB. Jurisdictional boundaries for the Los Angeles, Lahontan and Santa Ana RWQCBs are provided in Figure 3.4-1.

Federal and state laws and regulations that apply to water resources at LTE sites are discussed below.

A. Federal Laws

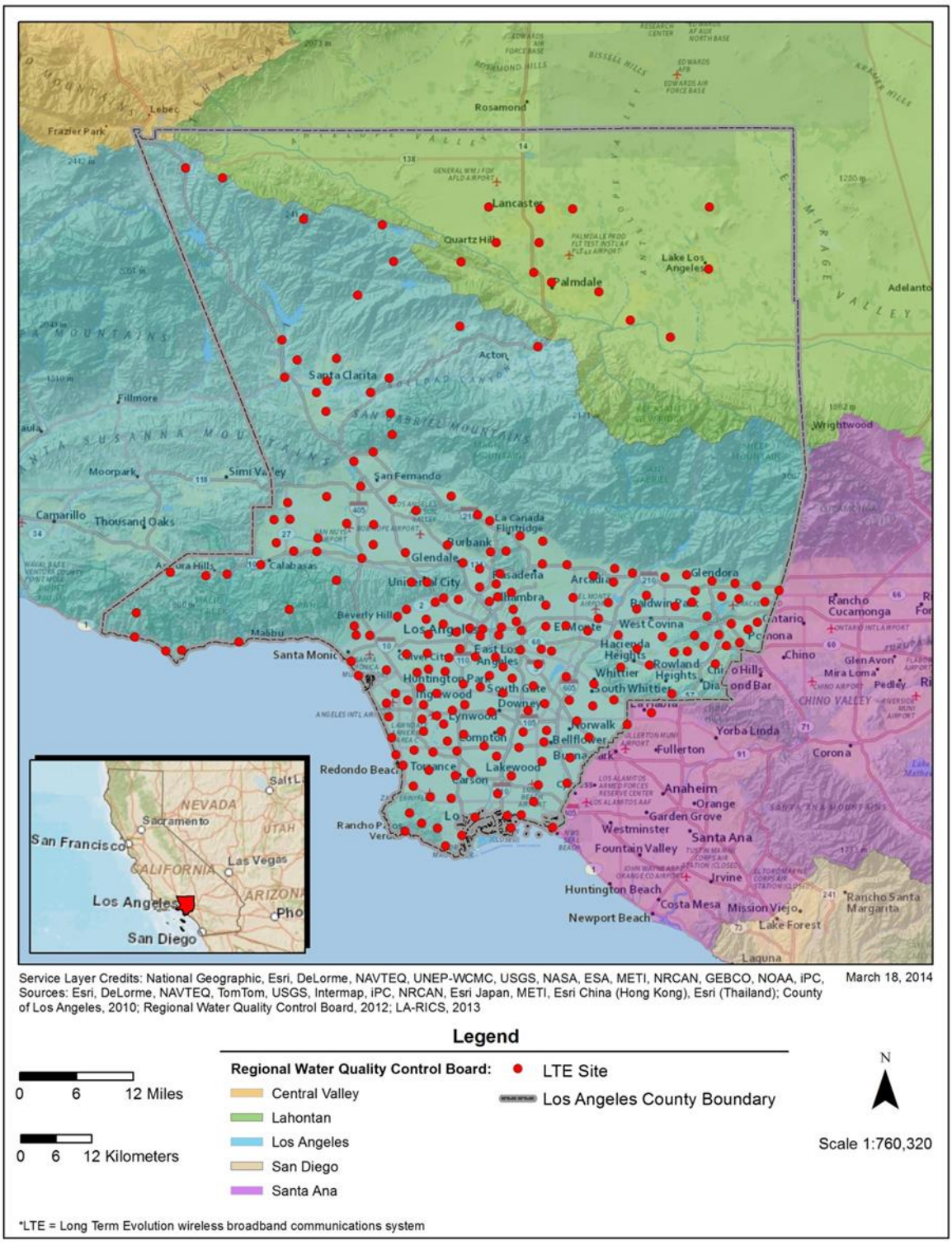
Clean Water Act

Sections 303, 401, 402 and 404 of the Federal Water Pollution Control Act of 1972 (33 USC 1251 et seq.) (CWA) protects the water quality of jurisdictional surface waters. The CWA requires states to: (1) protect specific beneficial uses of surface water and groundwater, (2) comply with applicable effluent limitations, (3) implement BMPs to eliminate or reduce discharges of pollutants, and (4) regulate the discharge of dredged or fill material into streams, rivers, wetlands, non-wetland and other surface waters. A written Storm Water Pollution Prevention Plan (SWPPP) is not required because each site would have less than one acre of soil disturbance. On all sites, including those on National Forest System lands, BMPs are required and will be applied prior to final authorizations.

Wild and Scenic Rivers Act (16 USC 1271-1287)

The Wild and Scenic Rivers Act (Act) of 1968 established a National Wild and Scenic Rivers System to preserve and protect selected wild and scenic rivers in a free-flowing condition for the benefit and enjoyment of present and future generations.

Figure 3.4-1
Jurisdictions of Regional Water Quality Control Boards



Executive Order 11988

The National Flood Insurance Program (NFIP) of 1968 provides flood insurance to homeowners, renters, and business owners if their community participates in the NFIP. Participating communities agree to adopt and enforce ordinances that meet or exceed Federal Emergency Management Agency (FEMA) requirements to reduce flooding risks to properties that may be located in floodplains.[38,39]

State Laws

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) establishes a regulatory program to augment federal protections under the CWA to protect "waters of the state", which include surface, ground, and ocean water. In California, the Porter-Cologne Act implements the National Pollutant Discharge Elimination System (NPDES) permitting program. NPDES permits are required for dewatering activities, and are issued by the RWQCBs. They set forth effluent limitations, monitoring, and reporting obligations, and often include BMPs to preclude impacts to groundwater. Section 1601 et seq. of the California Fish and Game Code (CFGC) authorize the California Department of Fish and Wildlife (CDFW) to enter into a "Lake or Streambed Alteration Agreement" with project proponents to minimize or avoid impacts to a river, stream, or lake where fish or wildlife resources may be adversely affected.[40]

3.4.2 Existing Resource

A. Surface Waters

Los Angeles County occupies approximately 4,083 square miles. Elevations range from sea level to 10,064 feet above mean sea level (MSL) at the summit of Mount San Antonio. Los Angeles County is 25 percent mountains, 10 percent coastal plain, and 65 percent foothills, valley, and desert. Most mountains are less than 5,000 feet above mean sea level with only 210 square miles (five percent) above this elevation. Surface water in streams is derived principally from precipitation, runoff and, in some cases, groundwater.

Average annual precipitation in Los Angeles County ranges from approximately 4.5 inches in the coastal plain to 35 inches in mountainous areas. Average annual precipitation in portions of the Mojave Desert area in north Los Angeles County is as low as 2.5 inches. Rainfall intensity in Southern California can range from 0.1 inch per day to more than one inch per hour. Snowfall at elevations above 5,000 feet frequently occurs during winter storms, but melts rapidly except on the higher peaks and north facing slopes. Most precipitation occurs between December and March. Dry periods of several months are common.[41]

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38 Federal Emergency Management Agency. "About the National Flood Insurance Program." Internet URL: http://www.floodsmart.gov/floodsmart/pages/about/nfip_overview.jsp. Accessed October 11, 2013.

39 "Executive Order 11988--Floodplain management." National Archives. Internet URL: http://www.archives.gov/federal-register/codification/executive-order/11988.html.

40 http://www.dfg.ca.gov/habcon/1600/. Accessed December 2013.

41 http://dpw.lacounty.gov/wrd/publication/engineering/2006_Hydrology_Manual/2006%20Hydrology%20Manual-Divided.pdf Accessed January 2014.

Runoff characteristics are influenced by soil type, terrain, vegetation, and other conditions. Precipitation during periods of low soil moisture is almost entirely absorbed by porous soils. Substantial surface runoff occurs after soil moisture is near field capacity, and during extreme intense rainfall events. Because much of the coastal plain is urbanized, natural soil and vegetation have been replaced by impervious surfaces. In urban areas, storm water runoff is directed to storm drains and lined channels with little opportunity for natural infiltration to groundwater aquifers.[41]

Piru Creek in west Los Angeles County is the only Wild and Scenic River identified, and is in a separate watershed more than seven miles from the nearest LTE site.

B. Groundwater Aquifers

Most groundwater production is concentrated in populated areas, particularly in southern Los Angeles County and Orange County. Published information for depth to groundwater and other aquifer parameters are scarce or unavailable in sparsely populated areas, or where groundwater resources have not been used extensively. Description of aquifers and number of proposed LTE sites within specific groundwater basins are provided in Table 3.4-1. Proposed LTE sites and area groundwater aquifers are shown in Figure 3.4-2. The groundwater basin in which each LTE site is located is identified in Appendix B.

Table 3.4-1
LTE Site Distribution by Groundwater Basin

Groundwater Basin	Description	No. of LTE Sites
Coastal Plain of Los Angeles	Aquifers in this basin are composed of unconsolidated alluvial sediments. Aquifer thickness typically ranges from 30 to 500 feet, and groundwater elevations typically range from approximately 110 to 230 feet below mean sea level due to extensive overdraft. Perched groundwater or non-producing aquifers may occur at shallow depths of 20 feet or more.	96
San Gabriel Valley	Aquifers in this basin are composed of unconsolidated alluvial sediments. Aquifer thickness typically ranges from approximately 300 to more than 3,000 feet, and groundwater elevations typical range from 110 to 1,200 above mean sea level.	36
San Fernando Valley	Aquifers in this basin are composed of unconsolidated alluvial sediments. Depth to groundwater typically ranges from 24 to 400 feet below ground surface.	31
Antelope Valley	Aquifers in this basin are composed of unconsolidated alluvial and lacustrine deposits. Depth to groundwater typically ranges from 50 to 350 feet below ground surface.	13
Santa Clara River Valley	Aquifers in this basin are composed of unconsolidated alluvial sediments, terrace deposits, and stream deposits of the Saugus Formation. Depth to groundwater typically ranges from 10 and 100 feet below ground surface.	9
Conejo-Tijera River Valley	Aquifers in this basin are composed of unconsolidated alluvial sediments, and sedimentary and volcanic rocks of the Modelo, Topanga and Conejo Formations. Alluvium is generally only a few feet thick, and is not a significant source of groundwater. The sedimentary and volcanic rocks are the primary sources of groundwater, and have a combined thickness up to approximately 19,500 feet.	2

Table 3.4-1 (continued)
LTE Site Distribution by Groundwater Basin

Groundwater Basin	Description	No. of LTE Sites
Upper Santa Ana Valley	Aquifers occur in a variety of sub-basins, and are composed of a variety of lithologies including unconsolidated alluvial sediments. Aquifer thickness and groundwater elevations vary widely among sub-basins.	2
Acton Valley	Aquifers in this basin are composed of unconsolidated alluvial sediments and stream terrace deposits.	1
Coastal Plain of Orange County	Aquifers in this basin are composed of unconsolidated alluvial and marine sediments. Depth to groundwater varies from 10 to more than 100 feet. Aquifer thickness typically ranges from approximately 350 feet to 1,600 feet.	1
Malibu Valley	Aquifers in this basin are composed of unconsolidated alluvial, beach and terrace deposits. Aquifer thickness typically ranges from 90 to 140 feet. Groundwater may be encountered at a depth of approximately five feet near the coast, and deeper inland.	1
Thousand Oaks Area	Aquifers in this basin are composed of unconsolidated, sedimentary rocks of the Modelo and Topanga Formations, and volcanic rocks of the Conejo Formation.	1
Unnamed	Isolated aquifers in these mountainous and hilly areas may occur in unconsolidated alluvial sediments at the base of valleys, and in porous or fractured bedrock.	38
TOTAL		231

C. Floodplains

Floodplains provide many valuable ecosystems services that benefit the natural and human environment, including flood protection, floodwater storage, groundwater recharge, and habitat for flora and fauna. On the other hand, when floodwaters reach certain levels, they can inundate areas of human activity, causing death and injury and damage to structures.

Areas subject to inundation by a one-percent-annual-chance flood event (100-year floodplain) are designated as "Flood Zone A" by FEMA, and include zones A, AE, AH, AO, AR, or A99.[42] Ten LTE sites (LACF073, LACF081, LACFCP14, LAFD049, LALG100, LALG300, LALG-HQ, LAPDWIL, LASDNCC and LBFD021) are located wholly or partially within Flood Zone A (Figure 3.4-3). Detailed maps showing the location of each of the 10 LTE sites within Flood Zone A are provided in Figures 3.4-4 through 3.4-13.

All ten of the aforementioned sites are already developed emergency services facilities, with paved or otherwise disturbed ground surfaces.

[42] http://hazards.fema.gov/femaportal/wps/portal/NFHLWMS. Accessed December 2013.

Figure 3.4-2
LTE Sites and Groundwater Basins

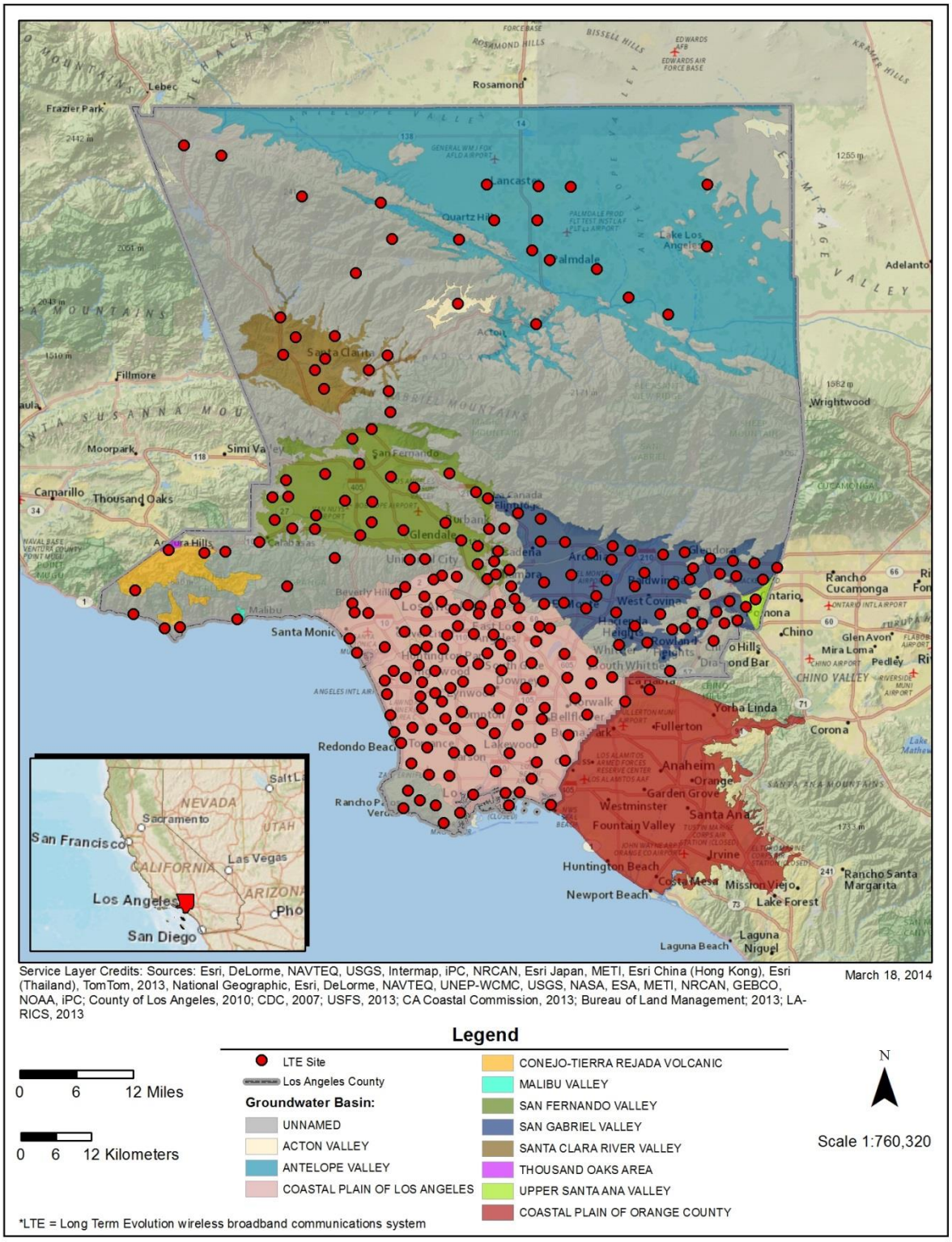


Figure 3.4-3
FEMA Floodplain Affected LTE Sites Within FEMA Designated Flood Zone A

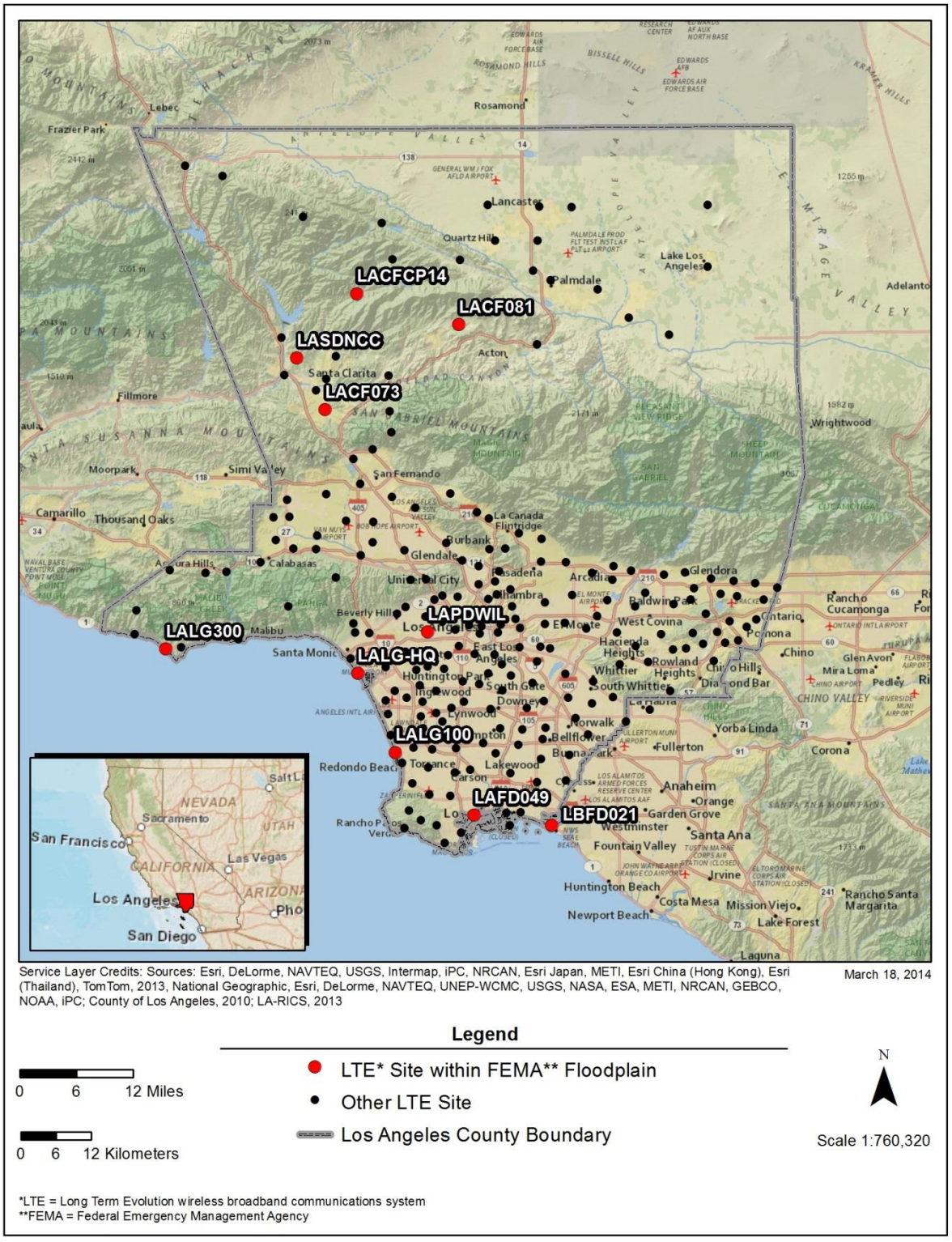


Figure 3.4-4
FEMA Flood Insurance Rate Map for Site LACF073

Figure 3.4-5
FEMA Flood Insurance Rate Map for Site LACF081

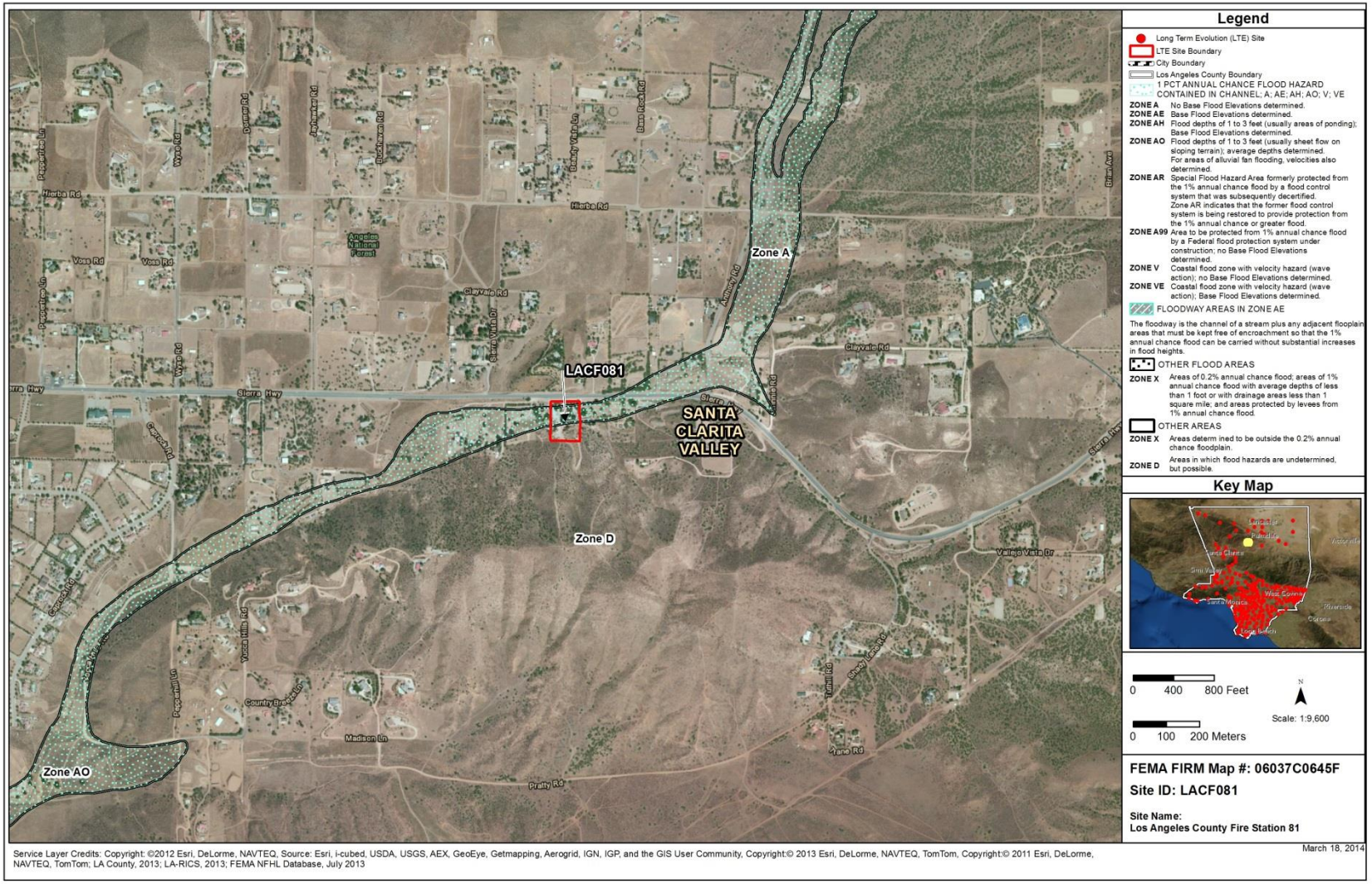


Figure 3.4-6
FEMA Flood Insurance Rate Map for Site LACFCP14

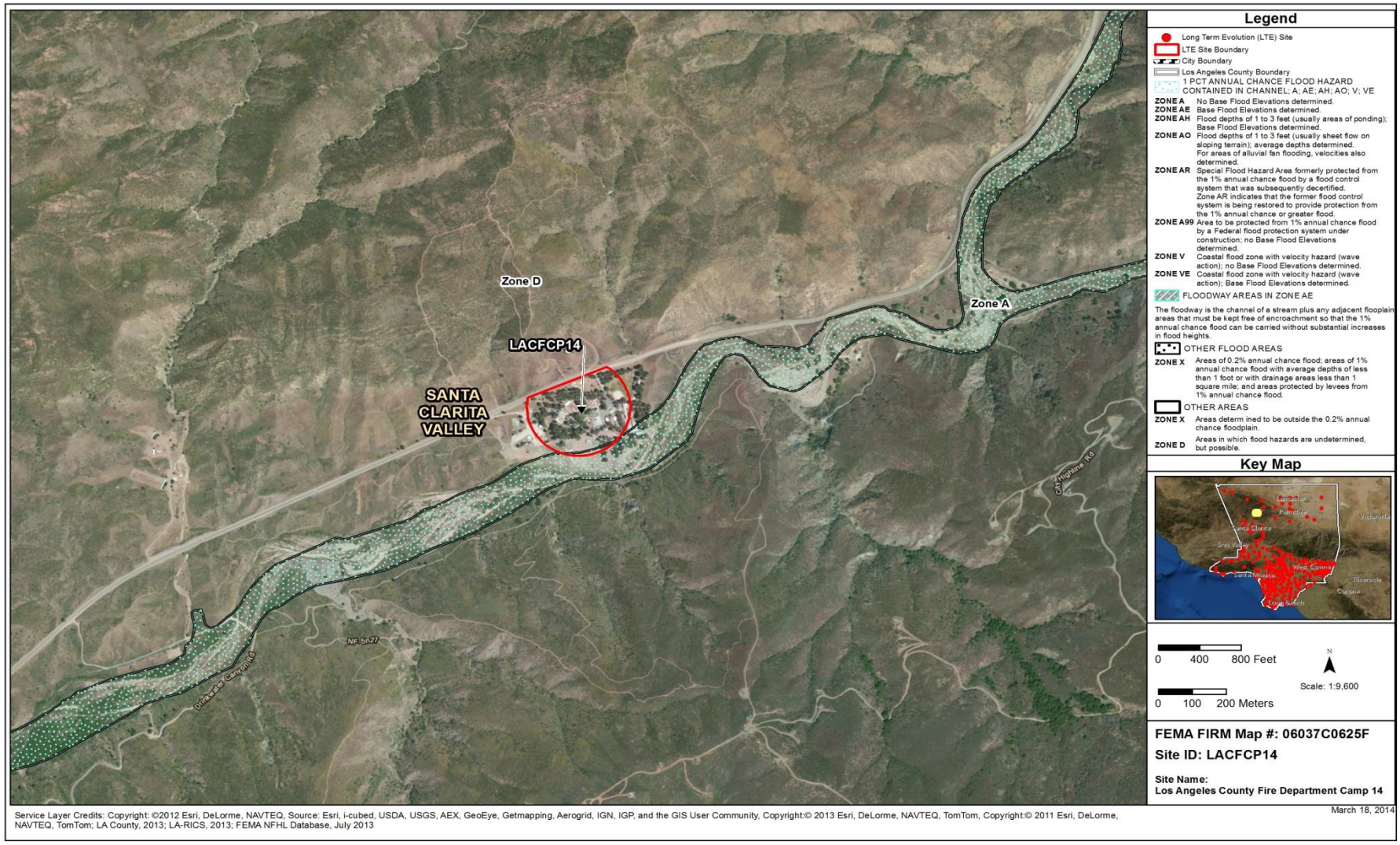


Figure 3.4-7
FEMA Flood Insurance Rate Map for Site LAFD049

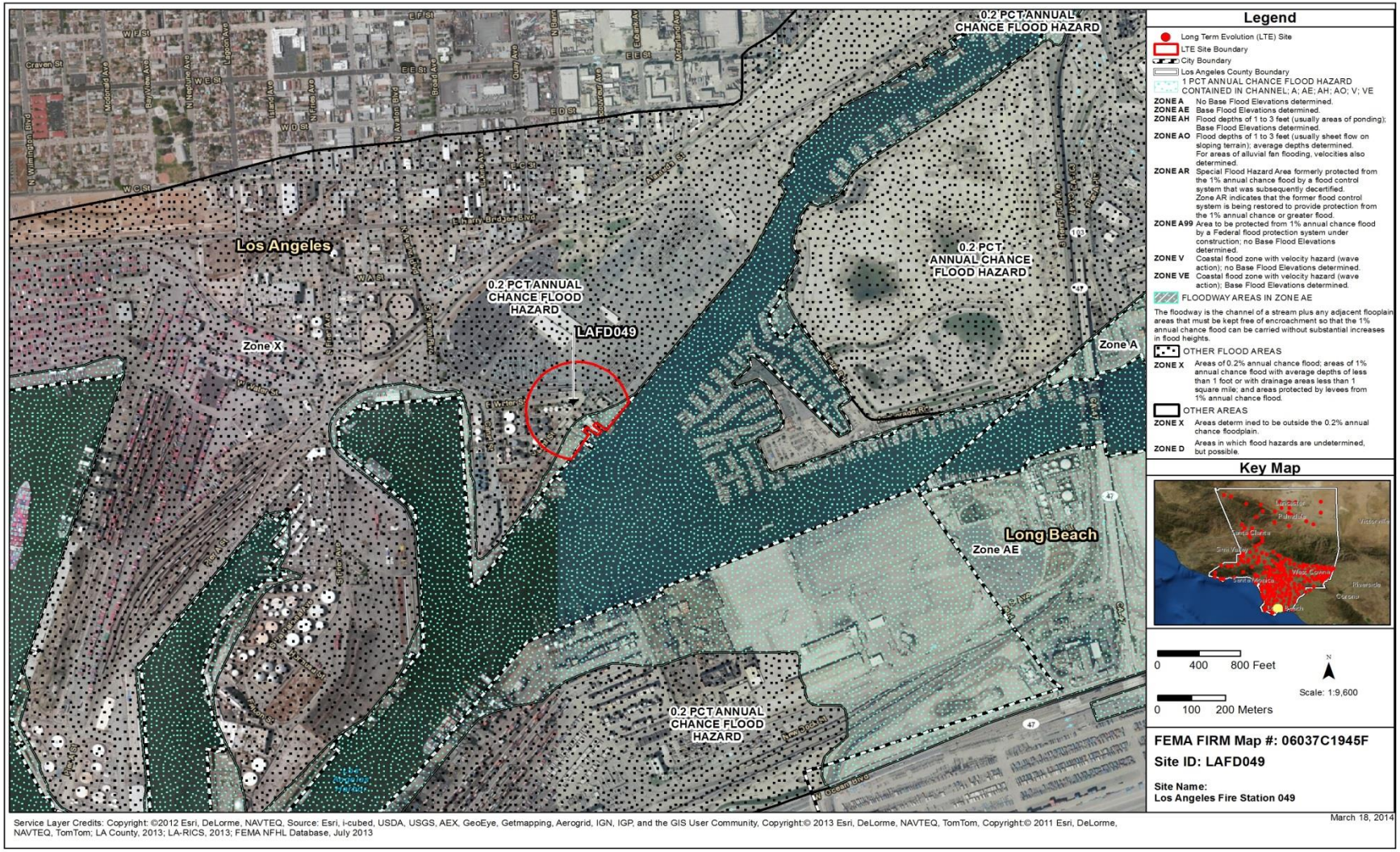


Figure 3.4-8
FEMA Flood Insurance Rate Map for Site LALG100

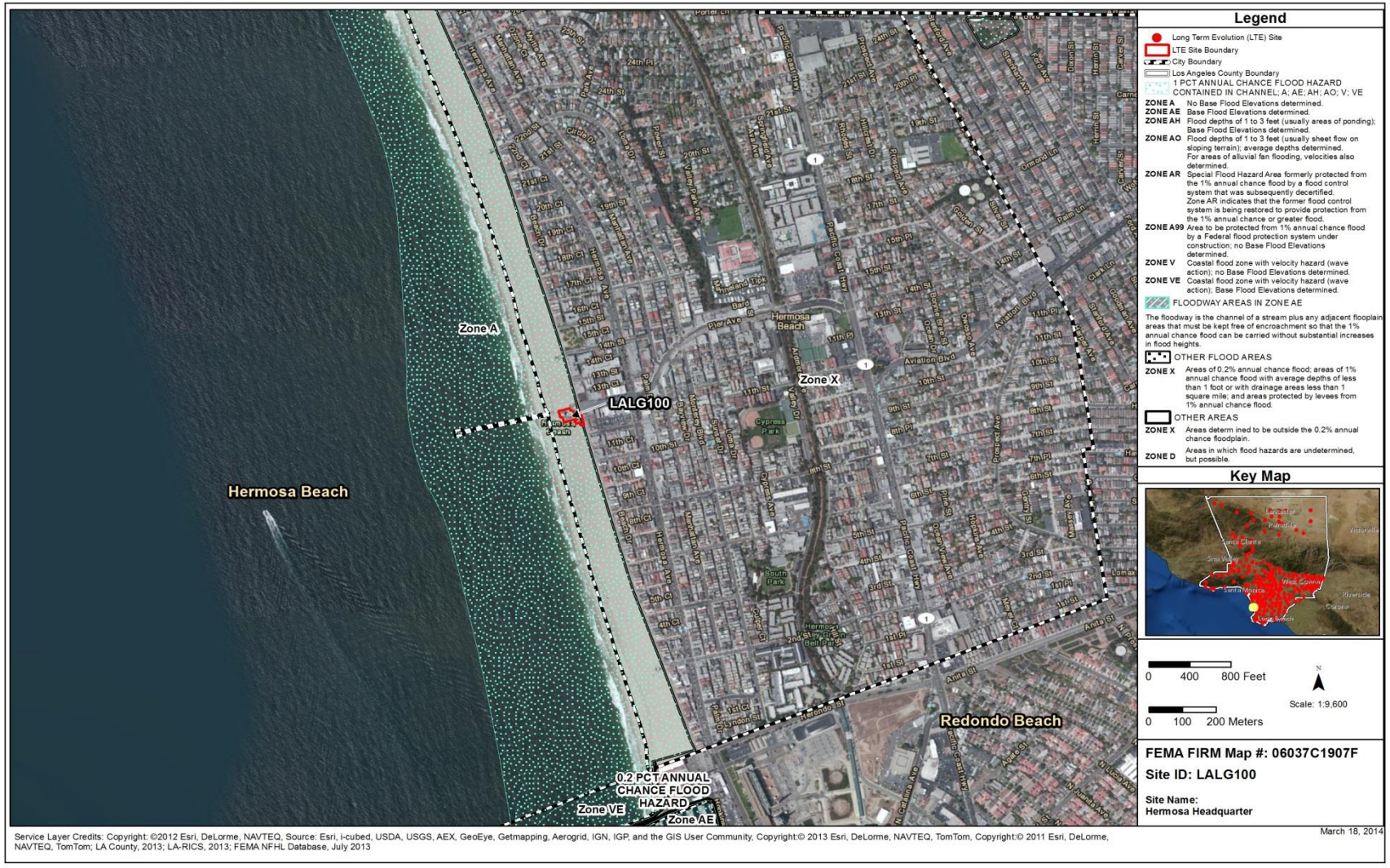


Figure 3.4-9
FEMA Flood Insurance Rate Map for Site LALG300

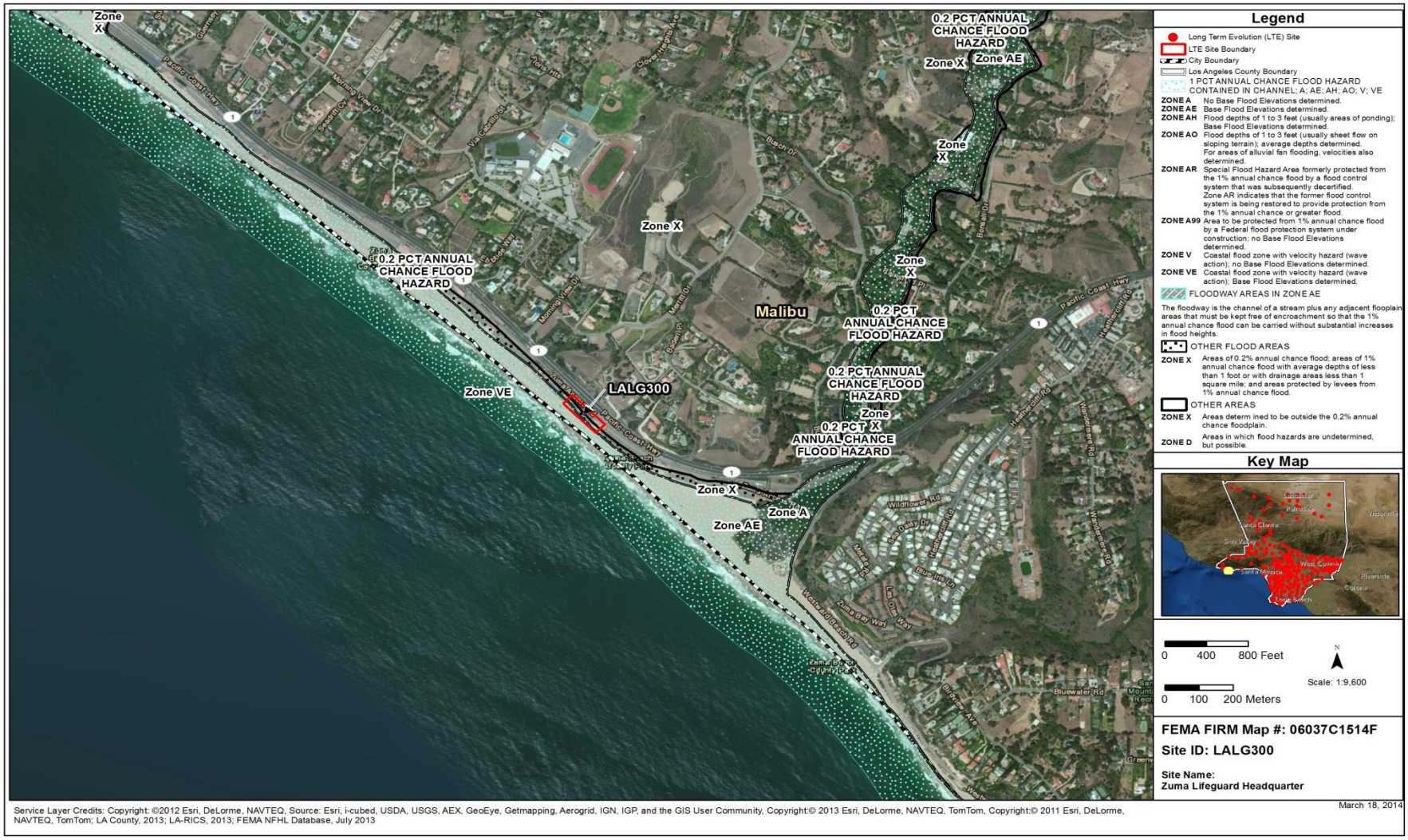


Figure 3.4-10
FEMA Flood Insurance Rate Map for Site LALG-HQ

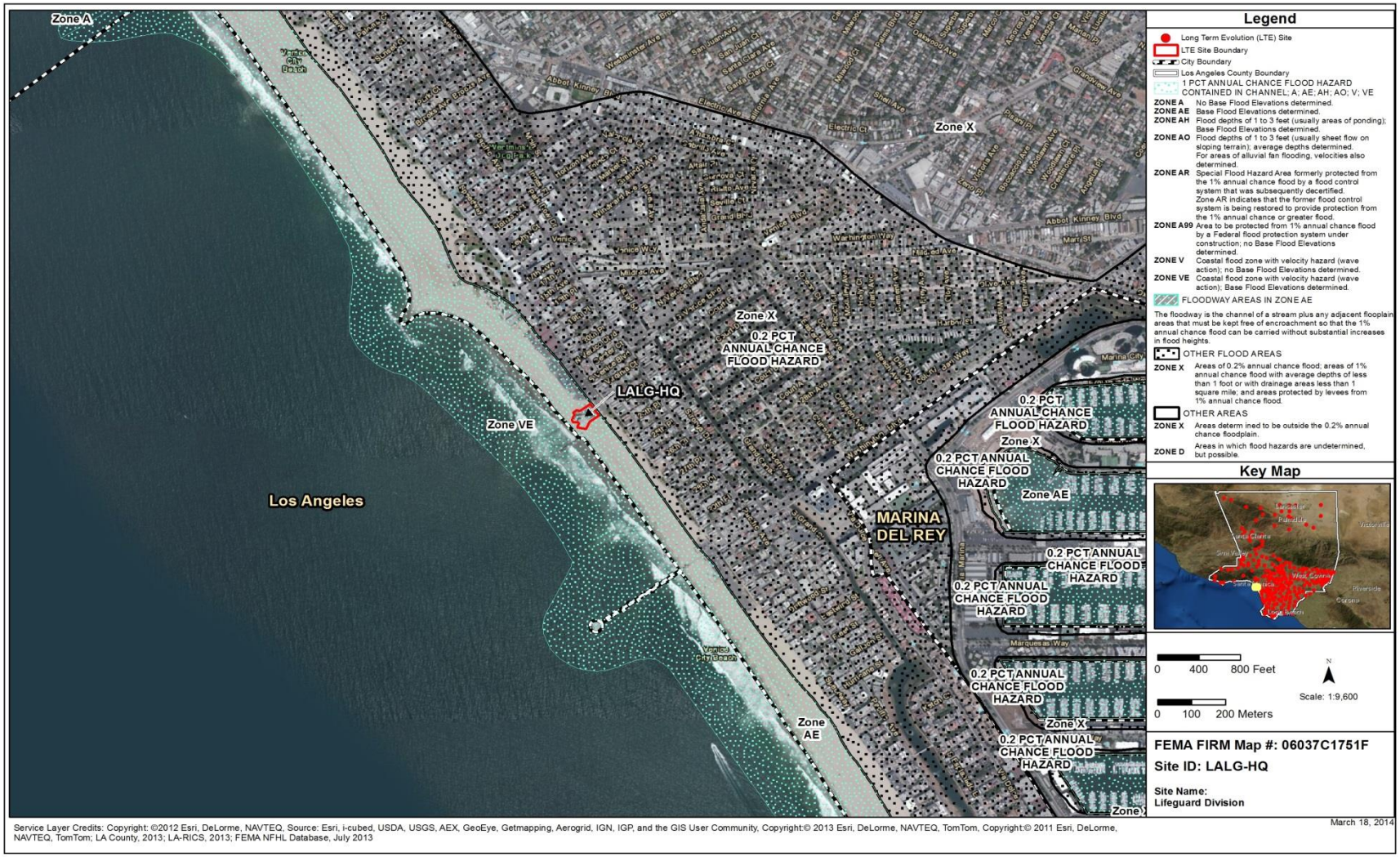
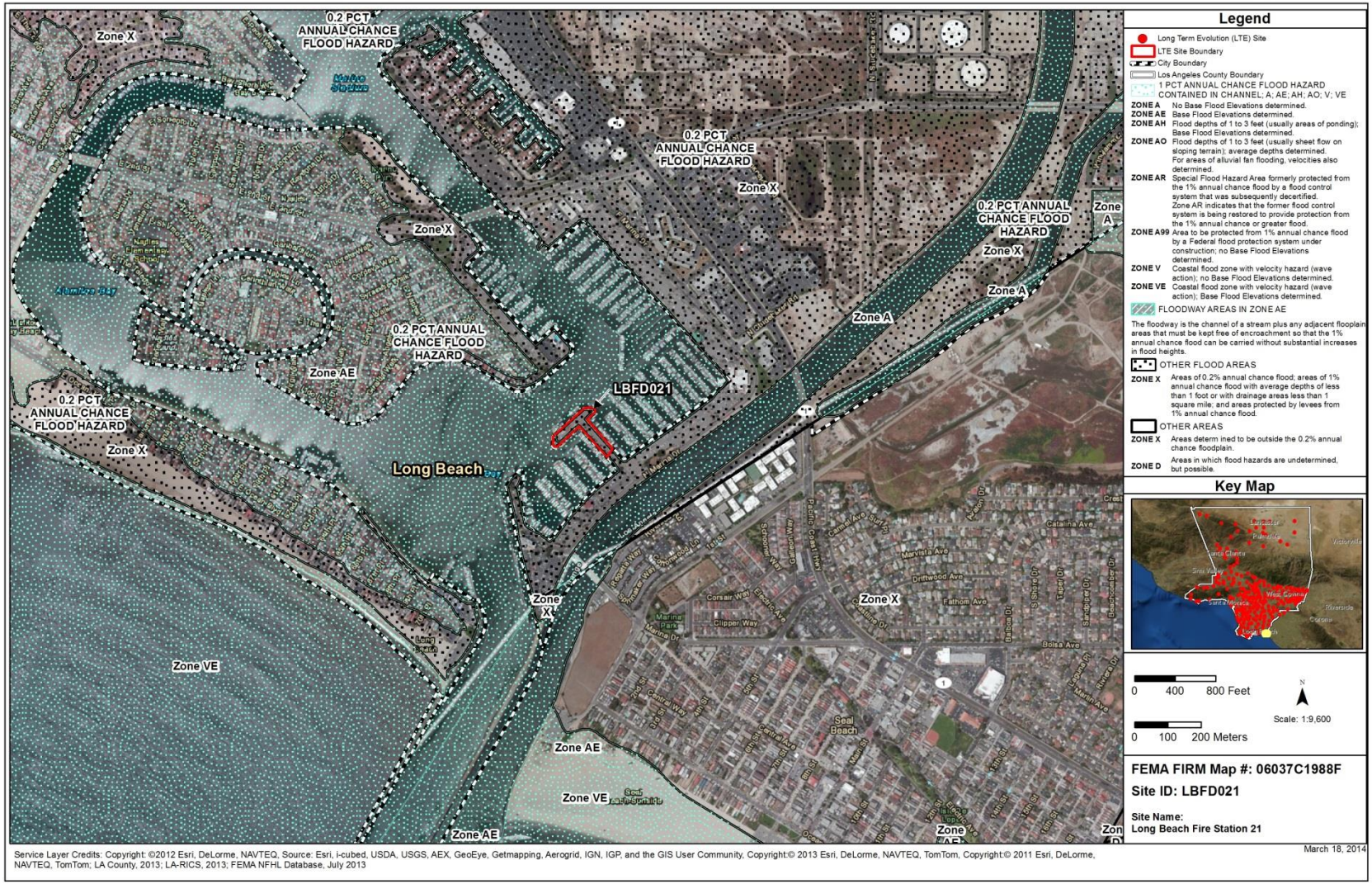


Figure 3.4-11
FEMA Flood Insurance Rate Map for Site LAPDWIL

Figure 3.4-12
FEMA Flood Insurance Rate Map for Site LASDNCC

Figure 3.4-13
FEMA Flood Insurance Rate Map for Site LBFD021



3.5 Biological Resources

This section is organized into two major subsections. Section 3.5.1 provides a regulatory overview while Section 3.5.2 provides an overview of the types of resources considered for analysis, including vegetation, wildlife, special status species, and sensitive habitats.

The definition of biological resources to be used for characterization of this component of the Affected Environment is flora and fauna, their behaviors, and their interactions with the environment that may be directly or indirectly affected by the proposed action.

Construction and staging would only occur within the boundaries of the 231 proposed LTE project sites. A description of site boundaries, work areas, FSAs and project footprints is provided in Chapter 2. The FSA is an area of approximately 500 foot radius from the center of the LTE project site and includes the project site within its boundaries. Areas outside of the project site, but located within the FSA would not be subject to ground disturbance. However, species and habitat beyond the FSA that could potentially be affected were also considered. For example, vegetation communities within the FSA and in the vicinity of project sites are described and considered in evaluating species occurrence potential (SOP). For most species, the FSA is adequate to encompass an area of potential effects at each LTE site. For some species, potential effects could occur at greater distances and the SOP for that species was determined based on a larger area.

3.5.1 Regulatory Setting

Several federal and state statutes and regulations have been promulgated to protect and promote general environmental quality for biological resources in particular. These are discussed below.

A. Federal Endangered Species Act

Consultation under Section 7 of the federal Endangered Species Act (ESA) is required to determine if the Proposed Action would affect threatened or endangered species or designated Critical Habitat.

B. Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. §§ 703–712) provides protection for migratory birds[43] (including the nests and eggs of birds protected under the MBTA) in the U.S., regardless of their official listing status. The provisions of MBTA make it unlawful to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, transport or import migratory birds, their eggs, parts, and nests. The MBTA does not discriminate between live or dead birds and grants full protection to any bird parts including feathers, eggs and nests. The law applies to the removal or disturbance of nests occupied by migratory birds during the breeding season.

On January 10, 2001, President Clinton signed Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds." One of the requirements of Executive Order 13186 is that

[43] The MBTA lists species of birds protected under the act in 50 CFR § 10.13.

each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement a Memorandum of Understanding (MOU) with the USFWS that shall promote the conservation of migratory bird populations.

C. Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. §§ 668-668d) prohibits unpermitted take, possession and commerce of such birds, including their parts, nests, or eggs, and establishes civil and criminal penalties for violation. The BGEPA defines take as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." Federal regulations implementing the BGEPA further define disturb to mean "agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.'' (72 FR 31132; 50 CFR 22.3.)

The USFWS interprets "disturb" to include impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment (USFWS, 2007a).

D. Marine Mammal Protection Act of 1972

The Marine Mammal Protection Act of 1972 (MMPA) is administered by the USFWS and NMFS, to protect all marine mammals, including whales, dolphins, porpoises, seals, sea lions, walrus, polar bears, sea and marine otters, dugongs, and manatees. The MMPA prohibits, with certain exceptions, the "take" of marine mammals. "Take" is defined as "harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal" (13 USC § 1362(13)).

E. Federal Land Policy and Management Act

The Federal Land Policy and Management Act (FLPMA) of 1976 (43 USC 1701 *et seq.*), provides that: "The public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use;" and "the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining and Minerals Policy Act of 1970 (84 Stat. 1876, 30 U.S.C. 21a) as it pertains to the public lands." For this EA, consideration of FLPMA is included due to a single LTE site's occurrence on BLM lands.

BLM has several policy objectives associated with management of BLM Sensitive (BLMS) species. BLMS species are native species at risk of undergoing a downward trend in such that viability of the species or a distinct population segment of the species is at risk across all or a significant portion of

its range, or species dependent on specialized habitat that are themselves threatened (BLM Manual 6840). Among other sensitive species, all federally-designated candidate species, proposed species, and delisted species (within five years of delisting) are considered as BLMS species.

F. National Forest Management Act

The National Forest Management Act (NFMA) of 1976 is the primary statute governing the administration of National Forests. In 2005, the USFS revised the Southern California Forest Plan (Forest Plan) (U.S. Department of Agriculture, 2005), which includes four southern California National Forests: Los Padres, Angeles, San Bernardino and Cleveland. The revised Forest Plan reflects strategies for addressing issues brought by the public and USFS staff. Under the Forest Plan, a Land Management Plant (LMP) was developed for the ANF. The LMP includes management of species identified as Forest Service Sensitive (FSS) that are discussed in this section. The LMP and Forest Plan are in consideration due to the occurrence of two LTE sites (BUR and LACFCP09) under ANF administration.

Forest Service Manual (FSM) Chapter 2672 provides standards for biological evaluations (BEs) and provides a list of designated special status wildlife and plant species occurring on NFS lands. Current policy, as shown in FSM 2672.4, is to conduct a pre-field review of available information, and in instances where there is evidence of special status plant and wildlife species or habitat, conduct a field reconnaissance if necessary to determine whether the project poses a threat to special status plants or wildlife. The results of surveys and conflict determination are documented in the BE.

FSM Chapter 2670.32 Sensitive Species (1995) stipulates that:

- As part of the [NEPA] process, review programs and activities through a biological evaluation, to determine their potential effect on sensitive species.
- Avoid or minimize impacts to species whose viability has been identified as a concern.
- If impacts cannot be avoided, analyze the significance of potential adverse effects on the population or its habitat within the area of concern and on the species as a whole.

FSM Chapter 2080 Noxious Weed Management, as amended (2001), includes a policy statement regarding risk assessment for noxious weeds that should be completed for every project. When project activities could introduce or spread weeds to National Forest System lands, the Forest Service is required to consider factors that can favor establishment and spread of weeds and implement control measures where necessary.

G. Magnuson-Stevens Fishery Conservation and Management Act (MSA)

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires federal agencies to consider activities that may adversely affect Essential Fish Habitat (EFH).

The objective of an EFH assessment is to determine whether the proposed action(s) "may adversely affect" designated EFH for relevant commercially, federally-managed fisheries species. For the proposed project, these species are identified in the Pacific Coast Groundfish Fishery Management Plan. It also describes conservation measures proposed to avoid, minimize, or otherwise offset any identified potential effects to designated EFH resulting from proposed activities.

H. Federal Water Pollution Control Act of 1972 (Federal Clean Water Act)

Discharges to the Waters of the United States (WOUS), including federal wetlands, are regulated pursuant to the CWA (33 USC § 1344). The discharge of dredged or fill material to WOUS requires permits pursuant to Section 404 of the CWA from the USACE (nationwide, regional, or standard individual) permit, depending on the proposed discharge. If a Section 404 or other federal permit is required that authorizes the discharge of pollutants to WOUS, then certification pursuant to Section 401 of the CWA is required.

In California, Section 401 certification is administered through the RWQCBs. Individual proposed LTE project sites are located in the jurisdiction of one of three RWQCBs: Lahontan, Los Angeles, and Santa Ana. When required, Sections 404 and 401 permitting involve consideration of impacts to biological resources associated with WOUS including consideration of impacts to plant and animal species.

I. Rivers and Harbors Act of 1899 Section 10

The Rivers and Harbors Act (33 USC 401 *et seq.*) requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States, including excavation/dredging or deposition of material in these waters or any obstruction or alteration in a "navigable water."

J. Habitat Conservation Plans

Habitat conservation plans (HCPs) are developed under the ESA. They provide for partnerships with non-federal parties to conserve the ecosystems upon which listed species depend, ultimately contributing to their recovery. HCPs can apply to both listed and non-listed species, including those that are candidates or have been proposed for listing. The West Mojave Plan (WEMO) HCP, which applies only to BLM lands, has been identified as applicable at Site BRK.

K. Noxious Weeds and Invasive Species (Executive Order 13112)

Several acts, laws and executive orders require the control of noxious weeds. Executive Order 13112 directs federal agencies take certain actions to control the spread of noxious weeds, to the extent practicable. The USDA Animal and Plant Health Inspection Service maintain a Federal Noxious Weed List which includes Introduced, Invasive, and Noxious Plants (USDA, 2012).

L. Exemption from California Environmental Quality Act

As noted in Chapters 1 and 2, Public Resource Code § 21080.25 is the statutory CEQA exemption adopted specifically for the Authority. The statute exempts individual project sites where all the

criteria set forth in the statute are met. (AB 1486, Chapter 690). These conditional requirements include criteria that construction and operations at the project site would not have a substantial impact on wetlands, riparian areas, or habitat of significant value, and would not harm any species protected by the ESA, the California Native Plant Protection Act (NPPA), or the California Endangered Species Act (CESA), or the habitat of those species. In order to meet these and other criteria associated with the exemption, two specific actions were taken in the project planning process:

- Site selection process excluded areas that had potential to impact the resources identified above.
- A set of CMRs to further protect biological resources was developed and included in the project description, and embedded into the overall construction contract for the proposed project.

Additional information regarding the screening process and the effect of inclusion of CMRs for the project is provided in Section 4.5, Biological Resources.

M. California Endangered Species Act

The CESA protects native species, and their habitats, that are threatened with extinction or experiencing a significant decline that could lead to a threatened or endangered designation. Section 2080 of the California Fish and Game Code prohibits "take" of any CESA-listed species. CESA allows for take incidental to otherwise lawful development projects.

N. California Fully Protected Species

California Fully Protected (CFP) species are animal species protected under California Fish and Game Code Sections 3511, 4700, 5050, and 5515. These protections in the California Fish and Game Code predate the CESA. These species were identified and protected because they were rare or otherwise facing possible extinction. "Take" of CFP species may be authorized for collecting species necessary for scientific research, relocation of bird species for the protection of livestock, or for CFP species conserved and managed as a covered species under an approved Natural Community Conservation Plan.

O. California Native Plant Protection Act

The NPPA was enacted in 1977 (California Fish and Game Code 1900 *et seq.*). It includes a list of 64 plant species, subspecies and varieties of plants that are otherwise protected as Rare under CESA. NPPA prohibits take of endangered or rare native plants, but offers exclusions for agriculture and nursery operations, emergencies, and, after proper notification to CDFW, vegetation removal from canals, roads, and others sites.

3.5.2 Resource Overview

This section provides a description of the biological resources analyzed in this EA. These include vegetation, wildlife, special status species, and sensitive habitats. Methods used to identify biological resources considered in this EA are described in Appendix E.

A. Vegetation

This section discusses vegetation resources (discussed in terms of land cover) and specific information regarding noxious species (weeds).

Vegetation (Cover Types)

Individual, proposed LTE project sites are located within one of three EPA Level III Ecoregions:[44] Southern California-Northern Baja Coast; Southern California Mountains; and Mojave Basin and Range.

The FSAs of the LTE sites contain 21 different vegetation or land cover types. These vegetation or land cover types were classified primarily according to *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986). The following sources were used to classify vegetation or land cover types occurring within FSAs, but not described by Holland, 1986:

- Ruderal: Ruderal Vegetation Along Some California Roadsides (Frenkel, 1970).
- Marine and Ornamental: A Guide to Wildlife Habitats of California (Mayer, K. E. and Laudenslayer, 1988).
- Ephemeral Stream: Regulatory Program of the U.S. Army Corps of Engineers. Part 330 Nationwide Permit Program. Final Notice of Issuance, Reissuance, and Modification of Nationwide Permits. March 9, 2000. Subpart E. Definitions (ACOE, 2000).

The acreage of the 21 vegetation or land cover types (including five "disturbed" designations for vegetation types) is presented in Table 3.5-1. Also included there is information regarding EPA Level III Ecoregions, and the number of LTE sites and FSAs containing each cover type.

Table 3.5-1
Vegetation Cover Types within Field Survey Areas of LTE Sites

Vegetation or Land Cover Type	US EPA Level III Ecoregions	Cover Within LTE Site		Cover Within FSA	
		Number of Sites with Cover Type	Acres	Number of FSAs with Cover Type	Acres
Agricultural Land	SCNBC, MBR	0	0	2	4
Beaches and Coastal Dunes	SCNBC	0	0	5	15

[44] Website: http://www.epa.gov/wed/pages/ecoregions/level_iii_iv.htm.

Table 3.5-1 (continued)
Vegetation Cover Types within Field Survey Areas of LTE Sites

Vegetation or Land Cover Type	US EPA Level III Ecoregions	Cover Within LTE Site		Cover Within FSA	
		Number of Sites with Cover Type	Acres	Number of FSAs with Cover Type	Acres
Chamise Chaparral	SCM, SCNBC	2	7	4	27
Chamise Chaparral (disturbed)	SCM, SCNBC	0	0	2	2
Coast Live Oak Woodland	SCM, SCNBC	6	7	9	28
Coast Live Oak Woodland (disturbed)	SCM	1	<0.5	1	15
Coastal Sage Scrub	SCNBC	1	<0.5	4	6
Coastal Sage Scrub (disturbed)	SCM, SCNBC	3	4	12	34
Desert Saltbush Scrub	MBR	0	0	1	1
Ephemeral Stream	SCM, SCNBC	2	<0.5	3	1
Foothill pine Woodland	SCM	0	0	1	6
Mojave Creosote Bush Scrub	MBR, SCM	1	<0.5	6	44
Mojavean Juniper Woodland and Scrub	SCM	0	0	1	5
Non-native Grassland	MBR, SCM, SCNBC	8	14	26	72
Non-vegetated Streams and Canals	SCNBC	1	<0.5	10	12
Open Water Marine	SCNBC	0	0	8	34
Ornamental	MBR, SCM, SCNBC	59	59	73	237
Rabbitbrush Scrub	SCM, SCNBC	2	1	2	11
Riversidean Alluvial Fan Sage Scrub	SCNBC	1	<0.5	1	8
Ruderal Habitat	MBR, SCM, SCNBC	9	7	24	46
Scrub Oak Chaparral	SCNBC	1	<0.5	2	6
Scrub Oak Chaparral (disturbed)	SCNBC	0	0	1	1
Southern Mixed Chaparral	SCM, SCNBC	4	1	8	38
Southern Riparian Forest	SCNBC	0	0	2	1
Urban or Built-up Land	MBR, SCM, SCNBC	231	592	231	2815
Total Acreage			**696**		**3469**

KEY
SCNBC (Southern California-Northern Baja Coast)
SCM (Southern California Mountains)
MBR (Mojave Basin and Range)
EPA
FSA
SOP

Sources of cover types: Holland (1986), Frenkel (1970), Mayer and Laudenslayer (1988), EPA (2014).

Urban or Built-up Land

Urban or Built-up Land includes areas where humans have drastically altered the landscape through activities such as grading and construction, such that all naturally occurring plant species

are absent. Urban or Built-up Land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered Urban or Built-up (e.g., car recycling plant, quarry). Urban or Built-up Land occurs throughout Los Angeles County but is most prevalent in the areas south of the Tehachapi Mountains to the Santa Monica Mountains and the area south of the Santa Monica and San Gabriel Mountains and to the west of the Peninsular Mountain Ranges (Holland, 1986). This cover type occurs on all 231 LTE sites.

Ornamental

Ornamental areas are portions of land adjacent to urban structures that are landscaped, maintained, and irrigated, or which have remnant native vegetation that receives some degree of maintenance or pruning, usually in the form of clearing for wildfire prevention. In densely urbanized areas, ornamental vegetation is typically dominated by non-native species which may or may not be invasive. Canopy structure, density, and the presence of understory and tree canopy layers are variable throughout ornamental areas (Mayer and Laudenslayer, 1988). For some sites, ornamental areas are of concern because they can provide substrate for host plants for special status wildlife. This cover type occurs on 59 LTE sites.

Non-Native Grassland

Non-native grassland typically occurs as a dense to sparse cover of annual grasses that may also include native wildflowers. There are rarely any shrubs or trees. The majority of the plants germinate in the late fall, into winter, and then grow and flower through spring. Throughout the majority of the summer they are setting seed or dead. This community is dominated by many non-native grasses, many of which originate from Europe, such as wild oat (*Avena barbata*), cheatgrass (*Bromus spp*.), filaree (*Erodium spp*.), rye grass (*Lolium spp*.), Mediterranean grass (*Schismus arabica*); and some native species such as California poppy (*Eschscholtzia californica*), lupine (*Lupinus spp*.), and phacelia (*Phacelia spp*.). This community typically grows upon fine textured, clayey soils, however it may be found in a variety of other soil types where disturbance has occurred. This community also occurs as a relict habitat following disturbance from construction, agriculture, or other human activities. Its elevation ranges from sea level to greater than 4,000 feet (Holland, 1986). This cover type occurs on eight LTE sites.

Ruderal Habitat

Ruderal habitat occurs as a result of anthropogenic disturbance of natural habitat. Disturbance is an event or condition that causes an interruption or loss of ecosystem structure or function (Walker, 2012). Anthropogenic forms of disturbance include off-road vehicle use, construction staging and activities, trampling, and others. In the case of ruderal habitat, anthropogenic disturbance is sustained, but there is no intentional substitution of vegetation following disturbance (Frenkel, 1970). Without intervention, ruderal habitat is colonized by pioneer species, which typically are invasive annual species. Ruderal habitat has less biodiversity than natural habitat (McKinney, 2002). A vegetation community was assigned as a vegetation cover type “Ruderal Habitat” if natural

or anthropogenic disturbance is extreme (generally greater than 70%) in an area. This cover type occurs on nine LTE sites.

Coast Live Oak Woodland

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*), a tree that reaches 30 to 80 feet in height. Canopy cover is intermittent and results in a poorly developed understory layer, but shrubs, including toyon (*Heteromeles arbutifolia*), currant (*Ribes spp.*), laurel sumac (*Malosma laurina*), or Mexican elderberry (*Sambucus mexicana*) may be present. The herbaceous layer is continuous and is often dominated by cheatgrass (*Bromus tectorum*) and other non-native species. This woodland occurs at elevations below 4,000 feet to the coast. It is found on the slopes of the transverse and peninsular ranges, especially on north-facing slopes and shaded canyon ravines (Holland, 1986). This cover type occurs on six LTE sites. Disturbed coast live oak woodland occurs on one LTE site.

Chamise Chaparral

Chamise chaparral is dominated almost exclusively by chamise (*Adenostoma fasciculatum*), with very few other shrub species. Mature stands are dense with sparse ground cover and litter (Holland, 1986). Common associated species occasionally present include, but are not limited to, interior-live oak (*Quercus wislizenii* var. *wislizenii*), scrub oak (*Quercus berberidifolia*), manzanita (*Arctostaphylos spp*.), ceanothus (*Ceanothus spp*.), mountain mahogany (*Cercocarpus betuloides*), toyon (*Heteromeles arbutifolia*), and poison oak (*Toxicodendron diversilobum*) (Holland, 1986). This cover type occurs on two LTE sites. Disturbed chamise chaparral does not occur on any LTE site, but does occur within the FSA of two LTE sites.

Coastal Sage Scrub

Coastal sage scrub (CSS) is composed primarily of low stature, aromatic, woody shrubs, and soft-woody shrubs (up to one meter high) that are most active in the winter and dormant in the summer (Holland, 1986; Holland and Keil, 1995). The Coastal Sage Scrub plant community typically occurs on sites with low moisture availability, including steep, xeric slopes or clay-rich soils that are slow to release stored water (Holland, 1986).

Dominant species in this community include deer weed (*Acmispon glaber)*, California sagebrush (*Artemisia californica)*, monkey flower (*Mimulus* spp.), California buckwheat (*Erigonum fasciculatum*), laurel sumac (*Malosma laurina*), coast prickly-pear (*Opuntia littoralis*), lemonade berry (*Rhus integrifolia*), and white sage (*Salvia apiana)*. CSS ranges from coastal Los Angeles to Baja California to the western and southern foothills of the San Gabriel and Santa Monica mountains (Holland, 1986). Of the proposed sites that have remnant native vegetation, Coastal Sage Scrub vegetation was the most common and abundant plant community observed (Holland, 1986).

Two types of CSS, Diegan and Venturan occur at and/or near the LTE sites. The distinction between the two is based primarily on dominant species composition and geographic range and can be the result of slope-aspect, elevation, fire/disturbance history, and differences in professional judgment made by the field biologist during the reconnaissance level surveys. For the purposes of this report,

CSS areas were given the general term "Coastal Sage Scrub." Both types of CSS are sensitive vegetation communities per CDFW Natural Communities. This cover type occurs on one LTE site. Disturbed CSS occurs on three LTE sites.

Southern Mixed Chaparral

Southern mixed chaparral is a dense community with shrubs growing from 5-10 feet (1.5-3 meters) tall. The stand may be continuous or it may have patches of bare soil or coastal sage scrub mosaicked throughout. Soils are usually relatively dry and the sites experience relatively moderate temperatures in comparison to other forms of chaparral in the same region (Holland, 1986). Dominant species include chamise (*Adenostoma fasciculatum*), mountain mahogany (*Cercocarpus betuloides*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), and scrub oak (*Quercus berberidifolia*). This community occurs throughout the foothills of the peninsular and transverse mountain ranges at elevations below 3,000 feet (Holland, 1986). This cover type occurs on four LTE sites.

Rabbitbrush Scrub

Rabbitbrush scrub is dominated by rabbitbrush (*Ericameria nauseosa*) in the shrub canopy with other great basin shrubs that grow around one meter tall. Trees are represented in rabbitbrush scrub by shrubby trees such as California juniper (*Juniperus californica*), although they do not constitute a dominant plant in the community in its entirety. Shrubs in this community are evenly spaced with openings in between. Other common species include great basin sagebrush (*Artemisia tridentata*), yerba santa (*Eriodictyon crassifolium*), and California buckwheat (*Eriogonum fasciculatum*). This habitat occurs in the northern half of Los Angeles County, from the interior slopes of the transverse mountains throughout the Mojave Desert. This community grows on well-drained sandy or gravelly soils elevations from sea level to 10,000 feet (Holland, 1986). This cover type occurs on two LTE sites.

Ephemeral Stream

Ephemeral streams are those streams containing flowing water only during, and for a short duration after, precipitation events in a typical year (ACOE 2000). Ephemeral streams occur in undeveloped areas throughout Los Angeles County. This cover type occurs on two LTE sites.

Riversidean Alluvial Fan Sage Scrub

This community can be found from sea level to 5,900 feet on south-facing slops on shallow soils and/or on low gradient deposits along streams. Species composition differs greatly among stands but is typically dominated by scalebroom (*Lepidospartum squamatum*). Disturbance may account for the high variation. Some stands in this habitat may have sufficient emergent trees to be placed in tree-dominated series. Other associated plants include big sagebrush (*Artemisia tridentata*), mulefat (*Baccharis salicifolia*), birchleaf mountain-mahogany (*Cercocarpus betuloides*), slender-horned spineflower (*Dodecahema leptoceras*), brittlebush (*Encelia farinosa*), yerba santa (*Eriodictyon spp.*), California buckwheat (*Eriogonum fasciculatum*), cheesebush (*Hymenoclea salsola*), bladderpod (*Isomeris arborea*), deer weed (*Lotus scoparius*), sugar bush (*Rhus ovata*),

Mexican elderberry (*Sambucus mexicana*), poison oak (*Toxicodendron diversilobum*), and chaparral yucca (*Yucca whipplei*) (Holland 1986). This cover type occurs on one LTE site.

Mojave Creosote Bush Scrub

Mojave creosote bush scrub contains tall shrubs 1.5-10 feet (0.5-3 meters) that are widely spaced, usually with bare ground in between. This community occurs on well-drained soils with very low available water holding capacity. Plant productivity is often limited by drought and only occurs during sufficient winter rainfall. During wet years, many species of annual wildflowers can be found in bloom from late February through April (Holland, 1986).

Creosote bush scrub is dominated by creosote bush (*Larrea tridentata*), box thorn (*Lycium andersonii*), brittlebush (*Encelia farinosa*), prickly-pear (*Opuntia spp.*), big sagebrush (*Artemisia tridentata*), rabbitbrush (*Chrysothamnus nauseosus*), fourwing saltbush (*Atriplex canescens*), burrobush (*Ambrosia dumosa*), and desert mallow (*Sphaeralcea ambigua*). This community is restricted to the northeastern reaches of Los Angeles County, where the San Gabriel and Tehachapi mountains descend into the Mojave Desert (Holland, 1986). This cover type occurs on one LTE site.

Open Water Marine

Open water can be either marine or lacustrine (lakes). Open water in marine environments consists of the water of the ocean extending from the non-vegetated shoreline out to the body of the ocean. Marine water is too deep for light to support the growth of plants, except in estuaries, although kelp (macroalgaes) can grow down to 120 feet below the water surface. Other photosynthetic organisms in open water include phytoplankton in the upper reaches of the water column. Marine environment occurs along the coast of Los Angeles County (Mayer and Laudenslayer, 1988). This cover type does not occur on any LTE site, but does occur within the FSAs of eight LTE sites.

Scrub Oak Chaparral

Scrub oak chaparral is a tall evergreen chaparral dominated by scrub oak (*Quercus berberidifolia*) (it comprises over 60% of the shrub cover) and mountain mahogany (*Cercocarpus betuloides*). In specific settings, Q. berberidifolia may be replaced by the shrub form of other oak species. It occurs in areas that are relatively more mesic than where other chaparrals exist and it also occurs at a higher elevation than most. Substantial leaf litter accumulates and discourages the growth of an understory, although some herbaceous species such as bedstraw (*Galium angustifolium*) and other shade tolerant herbs occur. Dominant species include Eastwood manzanita (*Arctostaphylos glandulosa*), ceanothus (*Ceanothus spp.*), toyon (*Heteromeles arbutifolia*), honeysuckle (*Lonicera spp.*), coffeeberry (*Rhamnus californica*), holly-leaved redberry (*Rhamnus ilicifolia*), and poison oak (*Toxicodendron diversilobum*). This community ranges throughout the Southern California Mountains up to 5,000 feet (Holland, 1986). This cover type occurs on one LTE site. The disturbed scrub oak chaparral does not occur on any LTE site, but does occur within the FSA of one LTE site.

Beaches and Coastal Dunes

Beaches are the smooth sloping accumulations of sand and gravel along shorelines. The surface is stable inland, but the shoreward part is subject to erosion by wind and water and to deposition in protected areas. Dunes may form on the surface of beaches, but are distinguished from foredunes dunes because beach dunes are formed by abiotic site factors rather than being anchored by vegetation. Beaches typically are barren, and thus feature no dominant species (Holland, 1986). Beaches occur throughout the coastal area of Los Angeles County. This cover type does not occur on any LTE site, but does occur within the FSAs of five LTE sites.

Non-Vegetated Streams and Canals

Non-vegetated streams and canals include concrete-lined channels, usually within urban areas, that function as water conveyance systems for flood control. Due to the concrete substrate, fluctuating water availability, and annual maintenance events, most channels lack mature riparian vegetation. Naturally recruited riparian vegetation may occur within areas of accumulated soil. This classification is not appropriate when sand or alluvium is an artifact of a very recent or uncommon flood event in the upper parts of watersheds. Streams and canals occur throughout Los Angeles County, particularly in urban areas (Holland, 1986). This cover type occurs on one LTE site.

Agricultural Land

Areas used for agriculture have been entirely or mostly cleared of natural vegetation and are instead planted with monoculture crops comprised of annual and perennial crops grown in rows with open space between the rows. Species composition frequently changes by season and year. Row crops often occur in floodplains or upland areas with high soil quality. They are nearly always artificially irrigated, and maintained through tilling, and the use of fertilizers, herbicides, and pesticides. Fields are usually vegetated by non-native herbaceous annuals, which form a dense cover. Typical species used in agriculture include oats (*Avena* spp.), Bermuda grass (*Cynodon* spp.), barley (*Hordeum* spp.), and clover (*Medicago* spp.). Onions, carrots, potatoes, and other tubers and root vegetables are also grown commercially (Los Angeles County Agricultural Commissioner/Weights & Measures, 2013). Agricultural land typically occurs in rural areas in Los Angeles County, but is generally excluded from national forests and other protected rural areas (Holland, 1986). This cover type does not occur on any LTE site, but does occur within the FSA of two sites.

Foothill Pine Woodland

Foothill pine woodland community is a mosaic of open and closed canopy forest of scattered pines and broadleaf hardwood trees and shrubs that are naturally associated with Upper Sonoran mixed chaparral. Stands of the coniferous woodland can be dense enough to suppress the shrubby layer. Most growth occurs in spring and early summer. This community typically occurs on dry, rocky soils of slopes and ridges. It is most frequently encountered on south-facing slopes, often intermixing there with Californian mixed chaparral or lower montane chaparral.

Dominant species in Foothill pine woodlands can vary with altitude and slope aspect. However, typical dominant plant species include California juniper (*Juniperus californica*), lodgepole pine (*Pinus contorta*), Coulter pine (*Pinus coulteri*), ponderosa pine (*Pinus ponderosa*), Jeffrey pine (*Pinus jeffreyi*), sugar pine (*Pinus Iambertiana*), and pinyon pine (*Pinus monophylla*). Foothill pine forest/woodlands can be found on all mountain ranges in Los Angeles County (Holland, 1986). This cover type does not occur on any LTE site, but does occur within the FSA of one LTE site.

Mojavean Juniper Woodland and Scrub

This vegetation is dominated by California juniper (*Juniperus californicus*), which grows to be a large shrub. It is a very open woodland with very few trees interleaving with each other. The understory is populated by species from Mojavean mixed scrub. Some co-occurring species include Mormon tea (*Ephedra nevadensis*), California buckwheat (*Eriogonum fasciculatum*), and redstem filaree (*Erodium cicutarium*). The herbaceous layer is typically intermittent and open. This woodland occurs at elevations from 4,000 to 6,000 feet above sea level. It is found on the desert slopes of the transverse and peninsular mountain ranges (Holland, 1986). This cover type does not occur on any LTE site, but does occur within the FSA of one LTE site.

Desert Saltbush Scrub

Desert saltbush scrub features only shrubs and herbs with a very open canopy. Therefore the total vegetation cover is low, leaving spaces in between plants. Furthermore, most species in this community grow to a low stature 1-3 feet (0.3-1 meter). Stands of this community are typically dominated by a single saltbush (*Atriplex*) species. The soils upon which this community grows are usually very alkaline and finely textured (Holland, 1986). This cover type does not occur on any LTE site, but does occur within the FSA of one LTE site.

Southern Riparian Forest

In Southern Riparian Forest, the tree canopy is open to locally dense and dominated by coast live oak (*Quercus agrifolia*) or by Fremont's cottonwood (*Populus fremontii*). The understory layer ranges from herbaceous species to woody shrubs such as willows (*Salix spp*.) This community occurs in bottomlands and outer floodplains along larger streams on fine-grained, rich alluvium. Other common species in southern riparian forest include mugwort (*Artemisia douglasiana*), toyon (*Heteromeles arbutifolia*), skunk bush (*Rhus trilobata*), California rose (*Rosa californica*), wild blackberry (*Rubus ursinus*), Mexican elderberry (*Sambucus mexicana*), and poison oak (*Toxicodendron diversilobum*). Southern Riparian forests can be found throughout canyons and valleys of coastal cismontane southern California from Point Conception south where there are intermittent or perennial streams (Holland, 1986). This cover type does not occur on any LTE site, but does occur within the FSAs of two LTE sites.

Noxious Species (Weeds)

Invasive plant species exist at and near the proposed LTE sites, within patches of native plant communities, and in areas that have been disturbed from human activities. Invasive species are

typically more numerous adjacent to roads and developed areas, and frequently border ornamental landscapes.

The Federal Noxious Weed List was reviewed for invasive species common to the Los Angeles Region. The following species were observed or have potential to occur on many of the project sites, *Euphorbia terracina, Avena sterilis, Pennisetum clandestinum, Salsola vermiculata*. While disturbed and ornamental habitats are generally considered to have low intrinsic value to sensitive species and native vegetation communities, grading or other disturbances that expose soil may create suitable conditions for weed infestations. Weed infestations in disturbed and ornamental habitats can spread to natural vegetation communities where they may out-compete native species, altering vegetation patterns, fire regimes, and use by wildlife.

B. Wildlife

More than 500 wildlife species occur in Los Angeles County, not including invertebrates (Garrett, Dunn, and Morse, 2006). Since the distribution of habitats varies throughout Los Angeles County, so does the distribution of wildlife species. Most wildlife species occur in rural and conserved lands of the county; however, due to the growing urban-wildland interface, a number of species have come to co-exist or conflict with humans in developed lands (Gehrt, Riley, and Cypher, 2010).

Aquatic species are not common in Los Angeles County. Much of their habitat has been converted throughout Los Angeles County, particularly due to the channelization of streams and rivers and the introduction of non-native species such as mosquito fish (*Gambusia sp.*) (Friends of the LA River, 2008; McGinnis, 2006). Most freshwater species in Los Angeles County are special status species[45] such as Santa Ana speckled dace (*Rhinichthys osculus* ssp. 3) and unarmored three-spine stickleback (*Gasterosteus aculeatus williamsoni*).

Herpetological species occur throughout Los Angeles County, the majority of which are residents. Most species are active during warm weather, from February to October, and remain in burrows throughout the remainder of the year. The western side-blotched lizard (*Uta stansburiana elegans*) and western fence lizard (*Scleroporus occidentalis*) are common species that inhabit a variety of habitats, including urban areas (Grinnell and Grinnell, 1907). Common inhabitants of streams and ponded waters in coastal Los Angeles County are the pacific treefrog (*Pseudacris cadaverina*), California toad (*Anaxyrus boreas halophilus*), and black-bellied salamander (*Batrachoseps nigriventris*) (Fisher and Case, 2014; Nafis, 2014). Many herpetological species in Los Angeles County are special status species; these species include coast horned lizard (*Phrynosoma blainvillii*), desert tortoise (*Gopherus agassizii*), green sea turtle (*Chelonia mydas*), and Pacific pond turtle (*Actinemys marmorata*).

Los Angeles County hosts a variety of resident and migratory birds. Resident birds include common species such as black phoebe (*Sayornis nigricans*), mourning dove (*Zenaida macroura*), California quail (*Callipepla californica*), red-tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchos*), and common raven (*Corvus corax*), but also federally-listed species such as coastal California gnatcatcher (*Polioptila californica*) and California condor (*Gymnogyps californianus*)

[45] "Special status species" are described below, in Section 3.5.3.

(Garrett, Dunn, and Morse, 2006). Migratory birds protected under the MBTA are discussed in Section 3.5.2, C, Special Status Species.

Various mammal species inhabit Los Angeles County. The majority of terrestrial mammals in the area are residents, whose home ranges are as small as half an acre for the California ground squirrel (*Spermophilus beecheyi*) (Polite and Ahlborn, 1999), to as large as 128,000 acres for male mountain lions (*Puma concolor*) (National Park Service [NPS], 2014). Mammals in Los Angeles County are herbivores, omnivores, or carnivores. Many smaller species are primarily herbivorous, such as the aforementioned ground squirrel. However, most bat species are insectivorous. Many bat species in Los Angeles County are special status species, as is the bighorn sheep (*Ovis canadensis nelsoni*). Common terrestrial mammalian species include coyote (*Canis latrans*), Audubon's cottontail (*Sylvilagus audubonii*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and desert woodrat (*Neotoma lepida*). The coastal area provides habitat for a number of marine mammals, such as the California sea lion (*Zalophus californianus*) and harbor seal (*Phoca vitulina*) (Reid, 2006).

C. Special Status Species

For purposes of this EA, special status species include:

- Species listed as endangered, threatened, proposed for listing, or have candidate status under the federal ESA. USFWS provided a list of such species with potential to occur in the Action Area,[46] as part of the informal consultation process under Section 7 of the ESA. USFWS-designated and proposed Critical Habitat is discussed separately in Section 3.5.2 D, Sensitive Habitats.
- Bald and golden eagles, due to their inclusion in the BGEPA.
- Species identified as under the purview of the MMPA.
- Species protected under the MBTA (species protected solely under the MBTA are not considered to have special status by the USFS).
- Species identified by the USFS as FSS.
- Species identified by the BLM as BLMS.
- Species identified under the CESA as Threatened, Endangered, or Rare.
- Identified in the California Fish and Game Code as CFP species.
- Identified under the California NPPA.

[46] For purposes of the ESA, "action area" is not limited to the immediate area involved in the action.(50 CFR § 402.02). As part of the informal consultation process, USFWS has identified an "action area" that covers all of Los Angeles County, and parts of San Bernardino and Orange counties.

A complete list of all special status plant and animal species considered for purposes of this EA, including those not expected to occur at or near any LTE site (and a rationale for that expectation) is provided in Appendix E-2.

Special Status Species Under Federal Purview

Special status species under federal purview include plants and animals protected under federal laws or regulations, such as the ESA, the BGEPA, the MMPA, the MBTA, and those designated as Sensitive by the USFS and BLM.

ESA-Listed Species. USFWS provided a list of 42 federally endangered, threatened, and candidate species, and critical habitats in the Action Area. No species proposed for listing were identified. A copy of this letter is included in Appendix H, and the Biological Assessment conducted for the proposed project is contained in Appendix E-4. Table 3.5-2 identifies species from the USFWS list, regarded as having a low, moderate, or high potential for occurrence within the FSAs, or within a larger area of potential effect corresponding to species' sensitivity, at any of the 231 LTE sites. The rationale for the Table 3.5-2 SOP determinations is provided in Appendix E-2.

Table 3.5-2
ESA-Listed Species Occurrence Potential[1,2]

Common Name	Scientific Name	ESA Status	Applicable Site(s)	SOP
Plants				
Santa Monica Mountains liveforever	*Dudleya cymosa* ssp. *ovatifolia*	FT	LACF069	M
Braunton's milk-vetch	*Astragalus brauntonii*	FE CH	CULV01	L
			LACF068	M
			LAFD097	L
Lyon's pentachaeta	*Pentachaeta lyonii*	FE CH	LACF065	M
			LACF083	L
Marcescent dudleya	*Dudleya cymosa* ssp. *marcescens*	FT	LACF069	H
Nevin's barberry	*Berberis nevinii*	FE	CLM	L
San Fernando Valley spineflower	*Chorizanthe parryi* var. *fernandina*	FC	LACF078	M
Invertebrates				
Palos Verdes blue butterfly	*Glaucopsyche lygdamus palosverdensis*	FE CH	LACF053	L
			LACF056	H
			LACF083	L
			LACF106	L
			TORFD04	L
Fish				
Steelhead trout (NMFS)	*Oncorhynchus mykiss*	FE	LACF069	H
Unarmored threespine stickleback**	*Gasterosterus aculeatus williamsoni*	FE	LACFCP14	L
Amphibians				
Arroyo toad	*Anaxyrus californicus*	FE	LACF076	L
California red-legged frog**	*Rana draytonii*	FT	LACFCP14	M
Reptiles				
Desert tortoise	*Gopherus agassizii*	FT	BRK	H

Table 3.5-2 (continued)
ESA-Listed Species Occurrence Potential[1,2]

Common Name	Scientific Name	ESA Status	Applicable Site(s)	SOP
Birds				
California condor*	*Gymnogyps californianus*	FE	BMT	M
			BRK	M
			BUR	M
			LACFCPO9	M
			LACFCP14	M
			LACF077	M
Coastal California gnatcatcher	*Polioptila californica*	FT	CLM	H
			LACF056	H
			LACF099	M
			LACF194	H
			WCFD004	H
Least Bell's vireo	*Vireo bellii pusillus*	FE	LACF069	H
			LACF076	H
Southwestern willow flycatcher	*Empidonax trailli extimus*	FE	LACF069	H
			LACF076	H
Western snowy plover	*Charadrius nivosus nivosus*	FT	LALG-HQ	L
			LALG100	L
			LALG300	M

[1]Species in this table represent those determined to have a low (L), moderate (M), or high (H) potential of occurrence at the 231 LTE sites. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2, which also provides a complete inventory of special status species considered for this EA, including those not anticipated to occur.
[2]ESA-listed mammals are not anticipated to occur.
*SOP was extended to 0.5 mile for these species.
**SOP was extended to 800 feet for these species.

KEY
Species Names: ssp. = subspecies; var. = variety
FC = Federal Candidate for listing

FE = Federal Endangered
ESA = Endangered Species Act
FT = Federal Threatened
SOP = species occurrence potential

Bald and Golden Eagles

Bald and golden eagles are protected under the BGEPA. Bald and golden eagle occurrence potential is presented in Table 3.5-3. Additional information, including preferred habitat and rationale for their SOP, is provided in Appendix E-2.

Table 3.5-3
Bald and Golden Eagle Occurrence Potential[1]

Common Name	Scientific Name	Applicable Site(s)	SOP*
Bald eagle	*Haliaeetus leucocephalus*	LACFCP14	M
Golden eagle	*Aquila chrysaetos*	BMT, BRK, BUR, LACF078, LACF157, LACFCP09	M
		LACFCP14	L

[1]Species in this table represent those determined to have a low (L), moderate (M), or high (H) potential of occurrence at the 231 LTE sites. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2.
*SOP was extended to 0.5 mile for these species.

KEY
SOP = species occurrence potential

Marine Mammals

There are 125 marine mammal species worldwide that are protected under MMPA however, only four marine mammal species have potential to occur within the LTE FSAs, these include the California sea lion (*Zalophus californianus*), harbor seal (*Phoca vitulina*), bottle-nosed dolphin (*Tursiops truncatus*), and common dolphin (*Delphinus delphis*). Marine mammal occurrence potential is presented in Table 3.5-4. Additional information, including preferred habitat and rationale for their SOP is provided in Appendix E-2.

Table 3.5-4
Marine Mammal Occurrence Potential[1]

Common Name	Scientific Name	Applicable Site(s)	FSA SOP
Bottlenose dolphin	*Tursiops truncatus*	LAFD049, LBFD006, LBFD021, SCH	L
		LALG100, LALG300, LALG-HQ	M
California sea lion	*Zalophus californianus*	LALG100, LALG300, LALG-HQ, LAFD049, LBFD006, LBFD021, SCH	M
Common dolphin	*Delphinus delphis*	LALG100, LALG300, LALG-HQ, LAFD049, LBFD006, LBFD021, SCH	L
Harbor seal	*Phoca vitulina*	LALG100, LALG300, LALG-HQ, LAFD049, LBFD006, LBFD021, SCH	L

[1]Species in this table represent those determined to have a low (L), moderate (M), or high (H) potential of occurrence at the 231 LTE sites. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2.

KEY
SOP = species occurrence potential
FSA = field survey area

Migratory Bird Treaty Act

Migratory shorebirds and marsh inhabitants travel through stops along the Pacific Flyway, such as the Ballona wetlands and Madrona marsh, while other groups of birds such as warblers, finches, flycatchers, and others travel along the transverse and peninsular mountain ranges. Los Angeles

County also hosts federally-listed migratory species such as least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*).

Forest Service Sensitive Species

Management and protection of FSS species is provided by Section 2670 of the FSM. This guidance provides policy, directing the need to conserve listed species and the ecosystems upon which they depend. FSS species are defined as plants and animal species that have been identified by the Regional Forester as populations where there are viability concerns (FSM 2670.5). The FSM directs that National Forests be managed in a manner that will not contribute to the reduction of viability of these species (FSM 2670.22). FSS species lists do not include species that are listed as threatened or endangered under the ESA.

The FSS species list was obtained from the USFS for the ANF and used to determine SOP for FSS for the FSAs at the two ANF sites (BUR and LACFCP09). All of these species were considered in this EA, and data regarding them including habitat and rationale for each SOP is contained in Appendix E-2. The FSS species with a low, medium, or high SOP are presented in Table 3.5-5.

Table 3.5-5[1]
Forest Service Sensitive Species Occurrence Potential at BUR and LACFCP09

Common Name	Scientific Name	Status	Applicable Site(s)	FSA SOP
Plants				
Forest camp sandwort	*Eremogone macradenia* var. *arcuifolia*	FSS	LACFCP09	M
Forest camp sandwort	*Eremogone macradenia* var. *arcuifolia*	FSS	BUR	NA
			LACFCP09	M
Hall's monardella	*Monardella macrantha* ssp. *hallii*	FSS	BUR	M
			LACFCP09	M
Jokerst's monardella	*Monardella australis* ssp. *jokerstii*	FSS	BUR	NA
			LACFCP09	NA
Late-flowered mariposa lily	*Calochortus fimbriatus*	FSS	BUR	M
			LACFCP09	M

Table 3.5-5[1] (continued)
Forest Service Sensitive Species Occurrence Potential at BUR and LACFCP09

Common Name	Scientific Name	Status	Applicable Site(s)	FSA SOP
Plants				
Mojave paintbrush	*Castilleja plagiotoma*	FSS	BUR	M
			LACFCP09	M
Mt. Gleason's paintbrush	*Castilleja gleasoni*	FSS	BUR	M
			LACFCP09	M
Orcutt's linanthus	*Linanthus orcuttii*	FSS	BUR	M
			LACFCP09	M
Palmer's mariposa lily	*Calochortus palmeri* var. *palmeri*	FSS	BUR	M
			LACFCP09	M
Parish's checkerbloom	*Sidalcea hickmanii* ssp. *parishii*	FSS	BUR	M
			LACFCP09	M
Parry's spineflower	*Chorizanthe parryi* var. *parryi*	FSS	LACFCP09	M
Peirson's lupine	*Lupinus peirsonii*	FSS	LACFCP09	M
Rock Creek broomrape	*Orobanche valida* ssp. *valida*	FSS	BUR	M
			LACFCP09	M
Salt Spring checkerbloom	*Sidalcea neomeaxicana*	FSS	BUR	M
			LACFCP09	M
San Bernardino aster	*Symphyotrichum defoliatum*	FSS	BUR	M
			LACFCP09	M
San Bernardino grass of Parnassus	*Parnassia cirrata* var. *cirrata*	FSS	BUR	M
			LACFCP09	M
San Gabriel bedstraw	*Galium grande*	FSS	BUR	M
			LACFCP09	M
San Gabriel linanthus	*Linanthus concinnus*	FSS	BUR	M
San Gabriel manzanita	*Arctostaphylos glandulosa* ssp. *gabrielensis*	FSS	BUR	M
			LACFCP09	M
Short-joint beavertail	*Opuntia basilaris* var. *brachyclada*	FSS	BUR	M
			LACFCP09	M
Short-sepaled lewisia	*Lewisia brachycalyx*	FSS	LACFCP09	M
Southern jewel-flower	*Streptanthus campestris*	FSS	BUR	M
			LACFCP09	M
Urn-flowered alumroot	*Huechera caespitosa*	FSS	BUR	M
			LACFCP09	M
Invertebrates				
San Gabriel Mountains blue butterfly	*Plebujus saepiolus aureoles*	FSS	BUR	M
			LACFCP09	M

Table 3.5-5[1] (continued)
Forest Service Sensitive Species Occurrence Potential at BUR and LACFCP09

Common Name	Scientific Name	Status	Applicable Site(s)	FSA SOP
Amphibians and Reptiles				
California legless lizard	*Aniella pulchra pulchra*	FSS	BUR	M
			LACFCP09	M
California mountain kingsnake (San Bernardino population)	*Lampropeltis zonata parvirubra*	FSS	BUR	M
			LACFCP09	M
Coastal rosy boa	*Lichanura orcuttii*	FSS	BUR	M
			LACFCP09	M
San Gabriel Mountains slender salamander	*Batrachoseps gabrieli*	FSS	LACFCP09	M
Yellow-blotched salamander	*Ensatina escholtzii croceator*	FSS	LACFCP09	M
Birds				
California spotted owl	*Strix occidentalis occidentalis*	FSS	BUR	NA
			LACFCP09	M
Gray vireo	*Vireo vicinior*	FSS	BUR	M
			LACFCP09	M
Northern goshawk	*Accipiter gentilis*	FSS	BUR	M
			LACFCP09	M
Mammals				
Fringed myotis	*Myotis thysasnoides*	FSS	BUR	L
			LACFCP09	M
Pallid bat	*Antrozous pallidus*	FSS	BUR	M
			LACFCP09	M
Townsend's big-eared bat	*Corynorhynus townsendii*	FSS	BUR	M
			LACFCP09	M

[1]Species depicted in this table represent those determined to have a low (L), moderate (M), or high (H) potential of occurrence at the Angeles National Forest-administered LTE sites. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2.

KEY:
SOP = species occurrence potential
FSA = field survey area
FSS = Forest Service Sensitive
NA = Not Anticipated

Bureau of Land Management Sensitive Species

The BLMS species are those that require special management consideration by BLM to prevent further degradation of the species and/or prevent the need to list a species under the ESA. Included in the list of BLMS species are ESA delisted (within five years), candidate, and proposed for listing species, as well as many species protected under the purview of the state of California. The BLM objectives are to conserve and assist in the recovery of both BLMS species and their habitats.

A list of BLMS species list was obtained from the BLM and used to determine SOP for these species within the FSA at the lone BLM LTE site (BRK). The BLMS species with a low, medium, or high SOP are presented in Table 3.5-6. Additional information regarding these species, and additional BLMS that were considered for this EA but are not expected to occur near the 231 LTE sites, are provided in Appendix E-2.

Table 3.5-6
Bureau of Land Management Sensitive Species Occurrence Potential at BRK[1, 2]

Common Name	Scientific Name	SOP
Plants		
Barstow woolly sunflower	*Eriophyllum mohavense*	M
Parry's spineflower	*Chorizanthe parryi* var. *parryi*	H
Birds		
Burrowing owl	*Athene cunicularia*	H
Golden eagle*	*Aquila chrysaetos*	M
Gray vireo	*Vireo vicinior*	H
Swainson's hawk	*Buteo swainsoni*	L
White-tailed kite*	*Elanus leucurus*	L
Mammals		
Fringed myotis	*Myotis thysasnoides*	L
Mohave ground squirrel	*Spermophilus mohavensis*	M
Pallid bat	*Antrozous pallidus*	M
Townsend's big-eared bat	*Corynorhynus townsendii*	M

[1]Species in this table represent those determined to have a low (L), moderate (M), or high (H) potential of occurrence at the 231 LTE sites. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2.
[2]No BLMS invertebrate or fish species have been identified as having potential to occur.
*SOP was extended to 0.5 mile for these species

KEY
BLMS = Bureau of Land Management Sensitive
SOP = species occurrence potential

U.S. Army Corps of Engineers Special Status Species

No agency-designated special status species were identified for consideration at the sole USACE-administered site (LAFD088).

State Regulated Special Status Species

This section addresses species protected under California laws and regulations. Those species under consideration in this EA include those listed under the CESA, CFP species, and species protected under the NPPA. Table 3.5-7 lists those species identified as having low, medium, or high potential to occur at or near the 231 LTE sites, along with the rationale for occurrence potential, and conservation status.

Table 3.5-7
State-listed Species Occurrence Potential[1, 2]

Taxa	Common Name	Scientific Name	Status	Applicable Site(s)	FSA SOP
Plants	Lyon's pentachaeta	*Pentachaeta lyonii*	CE	LACF065	M
				LACF083	L
	Marcescent dudleya	*Dudleya cymosa* ssp. *marcescens*	CR	LACF069	H
	Nevin's barberry	*Berberis nevinii*	CE	CLM	L
	San Fernando Valley spineflower	*Chorizanthe parryi* var. *fernandina*	CE	LACF078	M
	Santa Susana tarplant	*Deinandra minthornii*	CR	LACF072	M
Fish	Unarmored threespine stickleback**	*Gasterosterus aculeatus williamsoni*	CE	LACFCP14	L
Reptiles	Desert tortoise	*Gopherus agassizii*	CT	BRK	H
Birds	Bald eagle*	*Haliaeetus leucocephalus*	CFP	LACFCP14	M
	California condor*	*Gymnogyps californianus*	CE CFP	BMT	M
				BRK	M
				BUR	M
				LACFCPO9	M
				LACFCP14	M
				LACF077	M
	Golden eagle*	*Aquila chrysaetos*	CFP	BUR	M
				LACF078	M
				LACF157	M
				LACFCP09	M
				LACFCP14	L
				BRK	M
				BMT	M
	Least Bell's vireo	*Vireo bellii pusillus*	CE	LACF069	H
				LACF076	H

Table 3.5-7 (continued)
State-listed Species Occurrence Potential[1, 2]

Taxa	Common Name	Scientific Name	Status	Applicable Site(s)	FSA SOP
Birds cont.	Southwestern willow flycatcher	*Empidonax trailli extimus*	CE	LACF069	H
				LACF076	H
	Swainson's hawk	*Buteo swainsoni*	CT	BRK	L
				LACF072	L
				LACF076	M
	White-tailed kite*	*Elanus leucurus*	CFP	BRK	L
				LACF071	M
				LACF088	M
				LAFD029	M
				LAFD049	M
				LAFD099	M
				LAFD101	M
				LALG100	M
				LALG300	M
				LALGHQ	M
				LBFD021	M
				SCH	M
Mammals	Mohave ground squirrel	*Spermophilus mohavensis*	CT	BRK	M
				LACF092	M
				LACF093	M
				LACF114	L

[1]Species in this table represent those determined to have a low (L), moderate (M), or high (H) potential of occurrence at the 231 LTE sites. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2.
[2]CESA-listed invertebrates are not anticipated to occur.
*SOP was extended to 0.5 mile for these species
** SOP was extended to 800 feet for these species

KEY
Species Names: ssp. = subspecies; var. = variety
CE = California Endangered
CFP = California Fully Protected
CR = California Rare (also listed under California Native Plants Protection Act)
CT = California Threatened
FSA = field survey area
SOP = species occurrence potential

West Mojave Plan

The WEMO as used in this EA, refers solely to BLM's adopted Plan, which amends the California Desert Conservation Area Plan, and applies only to public lands. The BLM's WEMO is one portion of a larger effort by BLM, in cooperation with state and local governments, to establish a Habitat

Conservation Plan (HCP); however, state and local governments have not adopted the HCP to cover their respective jurisdictions.[47] The WEMO has also been the subject of litigation.

On January 9, 2006 the USFWS finalized its Biological Opinion for the BLM portion of the West Mojave Plan. In March 2006 the BLM signed the Record of Decision for the Final Version of its Plan. In 2007, USFWS amended its Incidental Take Statement for BLM's amendments to the CDCA described in the WEMO, to clarify anticipated take levels of desert tortoise.

The HCP component of the Plan is still being formulated and has not been ratified by the counties. Therefore, the BLM-administered BRK site is the only LTE site that is presently subject to the provisions of the WEMO.

The WEMO requires developments within the planning area to analyze effects on certain species known to occur within the planning area.[48]

Those species considered in the WEMO having low, medium, high, or observed SOP are shown in Table 3.5-8.

Table 3.5-8[1]
West Mojave Plan Species at Site BRK

Common Name	Scientific Name	WEMO SOP
Plants		
Barstow woolly sunflower	*Eriophyllum mohavense*	M
Amphibians and Reptiles		
Desert tortoise	*Gopherus agassizii*	H
Mojave fringe-toed lizard	*Uma scoparia*	M
Birds		
Burrowing owl	*Athene cunicularia*	H
California condor*	*Gymnogyps californianus*	M
Ferruginous hawk	*Buteo regalis*	M
Golden eagle*	*Aquila chrysaetos*	M
Gray vireo	*Vireo vicinior*	H
LeConte's thrasher	*Toxostoma lecontei*	M

47 Website: http://www.blm.gov/ca/st/en/fo/cdd/wemo_intro.html (accessed February 13, 2014)
48 Website: http://www.blm.gov/ca/st/en/fo/cdd/speciesaccounts.html (accessed February 13, 2014)

Table 3.5-8[1] (continued)
West Mojave Plan Species at Site BRK

Common Name	Scientific Name	WEMO SOP
Prairie falcon	*Falco mexicanus*	M
Swainson's hawk	*Buteo swainsoni*	L
White-tailed kite*	*Elanus leucurus*	L
Mammals		
Mohave ground squirrel	*Spermophilus mohavensis*	M
Townsend's big-eared bat	*Corynorhinus townsendii*	M

[1]Species in this table represent those determined to have a low (L), moderate (M), or high (H) potential of occurrence at BRK. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2.
*SOP was extended to 0.5 mile for these species

KEY
WEMO = West Mojave Plan
SOP = species occurrence potential

D. Sensitive Habitats

Sensitive habitats considered in this EA include:

- Critical Habitat, as designated under the ESA.
- Wetlands, EFH, and the West Mojave HCP, also managed under federal purview.
- Wildlife connectivity corridors regulated under state of California purview.

Each is discussed in this section.

ESA-Designated Critical Habitat

Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that habitat may require special management and protection, as Final "designated" or Proposed Critical Habitat (USFWS, 2013d).

No sites contained proposed Critical Habitat within the LTE sites or the FSAs associated with them. No designated or proposed Critical Habitat for steelhead trout is located within the LTE sites or the FSAs associated with them.

Critical Habitat designated by USFWS was identified within the FSA of 11 sites of which five contain Critical Habitat within the LTE site boundary (Table 3.5-9). Of these five sites, Critical Habitat was identified for two species – coastal California gnatcatcher (at LACF053, LACF056, LACF106, and PHN) and least Bell's vireo (at LACF076). The Critical Habitat analysis maps for the 11 sites can be found at Appendix J of the Biological Assessment (Appendix E-4 of this EA).

Critical Habitat was also identified within the FSA (adjacent to but not within the LTE site) at six sites for three species – coastal California gnatcatcher (at LACF083, LACF194 and WCFD004),

western snowy plover (at LALG100 and LALG300), and Lyon's pentachaeta (at LACF065). PCEs are the physical and/or biological features essential to the conservation of the species. Non-PCE areas do not contain physical and/or biological features essential to the conservation of the species.

Where Critical Habitat was identified at these 11 LTE sites, a screening was conducted (using satellite imagery and field reconnaissance) to determine whether PCE occurred there. On review, it was determined that PCE exists within the FSA at six sites for four species, and exists within the LTE site boundary at only one site (see Table 3.5-9). This site, LACF056, contains approximately .01 acre (less than 500 square feet) of PCE for coastal California gnatcatcher. The remaining four sites lack PCE necessary to support the listed species and consist of urban or built-up land, non-native grassland, agricultural land, noncontiguous disturbed southern mixed chaparral, ornamental, or ruderal habitat vegetation cover. PCEs for these species are described in USFWS Critical Habitat Final Rules as follows:

Coastal California gnatcatcher:[49] *The primary constituent elements (PCEs) of critical habitat for coastal California gnatcatcher are: (i) Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, maritime succulent scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and (ii) Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that that provide space for dispersal, foraging and nesting (USFWS, 2007a).*

Least Bell's vireo:[50] *The Service has determined that the physical and biological habitat features (referred to as the primary constituent elements) that support feeding, nesting, roosting and sheltering are essential to the conservation of the least Bell's vireo. These habitat features can be described as riparian woodland vegetation that generally contains both canopy and shrub layers, and includes some associated upland habitats. Vireos meet their survival and reproductive needs (food, cover, nest sites, nestling and fledgling protection) within the riparian zone in most areas. In some areas they also forage in adjacent upland habitats.*

[49] Revised Designation of Critical Habitat for the Coastal California Gnatcatcher, 50 CFR Part 17 RIN 1018–AV38 72032 Federal Register, Vol. 72, No. 243, Wednesday, December 19, 2007. This final rule became effective on January 18, 2008.

[50] Designation of Critical Habitat for the Least Bell's Vireo, 50 CFR Part 17, RIN 1018-AA95, Final rule. Federal Register, Vol. 59, No. 22, Wednesday, February 2, 1994. This rule became effective on March 4, 1994.

Table 3.5-9
Summary of PCE Analysis at Proposed LTE Sites Where Critical Habitat is Present

Site ID	Species	Vegetation or Land Cover Type	PCE Acres (ft^2)	Non-PCE Acres
LACF053	CAGN	Non-native Grassland	-	-
		Urban or Built-up Land	-	<0.5
		Ornamental	-	1
LACF056	CAGN	Non-native Grassland	-	1
		Urban or Built-up Land	-	**<0.5**
		Ornamental	-	1
		Coastal Sage Scrub	<0.5 (436 **ft^2**)	-
LACF076	LBV	Agricultural Land	-	-
		Non-native Grassland	-	-
		Ornamental*	-	**<0.5**
		Urban or Built-up Land	-	**<0.5**
LACF106	CAGN	Ornamental	-	-
		Non-native Grassland	-	-
		Urban or Built-up Land	-	**<0.5**
		Southern Mixed Chaparral	-	**<0.5**
PHN	CAGN	Urban or Built-up Land	-	**<0.5**
		Ruderal	-	**<0.5**
		Non-native Grassland	-	1

KEY
CAGN = coastal California gnatcatcher
LBV = least Bell's vireo
LTE = long term evolution
PCE = primary constituent element

Wetlands

Wetlands[51] were identified using a combination of National Wetlands Inventory maps, U.S. Geological Survey (USGS) GIS dataset and maps, high resolution aerial photographs, and field reconnaissance surveys. In California, wetlands and other waters are regulated by the USACE, CDFW, and RWQCBs. While wetlands occur throughout the region, only one ephemeral drainage was identified within an LTE site: (Site BRK). None of the other 230 LTE sites contains wetlands within its boundary. Several sites are found, however, adjacent to or near wetlands (Table 3.5-10).

[51] As defined by the USFWS, *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports hydrophytes, (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.* (Cowardin, 1979).

Table 3.5-10
LTE Sites Located Near Wetlands

Site ID	Within LTE Site	Within FSA
BRK	x	x
BUR		x
CLM		x
CULV001		x
GDWP001		x
GLNDL23		x
GLNDL24		x
LACF004		x
LACF053		x
LACF061		x
LACF069		x
LACF071		x
LACF072		x
LACF073		x
LACF076		x
LACF077		x
LACF078		x
LACF083		x
LACF085		x
LACF088		x
LACF091		x
LACF099		x
LACF102		x
LACF105		x
LACF123		x
LACF140		x
LACF151		x
LACF157		x
LACF159		x
LACF162		x
LACF192		x
LACFCP02		x
LACFCP09		x
LAFD016		x
LAFD049		x
LAFD077		x
LAFD079		x
LAFD088		x
LALG100		x
LALG300		x
LALG-HQ		x

Table 3.5-10 (continued)
LTE Sites Located Near Wetlands

Site ID	Within LTE Site	Within FSA
LAPDFTH		x
LAPDNHD		x
LASDCVS		x
LBFD006		x
LBFD021		x
MOR		x
PASA001		x
PHN		x
SCH		x
SVP		x
VEFD003		x

KEY:
FSA = field survey area
LTE = long term evolution

Essential Fish Habitat

None of the 231 LTE sites occur within EFH. Eight LTE sites are located near or adjacent to EFH, as indicated in Table 3.5-11, below. The habitat areas of particular concern (HAPC), a subset of EFH, were also considered. HAPC relevant to the proposed action include Estuarine, Sea Grass and Rocky Reef habitats. Table 3.5-11 illustrates the LTE sites located near EFH.

Table 3.5-11
LTE Sites Located Near Essential Fish Habitat

Site ID	Distance to EFH (feet) *	Name of EFH Waterbody	EFH	HAPC		
			Groundfish	Estuarine	Sea Grass	Rocky Reef
LACF088	430	Pacific Ocean	X	-	-	X
LACF099	500	Pacific Ocean	X	-	-	-
LAFD049	Adjacent	Los Angeles Harbor	X	-	-	-
LALG100	240	Pacific Ocean	X	-	-	-
LALG300	290	Pacific Ocean	X	-	-	-
LALG-HQ	400	Pacific Ocean	X	-	-	-
LBFD006	Adjacent	Long Beach Harbor	X	-	-	-
LBFD021	Adjacent	Los Alamitos Bay	X	X	X	-

Source: NOAA NMFS EFH Habitat Mapper at http://www.habitat.noaa.gov/protection/efh/efhmapper/
*LTE boundaries do not extend into marine environments.
LTE = Long Term Evolution
EFH = Essential Fish Habitat
HAPC = Habitat Areas of Particular Concern

West Mojave Plan Habitat Conservation Plan

Only one LTE site (BRK) is located in an area covered by the WEMO HCP. The goal of the WEMO HCP is to conserve and protect the desert tortoise and nearly 100 other sensitive plants and

animals, as well as the ecosystems on which they depend. At the same time, the plan strives to provide developers of public and private projects with a streamlined program for compliance with the California and federal endangered species. The 9.4 million-acre planning area encompasses most of California's western Mojave Desert and is applicable only to the one site located on BLM administered lands.

3.6 Historic and Cultural Resources

Historic and cultural resources relate to humans and their environments. This includes physical remains or expressions of past activities such as buildings, structures, objects, districts, landscapes, sites, or other locations, along with natural features of significance to communities or peoples. Resources within the project area are diverse and reflect the depth and extent of use by populations from prehistory to the modern age.

Paleontological Resources. The rocks and sediments of Los Angeles County preserve a vast prehistoric record. Marine sediments preserve fossils from the Triassic Period to the Holocene Epoch. Non-marine sediments contain a record from the Eocene Epoch to the Holocene Epoch, including the vast collection of late Pleistocene animals and plants from the asphalt deposits of Rancho La Brea (Harris 2010).

Human Habitation. The project area lies largely within Los Angeles County, California, with small portions overlapping into Orange and San Bernardino counties. Los Angeles County occupies 4,084 square miles and contains both Mediterranean and desert environments. Los Angeles County encompasses 70 miles of Pacific coastline; major parts of the Santa Monica, Sierra Pelona, and San Gabriel mountains; the Mojave Desert; several river basins, including the Los Angeles, San Gabriel and Santa Clara rivers; and large expanses of woodland, scrubland and grasslands. Elevations in the project area range from sea level to 10,068 feet.

Prior to European occupation, a rich diversity of Native American tribal societies was found within the project area. These included the Tongva (consisting of the Gabrielino and Fernandeño branches), the Serrano, Tataviam, Kitanemuk and the Chumash Native American tribes (Bean and Smith 1978). Figure 3.6-1 shows the local Native American tribal territories that are in whole or partially within Los Angeles County, and those portions of Orange and San Bernardino Counties near LTE sites there. All of the tribes identified, except the Chumash, speak languages belonging to the Uto-Aztecan language family. The Chumash language is an isolate with no known connections to other languages, suggesting a very great time depth (Goddard 1996).

The settlement that was to become the City of Los Angeles was founded by Hispanic colonists in 1781. Named El Pueblo de Nuestra Señora la Reina de los Ángeles, the small agricultural settlement was started to supply food for Spanish, and later Mexican, army forts in the region (Engelhardt 1927). The pueblo was elevated to the status of a *ciudad*, or city, in the mid-1830s as it grew with new settlers, homes for surrounding ranch owners and developed some commerce. Little changed following the invasion of Mexican California and its acquisition by the United States in the 1840s. It was the center of the "cow counties" of Southern California through the 1870s. The "Boom of the Eighties," however, brought the start of suburbs throughout Los Angeles County and a change of economy to agriculture and businesses (Dumke 1948). By the turn of the twentieth century, small towns dotted the landscape.

Following the acquisition of access to large amounts of water in the 1910s from the Owens Valley by the city's water department, and later from the Colorado River, urban and suburban development spread, and the city of Los Angeles and surrounding cities and unincorporated areas

within Los Angeles County grew in population. During this period, the city of Los Angeles also grew in area as it annexed many smaller towns. Another large influx of people, which continues to the present time, came during and following World War II, filling the spaces between suburbs, creating the urban landscape now present in the city and most of the surrounding smaller cities and unincorporated areas.

3.6.1 Regulatory Setting

This section describes the regulatory setting related to the protection of cultural and paleontological resources.

A. National Historic Preservation Act (Section 106) Compliance

The National Historic Preservation Act of 1966 (NHPA), as revised, requires that federal agencies consider effects on cultural resources when their activities meet the definition of an undertaking per 36 CFR Part 800. This project meets the definition of an undertaking and will be follow the process set forth in 36 CFR Part 800.

B. FCC Nationwide Programmatic Agreement Compliance

Following issuance of a Program Comment (FR 60280-60281), the Advisory Council on Historic Preservation agreed that the Section 106 regulatory process for projects similar to this project that were sponsored by NTIA and other select federal agencies could proceed following the *Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the FCC* (FCC PA) of 2004, and the *Nationwide Programmatic Agreement for the Collocation of Wireless Antennas* (FCC Collocation PA) of 2001.

To fulfill this requirement, the evaluation of potential impacts to cultural resources must be documented for each LTE site using a form developed to implement the FCC PA known as the New Tower Submission packet *aka* FCC Form 620 (see http://www.fcc.gov/encyclopedia/tower-and-antenna-siting) for newly proposed towers, or in the case of collocations, the very similar Collocation Submission packet *aka* FCC Form 621. A general methodology for resource identification and effects analysis is provided in the instruction section of these forms. The key elements are defined below. Copies of Forms 620 and 621 can be found on FCC's website at http://transition.fcc.gov/Forms/Form620/620.pdf, and http://transition.fcc.gov/Forms/Form621/621.pdf.

Because the project requires that the 231 LTE sites be submitted to the SHPO on FCC Forms 620 or 621, a phased approach has been developed for submission and review of these forms. A Programmatic Agreement (PA) has been entered into between the California SHPO and NTIA for this proposed project. This agreement, effective on October 3, 2014, is attached in Appendix H-9.

Cultural resource analysis for Section 106 compliance is conducted, per the FCC NPA, using Form 620/621, which includes several key requirements. First, the direct area of potential effect (direct APE) and an indirect area of potential effect (indirect APE) had to be established for each LTE project site. Second, because the ground would be disturbed during construction of new towers

and because many cultural resources may be located within the APEs, a records background search is required. Third, qualified cultural resource specialists visited each LTE project site to verify known cultural resources and evaluate any potential impacts to those resources that could result from the implementation of the project. Finally, Native American consultation was undertaken to identify any tribes that would like to consult on the proposed project.

C. Other Federal Laws

The Archaeological Resource Protection Act of 1979 (ARPA) was designed to preserve and protect archaeological resources on public and Native American lands by creating uniform regulations associated with archaeological studies on such lands plus federal penalties requirements if ARPA was violated. The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 expanded upon previous laws associated with Native American burial and funerary objects and gave greater protection to such items.

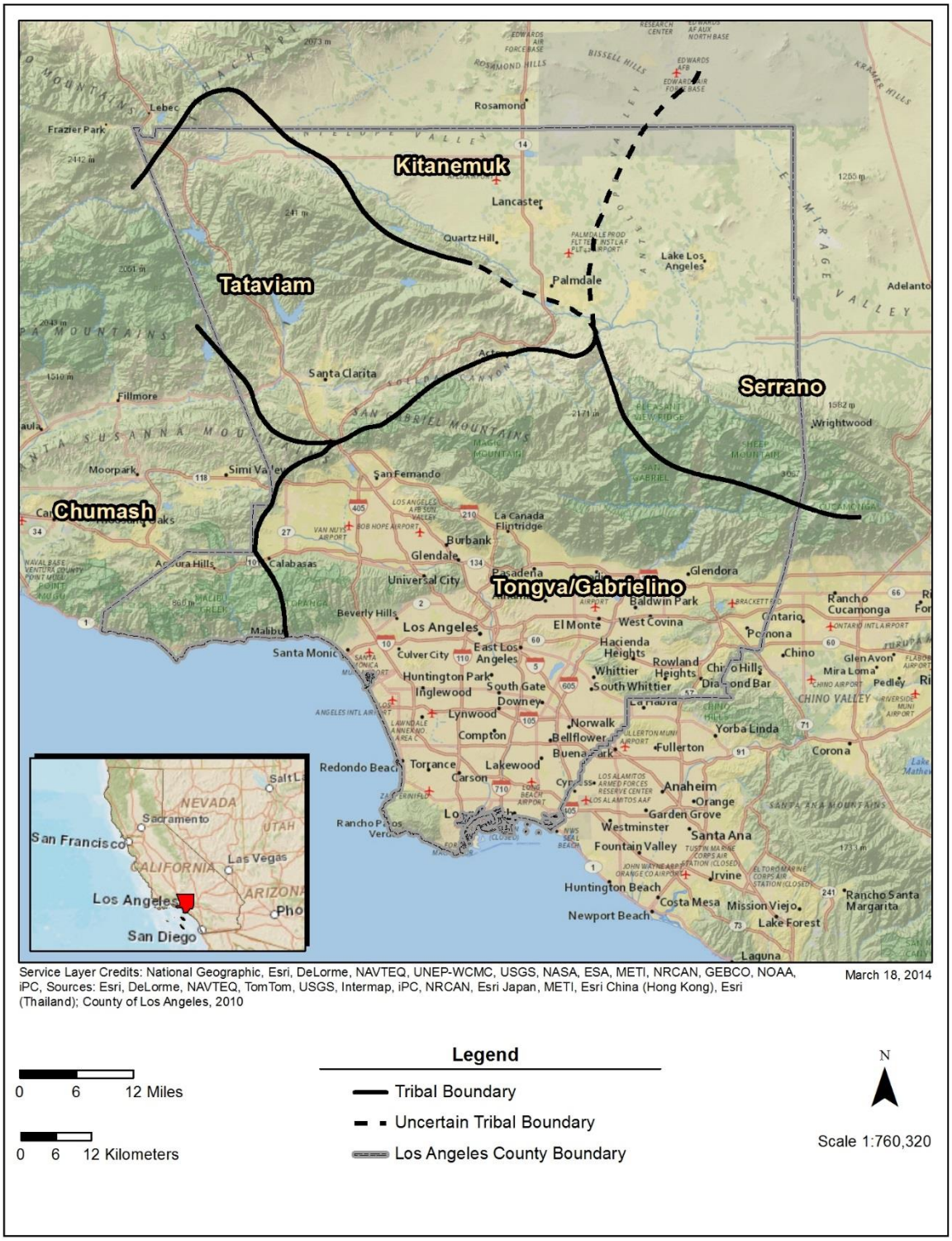
D. Executive Orders

Executive Order #11593 (1971) required federal agencies to administer cultural properties under their control and direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archaeological significance were preserved, restored, and maintained. Executive Order #13007 (1996) directs Federal land-managing agencies to accommodate Native Americans' use of sacred sites for religious purposes and to avoid adversely affecting the physical integrity of sacred sites. Some sacred sites may be considered traditional cultural properties and, if older than 50 years, may be eligible for the National Register of Historic Places (NRHP). Executive Order #13175 (2000) directs federal agencies to coordinate and consult with Indian tribal governments whose interests might be directly and substantially affected by activities on federally administered lands.

E. Paleontological Resources

The American Antiquities Act of 1906 (the Act) (16 U.S.C. §§ 431-433) states, in part, “any person who shall appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated” shall be subject to fine or imprisonment.

Figure 3.6-1
Native American Tribal Territories



3.6.2 Definitions

Cultural Resources. For purposes of this EA, cultural resources include archaeological resources, architectural resources, historic districts, Native American resources, and paleontological resources.

> **Archaeological resources** are defined for the purposes of this analysis as cultural resources that are more than 45 years old, which do not manifest above-ground features (c.f. NPS 1990b). Historic archaeological resources are those which developed after circa 1776 in California that do not have prehistoric components.
>
> **Architectural resources** are defined for the purposes of this analysis as cultural resources that are more than 45 years old which include buildings, structures or landscapes (c.f. NPS 1990b).
>
> **Historic Districts** include groups of individual buildings, structures, landscapes, or archaeological sites that are considered unified by a historic theme, builder or event.
>
> **Native American** resources are those resources that tribal authorities have identified as either prehistoric or ethnohistoric archaeological sites, or, are areas of traditional cultural significance (http://nahc.ca.gov/understandingcr.html).
>
> **Paleontological resources** are defined as any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth excluding archaeological or cultural resources (http://definitions.uslegal.com/p/paleontological-resource/).

Area of Potential Effect. Pursuant to FCC PA Section VI.C.2., the direct APE is the work area at each LTE project site. For new tower construction, this was defined as the maximum extent of where ground disturbance could occur for facility installation within the LTE parcel, including any needed construction staging areas, and a depth of construction up to 36 feet below grade. Pursuant to the FCC PA Section VI.C.4.a., the presumed indirect APE for archaeological and architectural resources is 0.5 mile from the proposed construction location.

3.6.3 Methodology

Following analysis requirements associated with the FCC PA and the instructions included in FCC Form 620, a literature search at the South Central Coastal Information Center (SCCIC) at California State University Fullerton was conducted by archaeological technicians permitted to do so. Once the records search was completed, site visits to review resources located near each LTE and visible from public right-of-ways were undertaken by qualified cultural resource professionals. Secretary of the Interior (SOI) Standards (http://www.cr.nps.gov/local-law/arch_stnds_9.htm) define the educational and experience requirements cultural resource analysts must have as part of the fulfillment of federal compliance projects. All fieldwork during this project was undertaken by specialists with credentials that meet the SOI requirements.

To fulfill NTIA methodology requirements, a "virtual desktop survey" by an SOI qualified architectural historian was undertaken to identify previously unidentified historic structures that could have been located within view of, or a reasonable distance from, the LTE tower sites. Once the virtual desktop survey was completed and additional resources were identified, a site visit to these newly identified resources, plus those noted during the SCCIC search, took place. Qualified archaeologists surveyed the proposed LTE project areas that exhibited raw or vacant land, and qualified architectural historians surveyed all LTE project areas that exhibited structural environments to document the potential effect of LTE construction on those resources. Cultural resources not yet determined eligible for listing on the NRHP were considered during the effects analysis.

Native American tribal consultations were undertaken following FCC PA Section IV et seq. and any known resources described during the consultation are noted below.

Before conducting field surveys at proposed LTE sites in the ANF, UltraSystems' staff archaeologist Michael Dice consulted with USFS Archaeologist David Peebles at the ANF Supervisor's Office in Arcadia, CA, on February 3, 2014, to review site and survey records and conducted additional research at the local CHRIS center.

Paleontological record searches were undertaken by the Natural History Museum of Los Angeles County (NHMLAC) in 2012 and 2013 of the rock units associated at each LTE site location and the potential for paleontological specimens in the rock units. The results of the search are presented in Appendix F-1.

A. Archaeological, Architectural, Native American and Paleontological Resources

Archaeological and Architectural Resources. The SCCIC holds site records for prehistoric and historic archaeological sites, historic districts, and historic resources inventory records for the built environment. The results of the SCCIC records search indicated that archaeological resources were previously recorded within 0.5 mile of 43 of the 231 LTE project sites. No archaeological resources were found within the direct APE at any of the LTE sites, as a result of the CHRIS search (Appendix F-2). The SCCIC search also identified architectural resources such as recorded buildings, structures, or other features of the historical built-environment. Additional site and survey records were researched at the ANF Supervisor's Office in Arcadia, CA. Review of USFS records located one historic site record and eight survey reports conducted with the LACFCP09 APE for indirect effects. No archaeological site records and two survey reports were found to have been conducted within the BUR APE for indirect effects.

Native American Resources. NTIA notified potentially affected federally recognized Native American tribes in cooperation with the FCC using the Tower Construction Notification System (TCNS). Using this system the Los Coyotes Reservation in Warm Springs, California, the Morongo Band of Mission Indians in Banning, California; the Ramona Band of Cahuilla Mission Indians, Anza, California; the Cahuilla Band of Mission Indians of the Cahuilla Reservation, Anza, California; the Twenty-Nine Palms Band of Mission Indians, Coachella, California; the Soboba Band of Luiseño Indians in San Jacinto, California, the Colorado River Indian Tribes, Parker, Arizona; the Fort Mojave

Indian Tribe, Mohave Valley, Arizona; the Chemehuevi Tribe, Havasu Lake, California; the Pauma/Yuima Band of Mission Indians, Pauma Valley, California; the Timbisha Shoshone Tribe, Bishop, California; and the Kaibab Piute Tribe in Fredonia, Arizona, were contacted. There has been no response from the Los Coyotes, Colorado River Indian, Fort Mojave Indian, Chemehuevi, Pauma/Yuima Band of Mission Indians; Timbisha Shoshone and Kaibab Piute tribes. The Morongo Band of Mission Indians responded that they were not concerned about the LTE project site (CLM) in their area of interest. The Ramona Band, the Cahuilla Band and the Twenty-Nine Palms Band have acknowledged the TCNS notification but have not requested further information on the project (Appendix F-3.). The Soboba Band of Luiseño Indians has responded, asking to review 16 of the LTE project sites in their area of interest. The Soboba Band's responses to the LTE project sites information were received in September 2014 (Appendix H-6.).

The Native American Heritage Commission (NAHC) conducted a review of its Sacred Lands File (SLF) to determine if a recorded Native American religious site(s) listed on the SLF were within any of the APEs. The Commission's reply indicated that a single tribal resource was located within the vicinity of the LTE project site; and included a list of 19 Native American tribal contacts. Each listed tribe was contacted. With no response from local Native American groups regarding resources, the existence of the potential tribal resource could not be verified (Appendix F-4).

Six of the tribes recommended Native American monitoring at tower construction sites. Five of the tribes were contacted by mail, and follow-up emails and telephone calls, in March 2014 with an invitation from the Authority to participate in a voluntary Native American monitoring program. Two of the contacted Tribes responded in late April 2014 declining to participate in a voluntary Native American monitoring program. The sixth tribe responded in May 2014 and was contacted that same month with an invitation from the Authority to participate in a voluntary Native American monitoring program.

Paleontological Resources. Letters were sent to the NHMLAC with 7.5-minute USGS topographic maps requesting information on which LTE project site locations might lie within 0.5 mile of rock units known to contain substantive vertebrate fossils and therefore would be assigned a high sensitivity for paleontological resources. Seventy-four of 231 project sites are located on strata considered sensitive for buried paleontological resources (Appendix F-1), but according to results of the literature search conducted by the NHMLAC, none of these sites exhibits exposed recorded paleontological resources.

B. Desktop and Field Reconnaissance Results

Archaeological Resources. Qualified archaeologists conducted field surveys of the APE for direct effects at the 154 LTE project sites that were not paved or otherwise developed, or had open space within the planned work area or immediately adjacent. No prehistoric or historic archaeological resources were observed during the surveys.

Architectural Resources. A virtual desktop streetscape search of each APE for indirect effects was conducted using Google Earth and similar sources to identify potential historic structures. When potential historic structures were identified, a supplemental windshield survey was conducted

within each applicable APE for the general purpose of verifying findings from previous desktop research and the virtual surveys.

During the virtual survey, buildings that appeared more than 45 years old and demonstrated architectural merits that might meet NRHP criteria were identified within the APE for indirect effects at 85 LTE project sites. Based on field inspections, 61 of the LTE project sites were determined to contain buildings that could be considered a historic property.

3.6.4 Historic Resources in Affected Environment

This section provides a description of the historic properties and paleontological resources identified in the direct and indirect APEs at the 231 LTE sites. Information on resources within the APEs of individual LTE project sites can be found in the FCC Forms 620 or 621; these are on file at SHPO and may be viewed by appointment.

A. Archaeological Resources

Based on the literature search and field reconnaissance, three archaeological resources or archaeological historic properties were identified in the direct APE of three LTE project site. A total of 96 subsurface archaeological features were found in the indirect APE at 43 LTE project sites. Known archaeological features are presented in Appendix F-2.

B. Architectural Resources

Based on the literature search and field reconnaissance, three sites have been identified as containing a potentially historic building within the direct APE. A total of 1,766 structures identified as historic buildings were identified within the indirect APEs at 160 LTE project sites. Of these 160 LTE project sites, 36 contain a total of 439 NRHP-listed resources (individual buildings and historic districts). NRHP listed and eligible buildings in APEs established for this undertaking are presented in Appendix F-6.

C. Native American Resources

One LTE project site was identified by the NAHC as potentially being within 0.5 mile of a Native American resource site. An effort, following federal guidelines for consultation utilizing letters, email and telephone calls, was made to contact local tribes and solicit background information and a location of the potential resource, but no tribe indicated that a traditional resource was in or near a LTE project APE. With no response from local Native American groups, the existence of the potential traditional resource at the LTE project site could not be determined, and therefore consultation has been completed and there is no indirect effect.

D. Paleontological Resources

Based on the NHMLAC records search, it is determined that 74 of the 231 LTE sites are situated on geological strata with a high potential for vertebrate paleontological resources. These LTE sites are presented in Appendix F-1.

Geological formations, or "rock units," that exist within the ANF where excavation has the potential to expose significant fossil vertebrate remains are, from youngest to oldest, Saugus Formation, Hungry Valley Formation, and Vasquez Formation. Other rock units in the ANF exist which do not contain significant vertebrate fossils are the Violin Breccia, Gneiss Complex, Granitic Rocks, Quartz Diorite and Quaternary Alluvium.

3.7 Aesthetic and Visual Resources

This section addresses existing aesthetic and visual resources in the southern California region. Visual and aesthetic resources within a landscape are natural and cultural features that can be seen and that contribute to the public's appreciation and enjoyment of it. They include physical features that define the visual and aesthetic character of an area. These can be important natural features or scenic vistas and can include man-made urban or community visual characteristics, including architecture, skylines or other aspects that create a visual definition for an area. Visual resources are important because of their uniqueness and they often provide a sense of community for the inhabitants of an area.

Visual character is an impartial description of what the landscape consists of and is defined by the relationships between the existing visible natural and built landscape features. These relationships are considered in terms of dominance, scale, diversity, and continuity. Physical resources and features that define visual character include landform types, vegetation types, land uses, height, bulk, scale, and architectural detail of associated buildings and ancillary site uses, overhead utility structures and lighting, open space (e.g., parks, reserves, greenbelts, and undeveloped land), significant viewpoints and scenic views (e.g., views of water bodies, mountains, historic structures, and downtown skylines), apparent "grain" or texture (e.g., density of development, size and distribution of structures and vacant properties or open spaces) and apparent upkeep and maintenance.

3.7.1 Regulatory Setting

A. National Forest Management Act

The NFMA establishes standards for management of national forests and grasslands. NFMA requires projects and permits to be consistent with applicable LMPs. The ANF LMP includes design guidance for use at the project level. Visual policies emphasize conserving or restoring aesthetic, recreation, and open space values, especially those of high-valued scenery such as scenic backdrops for local communities and increasingly rare values such as solitude.[52]

The ANF LMP establishes Scenic Integrity Objectives (SIO). Part 3 of the LMP establishes the following mandatory standards for SIOs:

- S9: Design management activities to meet the SIOs shown on the SIO Map.
- S10: SIOs will be met with the following exceptions:
    - Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor's approval.

[52] U.S. Department of Agriculture, Forest Service. Angeles National Forest Land Management Plan, Part 2, Table 474, Designated Communication Sites, September 2005.

- Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.

B. Bureau of Land Management Land Use Plan

Development on the one proposed LTE site (BRK) on land administered by the BLM is regulated by BLM's CDCA Plan. The CDCA Plan establishes goals for protection and use of the desert. It designates distinct multiple use classes for the lands involved, and establishes a framework for managing the various resources within these classes.[53] The CDCA Plan Recreation Element specifies the use of BLM's Visual Resource Management (VRM) Program for evaluating scenic quality and managing visual resources in the plan area. Under the VRM Program, the contrast rating process determines the extent of visual impact that proposed activities would create in a landscape.[54]

C. U.S. Army Corps of Engineers Visual Resource Assessment Procedure

The Visual Resource Assessment Procedure (VRAP) for the USACE is a systematic method for evaluating existing visual quality, evaluating visual impacts caused by projects, and recommending changes in project plans and designs. It is consistent with federal water resources planning and environmental policies and regulations and gives planners a systematic method for incorporating aesthetic considerations in planning studies.[55]

D. California Coastal Act

California's Coastal Act of 1976 (CCA), whose policies are similar to those of the federal Coastal Zone Management Act (CZMA), include the protection, enhancement and restoration of environmentally sensitive areas and protection of scenic beauty. Local governments must prepare and implement local coastal programs (LCPs) to implement the CCA for lands in the coastal zone.[56] These LCPs establish the allowable land use, locations, and intensities of new development in the coastal zone, and contain other development limitations to achieve the CCA's objectives, including those associated with visual resources.[57]

3.7.2 Existing Aesthetic and Visual Character

Detailed descriptions of the visual character associated with all 231 sites can be found in Appendix B. The general visual character of proposed LTE sites can be categorized based on their locations in urban, rural, or remote areas. A total of 203 of the 231 sites are located in areas characterized by high concentrations of people and activity. Urban areas include the Los Angeles Basin, San Fernando and Santa Clarita Valleys, along with urban portions of the Mojave Desert and Santa Monica Mountains. Views include low rise residential, commercial and industrial building

53 http://www.blm.gov/ca/st/en/fo/cdd/cdca_highlights.html
54 Bureau of Land Management, The California Desert Conservation Area Plan, 1980 as amended, pages 71 and 72.
55 U.S. Army Corps of Engineers, Visual Resource Assessment Procedure, Instruction Report EL 88-1, March 1988.
56 Coastal zone is defined by the California Coastal Act as an area extending from the shoreline inland 1,000 yards from the mean high tide. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards.
57 California Coastal Commission, Local Resources. http://www.coastal.ca.gov/lcps.html, accessed July 2013.

facades of varying architectural styles and urban streetscapes where paved streets with curbs and gutters are lined with utility poles, overhead distribution cables and street lights. The urban setting outside of the coastal zone does not contain sensitive visual resources and is not discussed further in this EA. Twenty-two project sites are located in areas having low concentrations of people and activity, but are served by infrastructure including roads and power. This rural setting includes 13 LTE sites located in the Mojave Desert; four in the Santa Monica Mountains, four in the Los Angeles Basin, and one in the ANF. Sites located in the mountains and forests are characterized by steep topography and dense vegetation that obstructs building facades and distant views. Sites located in the high desert region have distant views of the wide open landscape, with the San Gabriel Mountains serving as the backdrop in some areas.

3.7.3 Sites on Federally Administered Lands

Figure 3.7-1 shows the location of four LTE sites that are located on federal lands and 15 sites located in the coastal zone. Land within these areas constitutes the primary region of influence for aesthetic and visual resources based on their sensitivity as recognized by a federal or state management plan, coastal plan, or local regulatory planning document.

A. Angeles National Forest

As shown in Figure 3.7-1, five project sites are located within the boundary of the ANF. Development in the ANF is subject to the visual policies of the ANF LMP, which uses the USFS Scenery Management System (SMS) to inventory and manage scenic resources. Views from the National Forest are characterized by steep slopes with sharp to rounded summits and deep narrow canyons. The steeper reaches of the slopes are typically barren and highly eroded. Canyons characteristically have steep, rocky sides. Live oaks grow along shaded slopes.

Three LTE sites (LACF078, LACF157 and LACFCP14) are located within the boundary of ANF but are not located on land directly administered by the USFS. The ANF LMP would not be applicable to these sites and the USFS would not have any review or permitting role for development of the proposed action on these sites. Therefore, no further evaluation of visual resources associated with these sites was conducted. The remaining two sites are described below.

Two LTE sites (BUR and LACFCP09) are located on land administered by the USFS. For planning purposes the ANF has been divided into geographical units called “Places.” Each Place has a landscape theme and setting. The ANF has a variety of landscape character types that are found within different Places. The SMS includes SIOs that describe the appearance of a landscape in varying degrees of naturalness: Very High (Unaltered), High (Appears Unaltered), Moderate (Slightly Altered), Low (Moderately Altered), Very Low (Heavily Altered). The ANF has assigned SIOs to each of the designated Places in the Forest. Each SIO provides guidance for how each Place is to be managed to either preserve or achieve the desired SIO over time. Table 3.7-1 provides names of sites administered by the USFS, the ANF-LMP designated Place, and desired SIO for the area where the site is located.

Figure 3.7-1
LTE Sites under Federal Administration or in the Coastal Zone

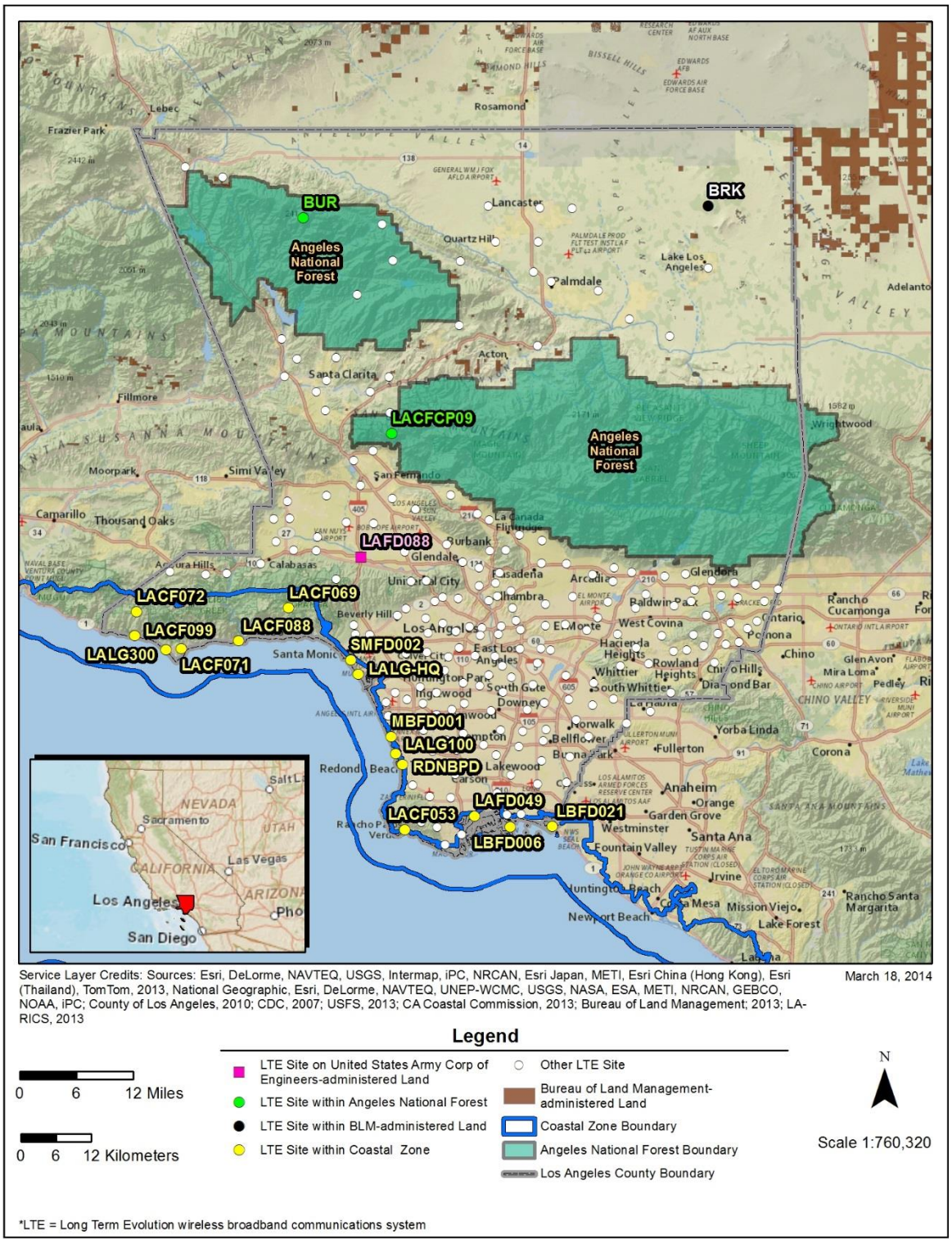


Table 3.7-1
Sites Located within Angeles National Forest

Site ID	Location	ANF Designated Place	Scenic Integrity (based on ANF-LMP)	Existing Visual Character
BUR	Burnt Peak, Los Angeles	Santa Clara Canyons Place	High	The site is an existing developed communications facility located in a remote area. It contains a 20-foot monopole, a pre-fabricated equipment shelter, an emergency generator, and a fuel tank, all of which are enclosed in a chain-link fence perimeter. Most of the site is ungraded and unpaved. There is sparse vegetation on site. Immediately adjacent to the site in the northeast are two other communications facilities, one of which contains multiple monopole towers of varying heights and a lattice communication tower. Forest Route 7N23A, approximately 130 feet from the southern edge of the site, leads to three additional communications facilities containing lattice communication towers. All three facilities are located on Burnt Peak, with two of the facilities located to the east of proposed site and one of the facilities located north of the proposed site on the opposite slope of the peak. Land surrounding the Burnt Peak site is undeveloped National Forest and consists mainly of coniferous forest or scrub oak woodland. Natural mountain views are on all sides of the site.
LACFCP09	21521 North Sand Canyon Road, Santa Clarita	Front Country Place	High	The site is a fully-developed fire camp located on a remote mountaintop. Most of the site is paved and flat. There is a guyed antenna tower on site with long omnidirectional antennas on top. Natural mountain views are on all sides of the site.

Source: Angeles National Forest Website, http://www.fs.usda.gov/angeles.

B. Bureau of Land Management Administered Lands

The BRK site is located on BLM-administered land in the Mojave Desert in unincorporated Los Angeles County, east of the city of Lancaster.

Land surrounding BRK is undeveloped and the area has sparse vegetation typical of the high desert region. Site BRK has been developed as a water reservoir as well as a communications site by Los Angeles County. A 60-foot communications lattice tower and a prefabricated equipment structure are onsite. There is no development in the immediate vicinity of the site and no significant views from the surrounding area are available in the direction of the site.

According to the guidance provided by BLM for Visual Resource Inventory, public lands are rated as Class A, B, or C based on the apparent scenic quality, which is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications.[58] The visual quality of project site BRK would be considered Class C (common scenic quality). The natural landscape within the area surrounding site BRK is considered of common scenic quality because it is relatively flat, has little or no vegetation or color contrast, is devoid of unique water features, and is high desert plains landscape with few distinguishing landforms or unique features.

C. U.S. Army Corps of Engineers Administered Lands

Site LAFD088 is an existing fire station located on USACE administered lands in an intensely developed urban area in the San Fernando Valley region of the City of Los Angeles.

Site LAFD088 is fully developed as a fire station containing existing communications equipment. There are several rooftop and wall mount antennas on the fire station building. According to the guidance provided by USACE for visual resource assessment, the existing visual quality of project site LAFD088 would be considered average. The area surrounding the proposed site is devoid of any water bodies. Landform consists of low lying plains with flat topography. The site is located in an intensely developed urban area comprising of a mix of residential and commercial buildings. The visual quality of the site is typical of a developed urban area. Streets are lined with utility infrastructure including utility poles and distribution cables. The surrounding foliage is moderate. Buildings in the area are medium rise and in good condition. There are natural vistas of the hills in the distant vicinity from public roads in the area.

3.7.4 Coastal Zone

As identified in Figure 3.7-1, 15 LTE sites (LACF053, LACF069, LACF071, LACF072, LACF088, LACF099, LAFD049, LALG100, LALG300, LALG-HQ, LBFD006, LBFD021, MBFD001, RDNBPD, and SMFD002) are located in the coastal zone. Table 3.7-2 provides brief descriptions of existing development and visual character associated with each site.

Pursuant to the requirements of the Coastal Zone Management Act (CZMA), construction activities proposed in the coastal zone (CZ) management area and therefore on the 15 coastal sites mentioned above, must comply with applicable state or local coastal planning regulations. Twelve of these 15 coastal sites would be located in CZ LCP segments that have had permit authority transferred to the local jurisdiction (the cities of Malibu, Manhattan Beach, Long Beach, Los Angeles, Redondo Beach, and Rancho Palos Verdes, and the Santa Monica Mountains segment of Los Angeles County). The remaining three sites (i.e., sites located within the cities of Los Angeles, Santa Monica and Hermosa Beach) are in areas under the California Coastal Commission's (CCC's) permit authority because no certified LCP applies. Additionally, development on those three coastal sites is also regulated by applicable zoning or municipal codes or uncertified coastal plans that are integral components of applicable general or specific plans.

[58] Bureau of Land Management, Manual H-8410-1 Visual Resource Inventory, 1986. Available at http://www.blm.gov/nstc/VRM/8410.html. Accessed November, 2013.

All applicable LCPs and development codes contain regulations and policies (such as height restrictions, setbacks and use of careful design, screening and mitigation measures) developed to protect coastal resources and conserve scenic views. The roadways listed below include locally designated scenic routes that are located in the vicinity of LTE project sites.

- Pacific Coast Highway is designated as a scenic road by the state and by numerous coastal jurisdictions, including the City of Malibu (in its LCP).[59] Segments of Pacific Coast Highway officially designated as scenic by the state do not lie within the study area.

- Topanga Canyon Boulevard is designated as a scenic route in the Santa Monica Mountains LCP.[60]

- Palos Verdes Drive west, east, and south are designated as view corridors by the City of Rancho Palos Verdes Coastal Specific Plan.

Seven project sites in the coastal zone are located near locally designated scenic routes or in scenic corridors protected by LCPs. Sites LACF071, LACF099, LALG300 are located adjacent to Pacific Coast Highway, Site LACF069 is located adjacent to Topanga Canyon Boulevard, and site LACF053 is located adjacent to the Palos Verdes Drive South. Sites LACF088 and RDNBPD are located within 0.25 mile of Pacific Coast Highway.

Four project sites (SCH, LAFD101, LBPDHQ and LBFD002) are located within 0.25 mile of the coastal zone and one site (LACF056) is located within a coastal viewshed. Detailed information regarding existing development and visual character associated with these five sites is also provided in Table 3.7-2 below.

3.7.5 Local Scenic Corridors

Two LTE sites are located along a locally designated scenic corridor that is outside of the coastal zone (Site LHS and Site SVP). Locally-designated scenic corridors and visual resources associated with LTE sites located in the coastal zone have been discussed above.

Site LHS is located at the Lost Hills/Malibu Sheriff station in the city of Calabasas. The site is in a rural area, on a fully developed parcel containing an existing lattice communication tower. The Calabasas General Plan establishes U.S. Highway 101 (Ventura Freeway) as a locally-designated scenic route and the area within 500 feet of the highway as a scenic corridor. Site LHS is located in the vicinity of U.S. Highway 101 and part of the site is located within the scenic corridor boundary. The area in the vicinity of the site is moderately developed and consists of a mix of commercial and residential buildings. The site is located in the foothills close to the San Fernando Valley. Distant views of the Santa Monica Mountains are available from public roadways located to the north and east of the site.

Site SVP is located at a former military site situated along Mulholland Drive within the City of Los Angeles. The site is in a rural area of the Santa Monica Mountains and on property previously

59 City of Malibu Local Coastal Program Land Use Plan. Adopted September 2002.

60 Santa Monica Mountains Local Coastal Program Land Use Plan. September 2007.

developed as a "Nike Missile" site. The original radar tower still stands at the site, along with other remnant missile site structures. The site also contains an existing monopole communication tower. The City of Los Angeles' Mulholland Scenic Parkway Specific Plan (MSPSP) establishes portions of Mulholland Drive as a locally-designated scenic highway. Site SVP is located within 500 feet of the Mulholland Drive right-of-way and within the MSPSP "inner corridor," which is a locally designated scenic corridor. The area surrounding the site is characterized predominately as natural open space and affords scenic mountain views. The site also abuts two parkland sites, the San Vicente Mountain Park and Westridge-Canyonback Park, both of which are operated by the Mountains Recreation and Conservation Authority (MRCA).

Table 3.7-2
Sites Located within and Near Coastal Zone

Site ID	Location	Applicable Coastal Planning Regulations	Existing Visual Character
LACF053	6124 Palos Verdes Drive South, Rancho Palos Verdes	Rancho Palos Verdes Coastal Specific Plan	The site is located in an urban area on the grounds of an existing fire station. The area in the vicinity of the site is intensely developed with predominantly single family residences. The site is located along Palos Verdes Drive within a scenic corridor designated by the Local Coastal Plan. Abalone Cove Shoreline Park is located to the south in the immediate vicinity of the site and the Pacific Ocean is located further south. Scenic views of the ocean are available from Palos Verdes Drive as well as open spaces and developments to the north of the site, and hillside views are available in all directions.
LACF069	401 S. Topanga Canyon Boulevard, Topanga	Santa Monica Mountains LCP	The site is located in a rural area on the grounds of an existing fire station. The area in the vicinity of the site is moderately developed and consists predominantly of single family residences. The site is located in the Santa Monica Mountains National Recreation Area and adjacent to Topanga Canyon Boulevard within a scenic corridor designated by the Local Coastal Plan. There are no scenic vistas to and from the site. The site is characterized by dense vegetation and tall trees with dense foliage that shield building facades and obstruct distant views in the area.

Table 3.7-2 (continued)
Sites Located within and Near Coastal Zone

Site ID	Location	Applicable Coastal Planning Regulations	Existing Visual Character
LACF071	28722 W Pacific Coast Highway, Malibu	Malibu LCP	The site is located in an urban area on the grounds of an existing fire station. The area in the vicinity of the site is intensely developed and consists predominantly of residential buildings. The site is located on a low lying parcel adjacent to Pacific Coast Highway. The viewshed from the surrounding development to the north consists of the Pacific Coast Highway corridor. The site is located in the Santa Monica Mountains National Recreation Area and there are natural views of the Santa Monica Mountains to the northeast and northwest of the site. The Pacific Ocean is located further south of the site; however, due to the higher elevation of land and development towards the south, there are no views of the Pacific Ocean.
LACF072	1832 S Decker Road, Malibu	Santa Monica Mountains LCP	The site is located in a rural area on the grounds of an existing fire station. The area in the vicinity of the site is sparsely developed and consists of institutional facilities. The site is located in the Santa Monica Mountains National Recreation Area and has views of the Santa Monica Mountains on all sides. The site is located at the edge of a proposed scenic ridgeline within the viewshed of a public viewing area identified in the Santa Monica Mountains Local Coastal Plan.
LACF088	23720 W Malibu Road, Malibu	Malibu LCP	The site is located in an urban area on the grounds of an existing fire station. The area in the vicinity of the site is intensely developed and consists of a mix of commercial and residential buildings. The site is located in the Santa Monica Mountains National Recreation Area, on low-lying land sandwiched between Pacific Coast Highway and the Pacific Ocean. The viewshed from the surrounding development and public roadways to the north consists of the Pacific Coast Highway corridor and the Pacific Ocean. There are views of the Santa Monica Mountains to the northeast and northwest of the site.

Table 3.7-2 (continued)
Sites Located within and Near Coastal Zone

Site ID	Location	Applicable Coastal Planning Regulations	Existing Visual Character
LACF099	32550 Pacific Coast Highway, Malibu	Malibu LCP	The site is located in an urban area on the grounds of an existing fire station. The area in the vicinity of the site is moderately developed and consists of a mix of residential and recreational buildings. The site is located in the Santa Monica Mountains National Recreation Area, on low-lying land sandwiched between the Pacific Coast Highway and the Pacific Ocean. Robert H. Meyer Memorial State Beach is also nearby on the south. The viewshed from the surrounding development and public roadways to the north consists of the Pacific Coast Highway corridor and the Pacific Ocean. There are views of the Santa Monica Mountains to the northeast and northwest of the site.
LAFD049	400 Yacht Street, Wilmington	City of Los Angeles Zoning Code	The site is located in an urban area on the grounds of an existing fire station. The area in the vicinity of the site is intensely developed with predominantly industrial buildings. The site is located close to the Los Angeles Harbor. Area in the vicinity of the site is flat. There are views of the harbor in all directions; however, the views are obstructed by utility infrastructure and other features characteristic of industrial areas.
LALG100	1200 Strand, Hermosa Beach	Hermosa Beach LCP	The site is located in an urban area on the grounds of the Hermosa Beach Lifeguard Headquarters. The area in the vicinity of the site is intensely developed with a mix of commercial and residential buildings. The site is located directly on the beach at the beginning of the pier. Coastal views of the Pacific Ocean to the west of the project site are available from Pier Avenue, Strand Street, Beach Drive and the commercial and residential developments located in the east.
LALG300	30050 Pacific Coast Highway, Malibu	Malibu LCP	The site is located on the grounds of the Zuma Beach Lifeguard Headquarters. The facility contains existing communications equipment. The area in the vicinity of the site is developed with low rise estate homes occupying large parcels of land. The site is located in the Santa Monica Mountains National Recreation Area, directly on the beach and adjacent to Pacific Coast Highway. The viewshed from the surrounding development and public roadways to the north consists of the Pacific Coast Highway corridor and the Pacific Ocean. There are views of the Santa Monica Mountains to the northeast and northwest of the site.

Table 3.7-2 (continued)
Sites Located within and Near Coastal Zone

Site ID	Location	Applicable Coastal Planning Regulation	Existing Visual Character
LALG-HQ	2300 Ocean Front Walk, Venice	Venice LCP	The site is located in an urban area on the grounds of the Los Angeles Lifeguard Headquarters. Land east of the site is developed with a mix of uses and several monopole towers are present on the grounds of the facility. The site is located directly on Venice Beach. The topography in the vicinity of the site is relatively flat and buildings range up to several stories in height, limiting ocean views from surrounding locations. Views of the Pacific Ocean are available along Ocean Front Walk.
LBFD006	330 Windsor Way, Long Beach	Long Beach LCP	The site is located in an urban area on the grounds of a fire station. The area in the vicinity of the site is intensely developed with predominantly industrial buildings. Towards the east, the viewshed consists of the Pacific Ocean. Views are obstructed by utility infrastructure and other features characteristic of industrial areas.
LBFD021	225 Marina Dr, Long Beach	Long Beach LCP	The site is located in an urban area on the grounds of the Long Beach Fire Department Headquarters. The area in the vicinity of the site is intensely developed with commercial buildings and large parking lots. The site is located within the Alamitos Bay area and there are coastal viewsheds of the bay to the north, south and west of the project site. Viewsheds to the east and the south consist of the San Gabriel River, which is southwest of the site.
MBFD001	400 15th Street, Manhattan Beach	Manhattan Beach Municipal Code	The site is located in an urban area on the grounds of a fire station which is part of the City of Manhattan Beach Civic Center. The area in the vicinity of the site is intensely developed with a mix of commercial, residential and public buildings. Views of sandy beaches and open water are limited to corridors along the roadways and along the strand. Otherwise, views consist of urban uses, including low rise commercial and residential uses of various styles, overhead utility lines, street lights, and other features characteristic of developed urban areas.
RDNBPD	401 Diamond St, Redondo Beach	Redondo Beach LCP	The site is located in an urban area on the grounds of a police station. An approximately 100-foot-high monopole communication tower is onsite. The area around the site is intensely developed with a mix of residential, commercial and public buildings. There are no advantageous views in the area. Views consist of low rise commercial and residential uses of various styles, overhead utility lines, street lights, and other features characteristic of developed urban areas.

Table 3.7-2 (continued)
Sites Located within and Near Coastal Zone

Site ID	Location	Applicable Coastal Planning Regulation	Existing Visual Character
SMFD002	222 Hollister Avenue, Santa Monica	City of Santa Monica Zoning Code	The site is located in an urban area on the grounds of an existing fire station. The area in the vicinity of the site is intensely developed and consists of a mix of residential and commercial buildings. The site is located in the coastal zone, in a low lying area in the vicinity of Santa Monica Mountains National Recreation Area. Santa Monica State Beach is also nearby, south of the site. The area to the north of the site is low lying and flat with no significant views of the Pacific Ocean. There are no advantageous views in the direction of the site from developments or public spaces located to the south of the site.
SCH	San Pedro City Hall, City of Los Angeles	Site included due to location near coastal zone	The site is located in an urban area on a fully developed parcel that contains the San Pedro City Hall. The majority of the site is paved and flat. The area in the vicinity of the site is intensely developed with a mix of commercial buildings and park open spaces. No significant views are near the site.
LAFD101	1414 W 25th St, San Pedro, Los Angeles	Site included due to location near coastal zone	The site is located in an urban area, on the grounds of a fire station. The majority of the site is paved and flat. The area in the vicinity of the site is intensely developed and mostly consists of single family residential buildings. The Pacific Ocean is located to the south of the site. There are natural views of the hillsides to the north and west of the project site, in the distant vicinity. To the south the viewshed consists of the Pacific Ocean.
LBPDHQ	400 West Broadway, Long Beach	Site included due to location near coastal zone	The site is located in an urban area within the campus of the Long Beach Police Department Headquarters. An approximately 60-foot high monopole type communications tower is affixed to the building roof. The area in the vicinity of the site is a business district which contains several medium to high rise commercial office buildings. Streets are lined with trees having dense foliage; however, there is no potential for screening of roof mounted telecom equipment as the buildings are high rise.
LBFD002	1645 E 3 St, Long Beach	Site included due to location near coastal zone	The site is located on the grounds of a fire station. The site is located in an urban setting and the surrounding area mostly consists of single family residential buildings. Most of the surrounding area consists of well maintained buildings and streetscapes. Landscaping in the form of green patches, small plants and trees exists along sidewalks. The streets are also lined with old utility poles that greatly hamper the aesthetic and visual quality of the area.

Table 3.7-2 (continued)
Sites Located within and Near Coastal Zone

Site ID	Location	Applicable Coastal Planning Regulation	Existing Visual Character
LACF056	12 Crest Road W, Rolling Hills	Site included due to location in a coastal viewshed	The site is located on the grounds of a fire station. A 60-foot monopole communication tower and a fire hose tower is located on site. Area in the vicinity of the site consists of large residential lots. The site is located within a scenic sensitive area and advantageous coastal viewsheds are located to the south of the site. There are natural hillside views on all sides of the site.

3.8 Land Use

This section presents an overview of the physical and regulatory environment related to land use and planning resources. It summarizes applicable land use permitting and regulatory requirements, including identification and a brief description of the regulatory mechanism, oversight agency, applicable regulation and permit requirements. Four categories of land use management and regulation apply to the proposed LTE sites: federally-administered lands, the coastal zone (CZ), airports and their environs, and local communities. The regulatory context for each of these categories is described below.

3.8.1 Federally-Administered Lands

Four of the project sites are on lands administered by federal agencies: BLM (BRK); USFS (BUR and LACFCP09); and the USACE (LAFD088). Figure 3.8-1 shows these four sites.

Bureau of Land Management

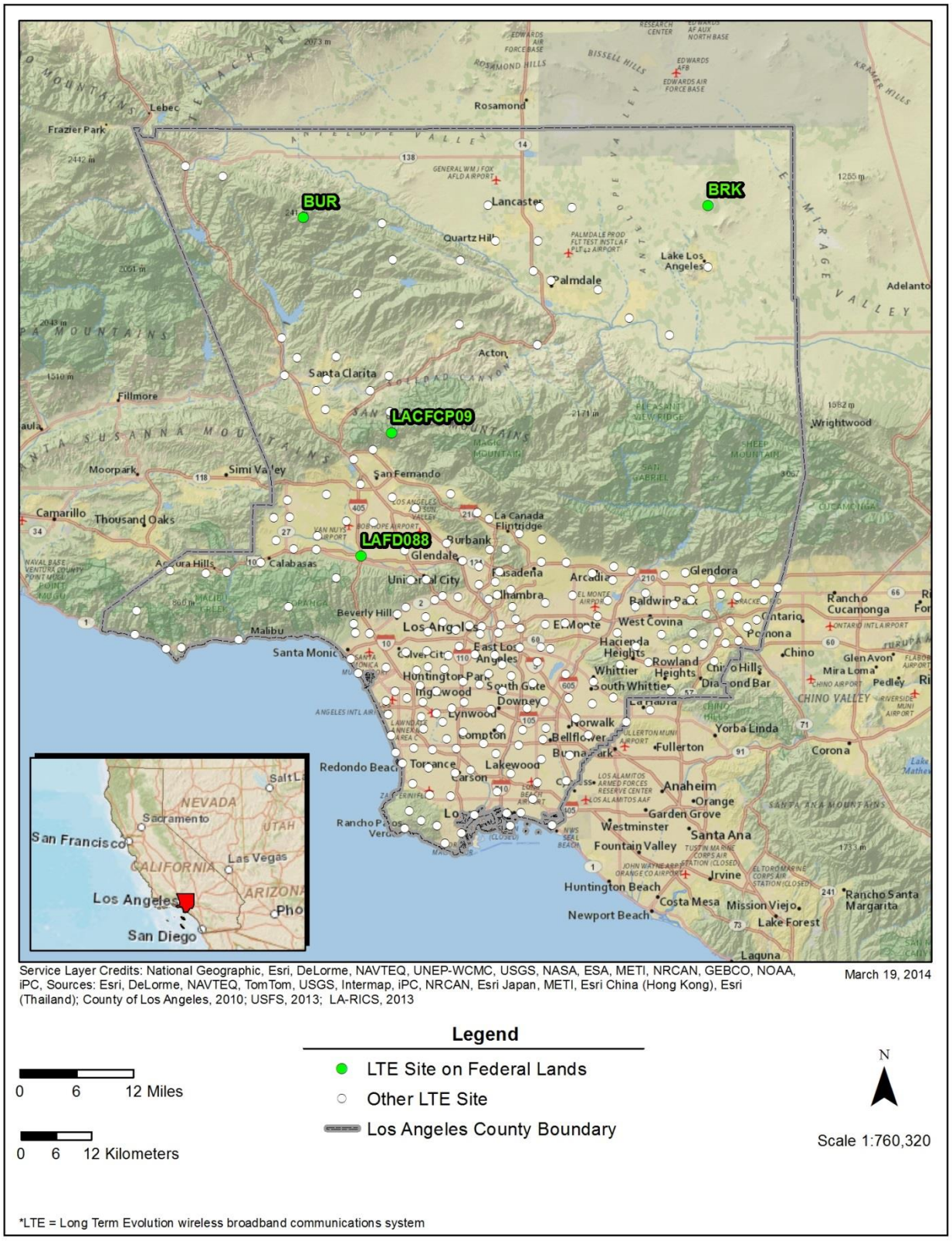
Site BRK, located in the desert area of unincorporated Los Angeles County east of the city of Lancaster, is on public land managed by the BLM. Development on land administered by the BLM is regulated by BLM's CDCA Plan.

The CDCA Plan establishes multiple-use guidance through class designations that govern the type and degree of land use actions allowed within specified areas. All land use actions and activities on public lands managed by the BLM must meet the guidelines for the use classification.[61] Under classifications L, M and I, new communication sites, including access to sites as deemed appropriate, are allowed.[62] The identification of communication facilities as allowed uses within these designated areas establishes the extent of land use policy addressing the proposed use with the CDCA Plan. Although BRK is located on lands administered by BLM, the site is not specifically assigned a multiple-use class (e.g., L, M or I). Thus, BRK is not regulated directly by the CDCA Plan because it is excluded from the multiple-use class categories that are governed by guidance contained in the CDCA Plan.

61 United States Department of the Interior, Bureau of Land Management. 1980. *California Desert Conservation Area Plan.* Desert District. Riverside, CA: Author. 1980 (as amended)

62 *Ibid*. Pgs. 16 and 94.

Figure 3.8-1
LTE Sites on Federal Lands



A 60-foot communications lattice tower and prefabricated equipment structure are located at BRK under a communication use right-of-way grant from the BLM. New facilities at this site would likely be addressed under the existing grant and permit. BLM may either require a new right-of-way application (Standard Form 299) or a modification of the existing permit.

In March 2006, the BLM adopted the WEMO and amended the CDCA Plan to incorporate the WEMO for public lands managed by the BLM.63 Site BRK is within the boundaries of the WEMO. The WEMO establishes conservation and protection policy for approximately 100 species, including the listed desert tortoise and Mohave ground squirrel.64 As required by the WEMO, these species have been evaluated and are discussed in Section 3.5 (Biological Resources).

U.S. Army Corps of Engineers

The LAFD088 Site, located in the Sepulveda Basin area of the city of Los Angeles, is located on public land managed by the USACE. Certain lands managed by the USACE in this vicinity are guided by the Sepulveda Dam Basin Master Plan (Basin Plan).[65] The Basin Plan does not include land use policy guidance specific to communication facilities.

The Basin Plan focuses on protection of habitat and recreation resources, as well as managing the environment for flood protection and public safety. The site has been previously developed with a fire station (City of Los Angeles Fire Station No. 88) and does not contain any habitat or recreation resources. The USACE does require projects located on public lands managed by the agency to obtain an outgrant authorizing the use on federal lands.

U.S. Forest Service

Sites BUR and LACFCP09, both located in the ANF, are on public lands managed by the USFS.

The NFMA establishes standards for management of National Forests and development of land management plans (LMPs) for National Forest areas. It requires projects and permits to be consistent with applicable LMPs. The Forest Plan, which is the adopted LMP for this area,[66] regulates development on land managed by the USFS in the ANF.

Forest Plan: The ANF encompasses roughly 1,000 square miles of rugged terrain just north of metropolitan Los Angeles, including the San Gabriel Mountains in Los Angeles County, and extends to small portions of Ventura and San Bernardino counties. The Forest Plan provides direction at the program level for managing habitats, ecosystems, and watersheds, some of which provide valuable

63 United States Department of the Interior, Bureau of Land Management. 2006. *Record of Decision West Mojave Plan, Amendment to the California Desert Conservation Area Plan.* Desert District. Riverside, CA: Author. March 2006.

64 United States Department of the Interior, Bureau of Land Management. 2005. *West Mojave Plan, A Habitat Conservation Plan and California Desert Conservation Area Plan Amendment.* Desert District. Riverside, CA: Author. January 2005.

65 U.S. Army Corps of Engineers. 2011. *Sepulveda Dam Basin, Los Angeles County, California, Master Plan and Environmental Assessment*. Los Angeles, CA: Author. September 2011.

66 United States Department of Agriculture, Forest Service. 2005. *Land Management Plan, Part 2 – Angeles National Forest Strategy.* Pacific Southwest Region. Author. September 2005. http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5166877.pdf. Last accessed January 15, 2014.

non-groundwater recharge water for Southern California. It consists of three parts: (1) vision for southern California national forests; (2) strategy specific to the ANF; and (3) design criteria.

Part 2 of the Forest Plan identifies land uses and land management categories that are consistent with the strategy and vision for the forest area. Specific uses, including communication facilities, are allowed on national forests except when identified as not suitable because of law, national or regional policy, or the revised Forest Plan.[67] The Forest Plan divides the ANF into land use zones, and allows specific activities within each zone. Communication sites are allowed in designated areas within the Developed Areas Interface (DAI), Back Country (BC), and Back Country Motorized Use Restricted (BCMUR) zones. Specifically, Part 2 designates the BC zone as suitable for communication site uses only at designated sites that are listed in the ANF LMP.[68] Communication sites are also allowed by exception in the Back Country Non-motorized (BCNM) zone, Critical Biological (CB) zone, and Experimental Forest (EF) zone. Communication sites are generally not allowed in the Wilderness (W) Zone.

Sites BUR and LACFCP09 are both located in the BC zone. The Forest Plan allows a broad range of uses in the BC zone, although the management intent is to retain this zone's natural character and limit the level and type of development. Communication facilities are permitted within designated areas (as are specifically identified and listed in the ANF LMP) of the BC zone when a special use permit (SUP) is obtained. Through the SUP, USFS confirms that proposed developments are suitable and establishes conditions that they must satisfy.

Part 3 of the Forest Plan specifies design guidelines for communication sites within the ANF. The design criteria address sustainability and conservation of various physical attributes of the forest lands, including aesthetic, biological, cultural and soil resources. The applicable standards from Part 3 of the LMP are S10, which establishes standards for meeting SIOs; and S42, which includes guidelines for raptor safety and resource protection at communication sites.[69]

The USFS also prepares Communications Site Management Plans (CMP), which are guidance documents meant to manage the available space at a given site efficiently and to help avoid conflicts between different users with different systems, signals and technologies. The CMP's do not approve or authorize any particular use, but any CMP standards for use must be consistent with, and are secondary to, the ANF LMP

3.8.2 Coastal Zone

The CZMA applies to federal activities, development projects, permits and licenses, and similar project activities that would be located within coastal resources or have the potential to affect them. Congress later delegated coastal resource management to states' coastal management programs. In 1977, the federal government certified the California Coastal Management Program (CCMP). The

67 *Ibid*. Pgs. 3-16.

68 *Ibid*. Pgs. 5-16.

69 United States Department of Agriculture, Forest Service. 2005. *Land Management Plan, Part 3 – Design Criteria for the Southern California National Forests.* Pacific Southwest Region. Author. September 2005. Pgs. 1-16. Internet: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5166878.pdf. Last accessed January 15, 2014.

enforceable policies of that document are in Chapter 3 of the California Coastal Act of 1976 (Coastal Act), and are administered by the CCC.

The mission of the CCC is to protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use. The Coastal Act addresses issues such as shoreline public access and recreation, reduced cost for visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the Commission and by local governments.

The CCC makes coastal development permit decisions and reviews LCPs prepared by local governments. It also reviews federal activities that affect the CZ.

LCPs are the basic planning tools used by the State and local governments in their shared stewardship of the coast. They specify appropriate location, type, and scale of new or changed uses of land and water by inclusion of a land use plan and measures to implement the plan (such as a zoning ordinance). Once certified by the CCC, LCPs govern decisions that determine the short- and long-term conservation and use of coastal resources. While each LCP reflects the unique characteristics of its local coastal community, all regional and statewide interests and concerns must also be addressed in the LCP to conform to Coastal Act goals and policies.[70]

The state's CZ jurisdiction is divided into 128 geographic segments. As of 2013, 92 of the LCP segments have been certified, representing close to 85% of the geographic area of the CZ in which local governments have delegated authority to issue coastal permits.[71] For segments without a certified LCP or delegated local authority, the regulatory review and permit process remains with the CCC.

An LCP comprises a land use plan (LUP) and an implementation plan. The LUP describes existing conditions and issues in the CZ and presents land use and development policies to fulfill the intent of the Coastal Act. Should conflicts arise between and LUP and other local planning documents, such as the General Plan, the policies and regulations of the LCP take precedence within the CZ. The implementation plan says how the LCP is regulated and who has review authority.

All LCPs must be consistent with the Coastal Act, specifically with Chapter 3, which sets broad CZ policy for planning and managing coastal resources. The Chapter 3 policies focus on the protection and sustainability of land resources (Article 5) and guide new development within the CZ (Article 6). While the Coastal Act's policies do not specifically address communication facilities development, any new development must be consistent with the Chapter 3 policies. Therefore, communication facility projects within the CZ are expected to demonstrate that they would not be detrimental to land resources, such as sensitive habitats, agricultural lands and archaeological

70 California Coastal Commission. Local Coastal Programs. San Francisco, CA: Author. Internet: http://www.coastal.ca.gov/lcps.html. Last accessed: April 18, 2014.

71 *Ibid*.

resources. Similarly, communication facility projects should demonstrate that they support policies for coastal access, visitor-serving uses, coastal-dependent development and preservation of aesthetic resources. LCPs established by local agencies may be more specific and restrictive, provided that they are consistent with Chapter 3 at a minimum. For CZ segments without a certified LCP, Chapter 3 policies prevail as guiding land use policy.

Fifteen of the LTE sites are located within the CZ management area. Construction activities proposed in the CZ management area must comply with applicable state or local coastal planning regulations. Twelve of these sites would be located in CZ LCP segments that have had permit authority transferred to the local jurisdiction (the cities of Malibu, Manhattan Beach, Long Beach, Los Angeles, Redondo Beach, and Rancho Palos Verdes, and the Santa Monica Mountains segment of Los Angeles County). The remaining three sites (located in the cities of Los Angeles, Santa Monica and Hermosa Beach) are in areas under the CCC's permit authority because no certified LCP applies. The 15 CZ sites and overviews for the applicable LCP policy for each of those sites are provided in Table 3.8-1. Figure 3.8-2 shows those sites within the CZ.

Table 3.8-1
Sites Located within the Coastal Zone

Site ID	Coastal Zone Segment	Coastal Zone Segment Local Coastal Plan Status and Agency with Coastal Zone Permitting Authority[72]	Relevant Coastal Zone Policy
LACF069; LACF072	Malibu Santa Monica Mountains – includes an unincorporated area west of the city of Los Angeles, east of Ventura County, and south of the Santa Monica Mountains North Area, excluding the city of Malibu. 73	The Santa Monica Mountains Land Use Plan component of the Santa Monica Mountains Local Coastal Program was certified (subject to acceptance of modification) by the California Coastal Commission on April 10, 2014. Final adoption of the Land Use Plan is pending action by the Los Angeles County Board of Supervisors to accept modifications.74 The Local Implementation Program component of the Local Coastal Program is pending certification by the California Coastal Commission, tentatively scheduled for June 2014.75 Although implementation procedures are pending, the standard of review for the pending Local Implementation Program will be the Land Use Plan.76 The authority to issue Coastal Development Permits is assumed transferred to Los Angeles County.	The following coastal plan land use policies would apply to Sites LACF069 and LACF072: CO-152 Require wireless telecommunication facilities to be designed and sited in such a manner that they minimize impacts to visual resources and blend into the landscape. Such facilities shall be co-located where feasible. This may include requiring one taller pole rather than allow multiple shorter poles. New wireless telecommunication facilities may be disguised as trees of a species that would likely be found in the surrounding area and that blend with the natural landscape when it is not feasible to co-locate on an existing pole. LU-50 Limit the visual and safety impacts of wireless telecommunications facilities to preserve the character and aesthetics of surrounding areas, through careful design, screening, and mitigation requirements. Encourage undergrounding of accessory equipment, co-locating, and clustering wireless telecommunication facilities and structures, wherever possible, to help avert unnecessary proliferation of such facilities.

72 California Coastal Commission. 2013. *Summary of LCP Activity in FY 12-13*. San Francisco, CA: Author. November 25, 2013. Internet: http://www.coastal.ca.gov/lcp/LCPStatusSummFY1213.pdf. Last accessed: April 18, 2014.

73 Los Angeles, County of. 2014. *Draft Santa Monica Mountains Land Use Plan.* Los Angeles, CA: Author. February 13, 2014. Internet: http://planning.lacounty.gov/assets/upl/project/coastal_lup.pdf. Last accessed: April 18, 2014.

74 California Coastal Commission. 2014. *April 2014 Agenda* and *Santa Monica Mountains Land Use Plan Staff Report.* Internet: http://www.coastal.ca.gov/mtgcurr.html. Last accessed: April 18, 2104.

75 *Ibid*.

76 *Ibid*.

Table 3.8-1 (continued)
Sites Located within the Coastal Zone

Site ID	Coastal Zone Segment	Coastal Zone Segment Local Coastal Plan Status and Agency with Coastal Zone Permitting Authority[77]	Relevant Coastal Zone Policy
LACF069; LACF072 (cont.)			LU-51 Communication processing, storage and transmission facilities and lines shall be sited, designed, and operated to avoid or minimize impacts to H1 habitat area and scenic resources, consistent with all provisions of the LCP. If there is no feasible alternative that can eliminate all impacts, then the alternative that would result in the fewest or least significant impacts shall be selected. LU-52 All facilities and related support structures shall be sited, designed, and operated to avoid when possible the visibility of the facility from public viewing areas, and to preserve the character of surrounding areas by protecting ridgelines by setting facilities below the ridge, and co-locating facilities, where feasible, to avoid proliferation of facilities. LU-53 All facilities shall place support facilities underground, where feasible. New communication transmission lines shall be sited and designed to be located underground, except where it would present or contribute to geologic hazards or if to do so would be more damaging to biological resources. Existing communication transmission lines should be relocated underground when they are replaced or when funding for undergrounding is available.

[77] California Coastal Commission. 2013. *Summary of LCP Activity in FY 12-13*. San Francisco, CA: Author. November 25, 2013. Internet: http://www.coastal.ca.gov/lcp/LCPStatusSummFY1213.pdf. Last accessed: April 18, 2014.

Table 3.8-1 (continued)
Sites Located within the Coastal Zone

Site ID	Coastal Zone Segment	Coastal Zone Segment Local Coastal Plan Status and Agency with Coastal Zone Permitting Authority[78]	Relevant Coastal Zone Policy
LALG300; LACF071; LACF088; LACF099	***City of Malibu*** - includes an area extending 25 miles from the Ventura County line on the west to Topanga Canyon Boulevard on the east. Inland, the city's Coastal Zone boundary extends approximately two miles and includes portions of the coastal terrace and slopes of the Santa Monica Mountains.[79]	The Malibu Local Coastal Plan was certified in 2002 and the City is the delegated authority to issue Coastal Development Permits.	Except for Policy 6.3.2, the Malibu Local Coastal Plan does not include policies specific to telecommunication uses, Policy 6.3.2 addresses telecommunication utility lines along the Pacific Coast Highway and encourages that ground equipment be placed underground when feasible. Policies 6.5 through 6.11 for New Development indirectly address development of communications facilities. Per these land use policies, new development is generally restricted to 28 feet in height and should be placed and designed to minimize impacts to visual resources.[80]
SMFD002	***City of Santa Monica –*** includes the coastal area within the city of Santa Monica	The Santa Monica Local Coastal Plan has not been certified by the California Coastal Commission. Although the California Coastal Commission retains permit authority for this Coastal Zone segment, the Santa Monica Coastal Policy and Land Use Plan provide land use guidance which is reflected and integrated in the city's zoning code.	Site SMFD002 is located within the Ocean Park subarea of the Santa Monica Coastal Zone.[81] Coastal policy is reflected under the OP2 zoning of this site. Noncommercial communication antennas are generally allowed throughout the City. Per the zoning ordinance, communication facilities at the Site SMFD002 are limited to 45 feet in height, which is established per a base height limitation of 30 feet plus an additional allowance of 45 feet.[82]

78 California Coastal Commission. 2013. *Summary of LCP Activity in FY 12-13*. San Francisco, CA: Author. November 25, 2013. Internet: http://www.coastal.ca.gov/lcp/LCPStatusSummFY1213.pdf. Last accessed: April 18, 2014.
79 Malibu, City of. 2002. *City of Malibu Local Coastal Program Land Use Plan.* Malibu, CA: Author. September 2002. Pg. 5.
80 *Ibid*. Pg. 95.
81 Santa Monica, City of. 1992. *Santa Monica Local Coastal Program Land Use Plan*. Santa Monica, CA: Author. August 1992.
82 Santa Monica, City of. Municipal Code, Article 9, Planning and Zoning. Santa Monica, CA: Author. Internet: http://www.qcode.us/codes/santamonica/. Last accessed January 15, 2014. Section 9.04.10.06.

Table 3.8-1 (continued)
Sites Located within the Coastal Zone

Site ID	Coastal Zone Segment	Coastal Zone Segment Local Coastal Plan Status and Agency with Coastal Zone Permitting Authority	Relevant Coastal Zone Policy
MBFD001	***City of Manhattan Beach*** – includes the coastal area of the city of Manhattan Beach	The Manhattan Beach Local Coastal Plan was certified in 1994 and the City is the delegated authority to issue Coastal Development Permits.	Title 10 (Planning and Zoning) of the Manhattan Beach Municipal Code serves as the implementing tool for the City's Local Coastal Plan.[83] Communication facilities are allowed within the PS (Public and Semipublic District) for which Site MBFD001 is located. Development standards are not predetermined but would be established through case review for project permits.
LALG100	***City of Hermosa Beach –*** includes the coastal area of the city of Hermosa Beach	This segment remains uncertified. The California Coastal Commission retains authority to issue Coastal Development Permits.	Coastal Act, Chapter 3 policies apply.
LALG-HQ	***City of Los Angeles*** - Venice Segment – includes generally that area within the Venice community in the city of Los Angeles that is bounded by Marine Street on the north, the City-County boundary, Washington Boulevard and Via Marina on the south, Lincoln Boulevard and Via Dolce on the east, and the Pacific Ocean on the west.	The Venice Local Coastal Plan has not been fully certified by the California Coastal Commission. In the city of Los Angeles, the California Coastal Commission and City share dual permit authority. The Venice Coastal Zone Specific Plan, adopted in 2003, provides land use guidance and zoning for this Coastal Zone segment, and is the implementing tool for the Local Coastal Plan.[84] The Specific Plan incorporates the Venice Local Coastal Plan Land Use Plan, which was certified by the California Coastal Commission in 2001.	Site LALG-HG is located within the North Venice subarea of the Venice Local Coastal Plan/Specific Plan. In this area, Coastal development projects along the ocean front walk are generally limited to 28 feet in height, with some development permitted to a height of 35 feet.
RDNBPD	***City of Redondo Beach*** – includes the coastal zone within the city of Redondo Beach	The Redondo Beach Local Coastal Plan was certified in December 2010 and the City delegated authority to issue Coastal Development Permits.	Chapter 5 of Title 10 (Planning and Zoning) of the Redondo Beach municipal code serves as the implementing tool for the City's Local Coastal Plan.[85] Site RDNBPD is located within the Civic Center of the public district, and zoned Civic Center (P-CIV), which allows development of public communication facilities and establishes a maximum height of 45 feet.[86]

83 Manhattan Beach, City of. Municipal Code, Title 10 Planning and Zoning. Manhattan Beach, CA: Author. Internet: http://library.municode.com/index.aspx?clientId=16473. Last accessed: January 15, 2014. Chapter 10.48, CZ Coastal Zone Overlay District.

84 Los Angeles, City of. 2003. *Venice Coastal Zone Specific Plan*. Los Angeles, CA: Author. December 2, 2003.

85 Redondo Beach, City of. Municipal Code, Title 10, Planning and Zoning. Redondo Beach, CA: Author. Internet: http://www.qcode.us/codes/redondobeach/. Last accessed: January 15, 2014. Chapter 5, Coastal Land Use Implementation Ordinance.

86 *Ibid*. Chapter 5, Article 2, Division 6.

Table 3.8-1 (continued)
Sites Located within the Coastal Zone

Site ID	Coastal Zone Segment	Coastal Zone Segment Local Coastal Plan Status and Agency with Coastal Zone Permitting Authority	Relevant Coastal Zone Policy
LACF053	***City of Rancho Palos Verdes*** - includes the coastal zone within the city of Ranchos Palos Verdes, which includes all land seaward of Palos Verdes Drive South and Palos Verdes Drive West	The Rancho Palos Verdes Coastal Specific Plan, certified by the California Coastal Commission in 1983, serves as the city's local specific plan and the local land use plan component of the Local Coastal Program.[87]	Allowed uses and developments regulations in the Coastal Zone are specified by the base zoning district and standards set forth in the Coastal Specific Plan. [88] Section 17.72.040 of the city of Rancho Palos Verdes zoning code establishes that uses within the coastal zone are allowed as permitted by the underlying base zone.[89] Site LACF053 is zoned I (Institutional), which conditionally permits public facilities owned or used and operated for governmental purposes by the city, the county, the state, the government of the United States of America, and any special district or other local agency. Height and other development standards are established through project review and conditionally approved.[90]
LBFD006; LBFD021	***City of Long Beach*** – includes over 3,100 acres of coastal zone area within the city of Long Beach.	With the exception of the Cerritos Wetlands subarea, the Long Beach Coastal Program was certified by the California Coastal Commission in 1980 and the City was delegated authority to issue Coastal Development Permits.	The Local Coastal Plan is incorporated as part of the City's General Plan and implemented through the zoning ordinance. Site LBFD006 is located within the Port of Long Beach. Site LBFD021 is within the South East Area Development and Improvement Plan (SEADIP) for the Marina area.[91] Under the Coastal Act mandate, the Port Local Coastal Plan was prepared by the Port Commission in 1978, and is incorporated by reference as part of the Long Beach Local Coastal Program.

87 Rancho Palos Verdes, City of. 1978. *Rancho Palos Verdes Coastal Specific Plan*. Rancho Palos Verdes, CA: Author. December 1978.
88 Rancho Palos Verdes, City of. Municipal Code, Title 17, Zoning. Rancho Palos Verdes, CA: Author. Internet: http://www.palosverdes.com/rpv/cityclerk/munidatabase/. Last accessed: January 15, 2014.
89 *Ibid*. Section 17.72.040.
90 *Ibid.* Section 17.72.040.
91 Long Beach, City of. 1980. *City of Long Beach Local Coastal Program.* Long Beach, CA: Author. February 1980. Pg. I-8.

Table 3.8-1 (continued)
Sites Located within the Coastal Zone

Site ID	Coastal Zone Segment	Coastal Zone Segment Local Coastal Plan Status and Agency with Coastal Zone Permitting Authority	Relevant Coastal Zone Policy
LBFD006; LBFD021 (cont.)			Chapter 21.56 of the City's municipal code establishes wireless telecommunication facility regulations that are consistent with the City's General Plan, and therefore its Local Coastal Plan. Per Chapter 21.56, communication facilities that are for government or emergency service agencies are exempt from specific regulation.[92] Sites LBFD006 and LBFD021 are zoned Planned Development 21 (PD-21) and Planned Development 4 (PD-4), respectively. Subarea 4 of PD-21 restricts heights to 200 feet, while heights for PD-4 are generally limited to 35 feet. However, in the city of Long Beach, facilities that are for government or emergency service agencies are exempt and thus not subject to these height restrictions.
LAFD049	***Port of Los Angeles –*** includes the port in the San Pedro area of the city of Los Angeles	The California Coastal Commission and city of Los Angeles share dual permit authority in this segment.[93] The Port of Los Angeles Master Plan, adopted in 1980, provides land use guidance and zoning for this Coastal Zone segment, and is the implementing tool for the Local Coastal Plan.[94]	The Port Plan places highest priority on land uses that are consistent with port uses and operations, including port-dependent industrial, cargo, commercial fishing and recreational uses. Institutional facilities, defined as those owned or leased by federal, state or other governmental agencies, are allowed in the Wilmington District, where Site LAFD049 is located.[95]

Source: Results of analysis by UltraSystems Environmental, Inc., 2013

92 Long Beach, City of. Municipal Code, Title 21, Zoning. Long Beach, CA: Author. Internet: http://library.municode.com/index.aspx?clientId=16115. Last accessed: January 15, 2014.

93 Los Angeles, City of. 2000. City of Los Angeles Coastal Zone, Exhibit D, San Pedro Northeast Subarea (Map). Los Angeles, CA: Author. May 2000. Internet: http://cityplanning.lacity.org/complan/othrplan/opmaps/coastalzone/spdcz4.pdf. Last accessed: January 15, 2014.

94 Los Angeles, Port of. 1980. *Port of Los Angeles Port Master Plan*. Los Angeles, CA: Author. April 1980. Internet: http://www.portoflosangeles.org/planning/pmp/PORT%20MASTER%20PLAN%20CERTIFIED%20-%20Apr.%201980.pdf. Last accessed: January 15, 2014.

95 *Ibid*.

Figure 3.8-2
LTE Sites within the Coastal Zone

3.8.3 Airport Land Use Plans

State law (California Public Utilities Code §§ 21670 - 21679.5) requires the creation of ALUCs to coordinate planning for areas surrounding public use airports. The purpose of the law is to protect the public health, safety and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public use airports. The ALUC is also concerned with airport activities that may adversely affect adjacent areas and with nearby land uses that may interfere with airport operations.

In Los Angeles County, the Regional Planning Commission has the responsibility for acting as the ALUC and for coordinating the airport planning of public agencies within the County. The Los Angeles County ALUC is required to prepare and adopt a Comprehensive Land Use Plan (CLUP), review and make recommendations concerning certain projects within the ALUC planning boundaries, and review and make recommendations on regulations of local agencies. Though given the authority to review and make recommendations, the ALUC does not have jurisdiction over airport operations.[96]

The Los Angeles County Airport Land Use Comprehensive Plan (ALUCP) was adopted in December 1991 (and revised December 2004) as the County's CLUP.[97] For each of the public use airports in Los Angeles County, the Airport Land Use Commission has adopted planning boundaries that establish areas for which certain proposed local actions must be submitted to the ALUC for review. Primarily, the planning boundaries delineate areas subject to noise impacts and safety hazards and may be subject to height restrictions.[98] Los Angeles County has 11 general aviation airports, including Los Angeles International Airport (LAX), which is owned by and in the City of Los Angeles.

Nine LTE sites are located within an influence area of an airport within the County, and development at these sites would need to comply with the applicable adopted airport land use plans (ALUPs). They also would need to comply with Federal Aviation Administration (FAA) noticing criteria requirements in accordance with Section 77.9 of the FAA Regulations. These nine sites and overviews for the applicable airport land use plan policy for each of those sites are provided in Table 3.8-2. Figure 3.8-3 shows the airports within the project area and sites located within airport land use planning areas.

96 Los Angeles, County of. Los Angeles County Airport Land Use Plan Summary. Los Angeles, CA: Author. Internet: http://planning.lacounty.gov//view/alup/. Last accessed: January 15, 2014.

97 Los Angeles County Airport Land Use Commission, Prepared by the Department of Regional Planning. 2004. *Los Angeles County Airport Land Use Plan*, (Adopted December 19, 1991, revised.) December 1, 2004. Internet: http://planning.lacounty.gov/assets/upl/data/pd_alup.pdf. Last accessed: January 15, 2014.

98 *Ibid*. Pg. 9.

Table 3.8-2
Sites Located within Airport Land Use Plan Areas

Site ID	Airport and Airport Plan[99]	Relevant Airport Land Use Policy
MLM	***General William J. Fox Airfield (Fox Airfield)*** – Fox Airfield Land Use Compatibility Plan (adopted December 2004)	Site MLM is located at the outer edge of the airport land use planning area, within compatibility zone E. Within Zone E, development and structures that create a hazard to flight are prohibited. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations.[100] Airspace review is required for structures greater than 100 feet high. Although not directly under the flight path area, Zone E is considered an airspace protection zone. Policy 2.4.7 of the Fox Plan prohibits new development that may introduce lighting that distracts from identification of airport facilities or equipment with potential to interfere with airport communication.
LACF162	***Hawthorne Municipal Airport (Hawthorne Airport)*** – Located in the city of Hawthorne, Hawthorne Airport is controlled by the City of Hawthorne and the facility is administered under the City's Hawthorne Airport Master Plan. (adopted in 1990 and updated 2007).[101]	Land uses for the Hawthorne Municipal Airport are regulated by the County ALUCP (see discussion of County ALUCP policies G-4, S-2, S-3, S-4, S-6 and S-7 for the Los Angeles International Airport below). In addition, the Hawthorne Airport is regulated by the Hawthorne Airport Master Plan and City of Hawthorne zoning ordinance. The Hawthorne Airport Master Plan focus is on airport operations, service capacity, growth and phasing. As a result, the Master Plan does not provide specific guidance that is applicable to communication facilities. The Master Plan Concept does not designate Site LACF162 for any airfield operational activities.[102]
LAFD005; LAFD080; LAFD095; LASDLNX	***Los Angeles International Airport (LAX)*** – The Los Angeles International Airport is owned by the City of Los Angeles and operated by the City of Los Angeles Department of Airports. A Master Plan for the Los Angeles International Airport is in progress, but no final airport master plan has been completed. The County ALUCP applies unless otherwise noted.	In general, policies in the County ALUCP focus on noise and safety issues. However, the following policies address land use that are related to communication facilities: G-4 Prohibit any uses which will negatively affect safe air navigation. S-2 Prohibit above ground storage of more than 100 gallons of flammable liquids or toxic materials on any one net acre in a designated runway protection zone. It is recommended that these materials be stored underground.

99 *Ibid*. Pgs. 3-8.

100 Los Angeles County Airport Land Use Commission, Prepared by the Department of Regional Planning. 2004 (December). *General William J. Fox Airfield Land Use Compatibility Plan*. December 1, 2004. Internet: http://planning.lacounty.gov/assets/upl/project/aluc_fox-lucp.pdf. Last accessed: January 15, 2014.

101 Internet URL: http://planning.lacounty.gov/case/view/hawthorne_municipal_airport_master_plan_aviation_case_no_rav2007_000022. Last accessed: January 15, 2014.

102 Hawthorne, City of. 2007. *Jack Northrop Field Hawthorne Municipal Airport Master Plan*. Hawthorne, CA: Author. May 22, 2007.

Table 3.8-2 (continued)
Sites Located within Airport Land Use Plan Areas

Site ID	Airport and Airport Plan	Relevant Airport Land Use Policy
LAFD005; LAFD080; LAFD095; LASDLNX (cont.)	***Los Angeles International Airport (LAX)*** – The Los Angeles International Airport is owned by the City of Los Angeles and operated by the City of Los Angeles Department of Airports. A Master Plan for the Los Angeles International Airport is in progress, but no final airport master plan has been completed. The County ALUCP applies unless otherwise noted.	S-3 Prohibit, within a runway protection zone, any use which would direct a steady light or flashing light of red, white, green or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following take-off or toward an aircraft engaged in a final approach toward landing at an airport. S-4 Prohibit, within a designated runway protection zone, the erection or growth of objects which rise above an approach surface unless supported by evidence that it does not create a safety hazard and is approved by the FAA [Federal Aviation Administration]. S-6 Prohibit uses which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation. S-7 Comply with the height restriction standards and procedures set forth in FAR [Federal Aviation Regulation] Part 77. In addition, the Los Angeles International Airport is regulated by the Los Angeles International Airport Specific Plan.[103] The land use chapter of the Los Angeles International Airport Specific Plan provides that communication uses that would otherwise be allowed in an M (Industrial) zone per the city of Los Angeles Municipal Code are also allowed uses within the Los Angeles International Airport Specific Plan.
LBFD026	***Long Beach Municipal Airport (Long Beach Airport)*** – Located in the city of Long Beach, the Long Beach Airport is owned and operated by the city of Long Beach. No airport master plan has been completed; the County ALUCP applies.	See discussion of County ALUCP policies G-4, S-2, S-3, S-4, S-6 and S-7 under the Los Angeles International Airport above.
LACF129	***Palmdale Regional Airport (Palmdale Airport)*** – Located in the city of Palmdale, the Palmdale Airport temporarily operates from U.S. Air Force Plant 42, a military airport. No airport master plan has been completed; the County ALUCP applies.	See discussion of County ALUCP policies G-4, S-2, S-3, S-4, S-6 and S-7 under the Los Angeles International Airport above.

[103] Los Angeles, City of. 2004. *Los Angeles International Airport (LAX) Specific Plan*. [Ordinance No. 176,345]. Los Angeles, CA: Author. September 29, 2004 (as amended January 2013).

Table 3.8-2 (continued)
Sites Located within Airport Land Use Plan Areas

Site ID	Airport and Airport Plan	Relevant Airport Land Use Policy
LAFD114	***Van Nuys Airport*** – Located in the heart of the San Fernando Valley, Van Nuys Airport is owned by the City of Los Angeles and operated by the City of Los Angeles Department of Airports. No airport master plan has been completed; the County ALUCP applies.	See discussion of County ALUCP policies G-4, S-2, S-3, S-4, S-6 and S-7 under the Los Angeles International Airport above.

Source: Results of analysis by UltraSystems Environmental, Inc., 2013

3.8.4 Local Zoning and Land Use

The Authority is not subject to certain local land-use plans, policies, and regulations under the doctrine of intergovernmental immunity [California Government Code § 53090(a) and 53091(a)]. Nevertheless, this EA considers local land use plans, policies and regulations to identify if relevant policies may apply to the Proposed Action. Documents consulted are listed in Chapter 7 (References). Basic land use statistics, such as the land use designation, zoning classification, and relevant community/district plan, for each site are provided in Appendix B (Data Summary Sheets). Relevant local land use plans, policies, and regulations for selected cities and Los Angeles County are discussed below. The EA takes this approach in recognition that such plans, policies, and regulations reflect the local community's policy decisions with respect to appropriate uses of land in the area. Consideration of these plans, policies and regulations assists in determining whether the Proposed Action may conflict with nearby land uses, which affects the analysis of whether the Proposed Action would result in environmental impacts.

The 231 LTE sites include 36 sites in unincorporated Los Angeles County, 95 sites in the City of Los Angeles, and 100 sites in other incorporated cities. Among those sites located in other incorporated cities is one in the city of La Habra, which is in Orange County. Another site is located primarily within the city of Claremont, which is an incorporated city in Los Angeles County; however, the site boundary straddles the Los Angeles/San Bernardino county line and is also partially located within the city of Upland, in San Bernardino County. Table 3.8-3 lists the cities where the LTE sites are located and the number of sites in each of those municipalities.

The Proposed Action and its associated components would be located primarily on property within existing facilities belonging to public agencies. Almost 200 of the LTE sites are located on existing public facility sites in urbanized settings, which have a high concentration of people and/or activity and have existing infrastructure. Many of the urban-character sites are occupied by police, sheriff or fire stations that are zoned for public facilities, institution or similar civic designation. Some urban-area sites are located in residential, commercial, industrial, or open space zones. Within the urban character context, these sites are generally near other existing development, which is predominantly residential, commercial and industrial.

Figure 3.8-3
LTE Sites within Airport Influence Areas

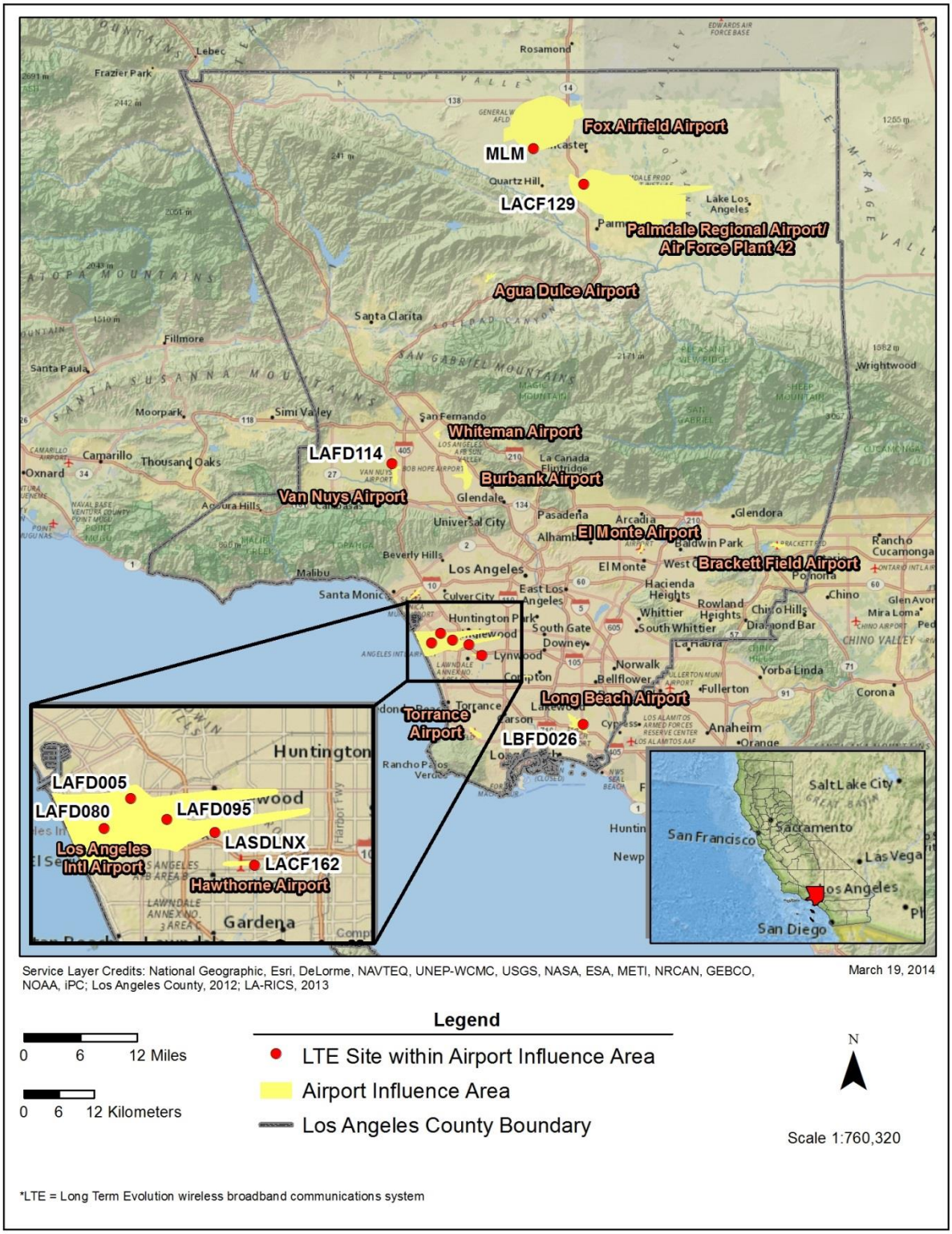


Table 3.8-3
Sites by City and County Jurisdiction

City / # of Sites		City / # of Sites		City / # of Sites	
Alhambra	1	Glendora	3	Pasadena	3
Arcadia	1	Hawthorne	2	Pico Rivera	1
Arcadia	1	Hermosa Beach	1	Pomona	5
Baldwin Park	1	Huntington Park	1	Rancho Palos Verdes	2
Bell	1	Industry	3	Redondo Beach	2
Bell Gardens	1	Inglewood	2	Rolling Hills	1
Bellflower	2	Irwindale	1	Rolling Hills Estates	1
Beverly Hills	1	La Habra [Orange County]	1	Rosemead	1
Burbank	1	La Mirada	1	San Dimas	2
Calabasas	2	La Verne	2	Santa Clarita	7
Carson	1	Lakewood	1	Santa Fe Springs	2
Cerritos	1	Lancaster	4	Santa Monica	2
Claremont	3	Lawndale	1	South El Monte	1
Commerce	1	Long Beach	10	South Gate	1
Compton	2	Los Angeles-City**	61	Temple City	1
Covina	2	Lynwood	1	Torrance	4
Culver City	1	Malibu	4	Upland [San Bernardino County]	*
Diamond Bar	2	Manhattan Beach	1	Vernon	2
Downey	2	Monrovia	2	Walnut	3
Duarte	1	Montebello	2	West Covina	2
El Monte	2	Monterey Park	1	West Hollywood	1
El Segundo	1	Norwalk	1	Westlake Village	1
Gardena	2	Palmdale	3	Whittier	2
Glendale	5	Paramount	1	Los Angeles County (Unincorporated)**	36

* Site CLM straddles the jurisdictional boundary of the city of Claremont (located in Los Angeles County) and the city of Upland (located in San Bernardino County).
** One site within the city of Los Angeles is located on property administered by the USACE (LAFD088); and three sites within unincorporated Los Angeles County are on property administered by the BLM (BRK) and USFS (BUR and LACFCP09). Also, one site (CCF) within the city of Los Angeles is located on State-owned property.

Source: LA-RICS Authority

The discussion below provides a brief overview of the land use planning and regulatory context for local jurisdictions in which the LTE sites are located.

A. Plans, Policies and Regulations of Los Angeles County

Thirty-six of the LTE sites are located within the unincorporated area of Los Angeles County, and are anticipated to be guided by land use plans, policies and regulations established by the County. Relevant components are discussed below.

County General Plan: The County of Los Angeles General Plan is organized as a series of area-wide and district plans established for distinct regions of the county. Except for the Santa Monica Mountains Land Use Plan (SMM LUP) and Santa Monica Mountains North Area Plan (North Area Plan), land use policy in the County General Plan is not specific to communication facility uses. Relevant policy for the SMM LUP and North Area Plan are discussed below under County SMM Policy. The other County area-wide plans do not provide detailed policies that define specific development standards or height restrictions. Height restrictions are identified in several community standards district (CSD) plans, which are codified. However, none of the height restrictions within the CSD plans address communication facilities. Review of the applicable components of the County General Plan, including the area-wide plans and CSDs, did not identify any land use policies that affect communication facilities or would establish height restrictions for those structures.

Antennas and similar structures are addressed in Chapter 22.52 of the Los Angeles County Code. To resolve ambiguity of the code, the Department of Regional Planning issued Policy No. 01-2010 (dated July 26, 2010), which establishes zoning ordinance policy for permitting wireless telecommunication facilities (WTFs) in the County.[104] The WTF Policy establishes various design and site placement criteria, which include a maximum height of 75 feet and requirement to incorporate camouflage techniques for all new facilities.

County Significant Ecological Areas (SEAs): Los Angeles County has established a planning overlay within the General Plan for SEAs. SEAs are defined as ecologically important land and water systems that support valuable habitat for plants and animals, often integral to the preservation of rare, threatened or endangered species and the conservation of biological diversity throughout the County. While SEAs are not preserves, they are areas where Los Angeles County deems it important to facilitate a balance between development and resource conservation. The County SEA plan identifies areas that are within unincorporated County area, as well as open spaces areas within adjacent incorporated areas. Since it is a County-based planning overlay, incorporated cities are not obligated to recognize a County SEA. However, many local agencies acknowledge the County SEA overlay within their local planning documents by assigning open space and habitat preservation land use regulations to those areas, but not formally ratifying the County designation.

In the context of SEAs, development of communication facilities is considered a project. For development projects not exempt from the SEA requirements, an SEA conditional use plan (CUP) review by the County's Significant Ecological Area Technical Advisory Committee would be required.

The following seven sites are located within the boundaries of an SEA: BMT (in the Portal Ridge-Liebre Mountain SEA); BRK (in the Saddleback Butte State Park SEA); LACF065 (in Las Virgenes SEA); LACF083 (in the Rolling Hills Canyon SEA); LACFCP09 and LACFCP14(both in the Santa Clara River SEA); and SVP (in the Encino Reservoir SEA). Figure 3.8-4 shows sites within County-designated SEAs.

[104] Los Angeles, County of, Department of Regional Planning. 2010. Subdivision & Zoning Ordinance Policy No. 01-2010, Wireless Telecommunication Facilities. July 26, 2010. Internet: http://planning.lacounty.gov/assets/upl/data/ip_2010-01_sub-zon-ord.pdf. Last accessed: January 15, 2014.

County Forest Policy: The Los Angeles County planning area includes 235 square miles within National Forest boundaries. In addition to the two sites that are located in the ANF on public lands managed by the USFS (and discussed above), three sites (LACF078; LACF157; and LACFCP14) are located within the contiguous boundary of (i.e., lands surrounded by) the ANF but not on lands administered by the USFS. The County General Plan acknowledges forest resources by designating lands within the contiguous Forest Plan boundary as open space, non-urban or similar conservation-oriented uses, and requiring that public projects be jointly reviewed by the County and USFS.[105]

County Santa Monica Mountains Policy: The Santa Monica Mountains National Recreation Area (SMMNRA) boundary generally covers the Santa Monica Mountains region in southern California with its land area being predominantly in unincorporated Los Angeles County. In 2002, the NPS published a General Management Planto comprehensively address recreation and scenic resources within portions of the Santa Monica Mountains.[106] Although not directly required to comply with the NPS General Management Plan for the SMMNRA, Los Angeles County recognizes the relationship of the SMMNRA and the Santa Monica Mountains natural resources to its community and reflects this within *The Santa Monica Mountains North Area Plan*[107] (a component of the County General Plan referenced as the North Area Plan) and the *(Draft) Santa Monica Mountains Land Use Plan*[108] (also a component of the County General Plan and the Santa Monica Mountains Local Coastal Program). Nine proposed LTE sites are located within the contigous boundary of the SMMNRA, but not on land administered by the NPS. These include: two sites in unincorporated Los Angeles County (LACF069 and LACF072): four sites in the city of Malibu (LACF071, LACF088, LACF099 and LALG300); two sites in the city of Los Angeles (LAFD097 and SVP): and one site in the city of Calabasas (LHS). The two County sites (LACF069 and LACF072) that are located in the SMMNRA contiguous boundary are also located within the Santa Monica Mountains Local Coastal Program/Land Use Plan area. Site LACF065, which is located within the Santa Monica Mountains region but not in the SMMNRA, is also within the North Area Plan area.

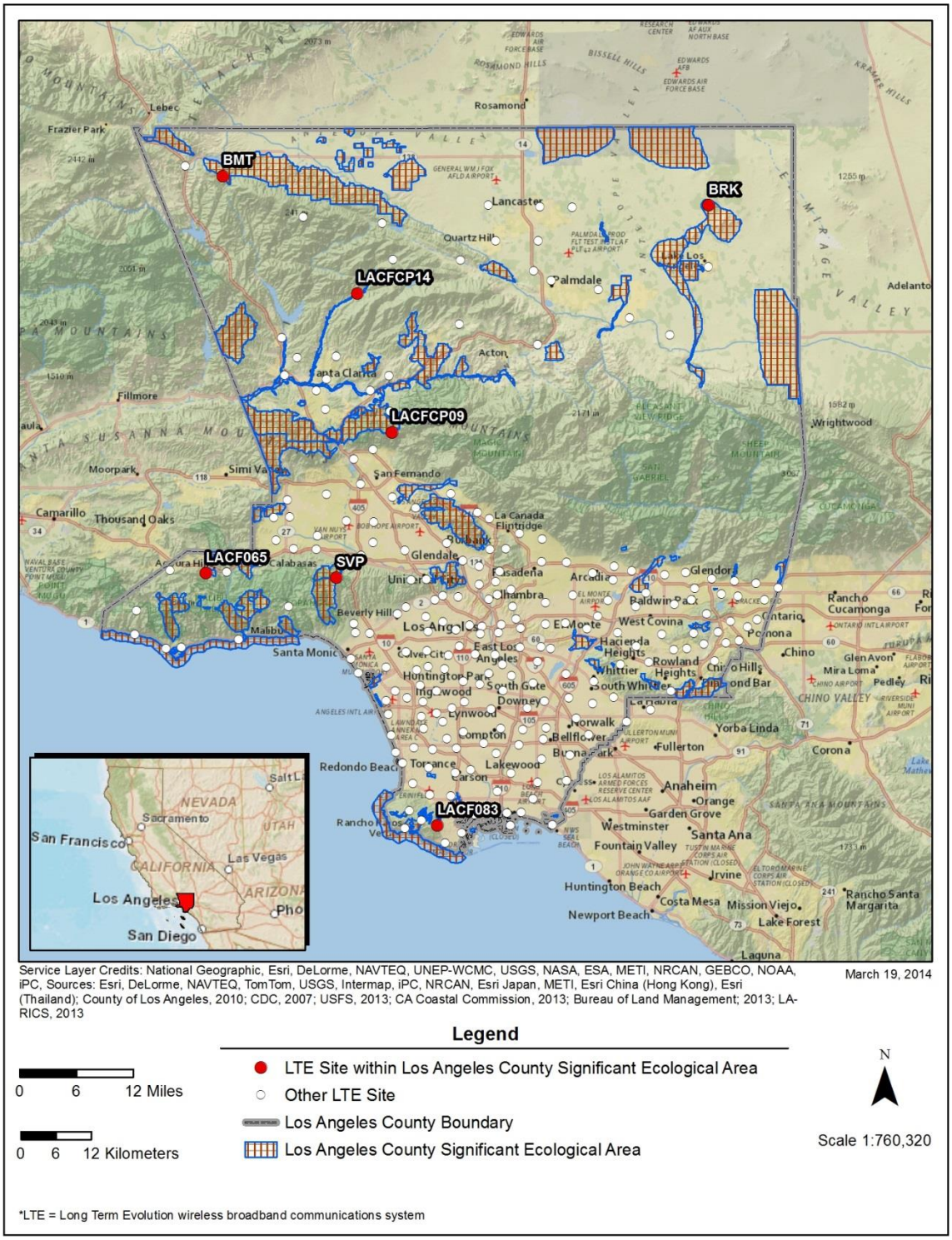
105 Los Angeles, County of. 1980. *Los Angeles County General Plan.* Los Angeles, CA: Author. November 25, 1980. Land Use Element, pgs. III-52 and III-53.

106 National Park Service. 2002 *General Management Plan & Environmental Impact Statement*. California, CA: Author. July 2002.

107 Los Angeles, County of. 2000. *The Santa Monica Mountains North Area Plan.* Los Angeles, CA: Author. October 24, 2000.

108 Los Angeles, County of. 2014. *Draft Santa Monica Mountains Land Use Plan.* Los Angeles, CA: Author. February 13, 2014. Internet: http://planning.lacounty.gov/assets/upl/project/coastal_lup.pdf. Last accessed: April 18, 2014.

Figure 3.8-4
LTE Sites within a Significant Ecological Area



The Los Angeles County Fire Station 65 (LACF065) Site is designated "Mountain Land 5" by the County's Land Use Policy Map.[109] The North Area Plan identifies telecommunication facilities as an allowed use on lands designated Mountain Land.[110] Further, the North Area Plan includes the following policy:

Policy VI-31 Wireless telecommunication facility sites shall preserve the character and aesthetics of areas chosen for such uses by limiting the visual and safety impacts of such facilities through careful design, screening, and mitigation requirements. The co-location and clustering of wireless telecommunication facilities and structures shall be encouraged, wherever possible, to help avert unnecessary proliferation of such facilities in public and private property.

The County of Los Angeles is updating several components of its general plan. Of note is preparation of the Santa Monica Mountains Land Use Plan (SMM LUP), also a component of the Santa Monica Mountains Local Coastal Program for the County.[111] The SMM LUP was partially approved by the CCC on April 10, 2014 and fully approved on July 10, 2014, pending acceptance by the County Board of Supervisors (scheduled for hearing August 26, 2014). Under the adopted plan, the following land use policies would apply at Sites Los Angeles County Fire Station 69 (LACF069) and Los Angeles County Fire Station 72 (LACF072):

CO-152 Require wireless telecommunication facilities to be designed and sited in such a manner that they minimize impacts to visual resources and blend into the landscape. Such facilities shall be co-located where feasible. This may include requiring one taller pole rather than allow multiple shorter poles. New wireless telecommunication facilities may be disguised as trees of a species that would likely be found in the surrounding area and that blend with the natural landscape when it is not feasible to co-locate on an existing pole.

LU-50 Limit the visual and safety impacts of wireless telecommunications facilities to preserve the character and aesthetics of surrounding areas, through careful design, screening, and mitigation requirements. Encourage undergrounding of accessory equipment, co-locating, and clustering wireless telecommunication facilities and structures, wherever possible, to help avert unnecessary proliferation of such facilities.

LU-51 Communication processing, storage and transmission facilities and lines shall be sited, designed, and operated to avoid or minimize impacts to H1 habitat area and scenic resources, consistent with all provisions of the LCP. If there is no feasible alternative that can eliminate all impacts, then the alternative that would result in the fewest or least significant impacts shall be selected.

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109 Los Angeles, County of. 1980. *Los Angeles County General Plan, Land Use Policy Map.* Los Angeles, CA: Author. November 25, 1980.

110 Los Angeles, County of. 2000. *The Santa Monica Mountains North Area Plan.* Los Angeles, CA: Author. October 24, 2000. Pg. VI-57 and -58.

111 Los Angeles, County of. 2014. *Draft Santa Monica Mountains Land Use Plan.* Los Angeles, CA: Author. February 13, 2014. Internet: http://planning.lacounty.gov/assets/upl/project/coastal_lup.pdf. Last accessed: April 18, 2014.

LU-52 All facilities and related support structures shall be sited, designed, and operated to avoid when possible the visibility of the facility from public viewing areas, and to preserve the character of surrounding areas by protecting ridgelines by setting facilities below the ridge, and co-locating facilities, where feasible, to avoid proliferation of facilities.

LU-53 All facilities shall place support facilities underground, where feasible. New communication transmission lines shall be sited and designed to be located underground, except where it would present or contribute to geologic hazards or if to do so would be more damaging to biological resources. Existing communication transmission lines should be relocated underground when they are replaced or when funding for undergrounding is available.

B. Plans, Policies and Regulations of Incorporated Cities

Summary Overview of Incorporated Cities Land Use Policy

The general plan and zoning codes for each city were reviewed to identify the adopted land use designation, land use policies, regulations and zoning for each LTE site location. When available, WTF regulations were reviewed to assess local regulatory requirements for the siting, construction and permitting of telecommunication facilities on sites within the boundaries of incorporated cities.

The majority of the cities recognize WTFs as a specific use and have established regulations for siting, designing and permitting them. As many as 30 of the cities expressly exempt from the entitlement permitting process WTFs that are for public communications and/or safety-net services or located on public agency and/or Los Angeles County property. Several cities provide streamlined entitlement permitting for WTFs located in preferred locations, that meet specified design criteria or which are collocated.

The majority of the cities require a CUP, WTF use permit, or similar discretionary permit review process before they issue an entitlement permit. The CUP (or equivalent permit) process allows those agencies to consider site-specific issues and negotiate conditions addressing design, height, placement, operation and construction activities. Several cities have zoning codes that do not specifically recognize WTFs, and while the planning directors for those agencies would ultimately determine the required permit process, a CUP (or equivalent discretionary review permit) is the presumed requirement for cities without clearly defined entitlement processes.

When reviewing WTFs for consistency with land use plans, policies and regulations, local agencies typically consider permitted uses within the underlying zone category, proximity to certain surrounding uses (such as adjacent residential or other WTFs), and facility height and design.

A substantial number of the cities require or encourage specific design performance in order for a WTF to be considered consistent with local policies and regulations. For example, a local permitting agency may require a WTF to be designed to substantially conceal its appearance and blend with the character of the surrounding area; this manner of design treatment is typically referred to as “camouflage” or “stealth” design. The extent of design treatment and degree of performance is site-

specific and determined through each local agency as defined by local regulations and policies. In a majority of situations for WTF projects, compliance with design requirements is achievable.

Almost all of cities have policies and regulations that restrict the maximum height of a WTF. For example, local permitting agencies may establish maximum height limits for structures within specific land use zones or related to specific uses (e.g., WTFs). When a tower site is not in strict compliance with the applicable height standards and/or height limitations, and an "exemption" is not otherwise granted, the local permitting agency may consider whether an exception is warranted or require that the proposed structure (i.e., the WTF equipment configuration and equipment) be modified to comply with the applicable height restriction for that specific location.

A substantial number of cities have policies and regulations that either limit WTFs to specific areas, or directly prohibit them within specific areas or when within a specified distance from certain surrounding land uses. For example, when a WTF project does not comply with the applicable permitted use(s), and an "exemption" is not otherwise granted, it would be prohibited at that location. When a distance limitation is encountered, this use restriction may be remedied by relocating the site to a zone or designated area that allows WTFs, or the city could determine if an exception is warranted. Some cities also limit facilities in special districts or overlay zones, such as prohibiting WTFs within historic districts or areas identified by unique design and/or visual criteria. Some of the local city zoning ordinances reviewed for this EA are outdated with regard to WTFs and are silent on the allowance of WTFs within the agency area.

The general plan and zoning for each local community were reviewed to identify the adopted land use designation, plan policies and zoning for each LTE site location and assess the potential relevance to development of communication facilities. About 80 of the LTE sites are located on property designated or zoned as a "public facility" or similar public service or institutional use and occupied by a public agency facility, such as a police, sheriff or fire station, or a public administration or institutional building. Another 17 sites are designated or zoned for open space, park, agriculture or watershed uses, where proximity to urbanized development is limited. The remaining LTE sites are on properties zoned commercial, industrial, residential or other similar urbanized area uses.

3.9 Infrastructure

3.9.1 Introduction

This section of the EA describes infrastructure needed to support construction and operation of the Proposed Action. Supporting infrastructure examined in this section includes existing electricity capacity and demand, solid waste management capacity and demand, nonpotable water supply and demand, and transportation infrastructure.

3.9.2 Utilities

A. Electricity

Electrical service is primarily provided (at 222 of the 231 LTE sites) by SCE and LADWP. The remaining nine LTE sites are served by Azusa Light and Water, Burbank Water and Power, City of Glendale Water and Power and Vernon Light and Power Department. Table 3.9-1 provides an overview of electrical service providers serving the LTE sites.

Table 3.9-1
Electric Utilities Serving LTE Sites

Name	Service Area	No. of Project Sites Served	Peak Demand Megawatts (MW)*	Annual Generation Capacity Gigawatt-hours (GWh)*
Southern California Edison	Central, coastal and southern California, excluding some cities	165	23,303	88,700
Los Angeles Department of Water and Power	City of Los Angeles and some communities in the Los Angeles area	57	6,142	27,908
Azusa Light and Water	City of Azusa	1	63	0.28
Burbank Water and Power	City of Burbank	1	304	1,248
City of Glendale Water and Power	City of Glendale	5	336	2,124
Vernon Light and Power Department	City of Vernon	2	189	1,092
		231	30,337	121,072.28

* Note:
- Peak Demand refers to maximum peak demand experienced by the utility in the past.
- Annual Generation Capacity refers to maximum total electricity provided by the utility during a one year period in the past.
- All values are based on figures provided in planning documents and reports prepared by CEC and individual utilities.

Source: California Energy Commission, Staff Report, CEC-200-2009-019 November 2009.

B. Solid Waste Disposal

The Los Angeles County Sanitation Districts operate a comprehensive solid waste management system serving the needs of a large portion of Los Angeles County. Los Angeles County relies on a

unique mixture of publicly and privately owned and operated facilities to maintain a competitive environment for waste collection, recycling, and disposal.

Types of disposal facilities for non-hazardous waste within Los Angeles County include Class III landfills, which accept non-hazardous household waste; and unclassified landfills, which accept materials such as soil, concrete, asphalt, and other construction and demolition debris. The total remaining permitted Class III landfill capacity in the county is estimated at 129.2 million tons (LACDPW, 2013).[112] Considering the annual countywide waste generation of 21.5 million tons in 2012,[113] sufficient Class III disposal capacity is available to meet the County's waste disposal needs for the next six years. The remaining permitted capacity of unclassified landfills, which is where most of the construction waste generated by the proposed activity would go, is estimated at 64.1 million tons. At the average disposal rate of 286 tons per day in 2012, this capacity would be exhausted in 614 years.[114]

C. Water

Los Angeles County is served by a complex water management system, which consists of numerous water providers, water quality control boards and other agencies. Los Angeles County's mix of local and imported water supplies is delivered through an intricate system of aqueducts, reservoirs, and groundwater basins. Approximately 33 percent of the water supply comes from local sources, including surface water from mountain runoff, groundwater and recycled water. The remainder is imported into Los Angeles County from three sources: the Colorado River, the Sacramento-San Joaquin Delta in Northern California via the State Water Project, and the Owens Valley via the Los Angeles Aqueduct.[115]

Two hundred twenty-six of the LTE sites are located on grounds of police, fire, or other occupied facilities served by a domestic water system. Five LTE sites are located on the grounds of existing communications sites located in remote areas where connection to a domestic water system may not be available.

D. Transportation

Los Angeles County has an extensive network of interstate freeways, state highways, regional roadways and local surface streets that provide access to every portion of the service area. This network is the major means of transportation throughout Los Angeles County. Interstate highways serve as regional evacuation routes during emergencies. The highway network spans the county in all directions and links critical infrastructure facilities such as the ports of Los Angeles and Long Beach, and Los Angeles International Airport.

All 231 LTE sites have direct vehicular access from existing paved or dirt roadways. Most of the LTE sites (202 sites) are located in the developed Los Angeles Basin and adjacent municipalities. All of these urban LTE sites are located on the grounds of existing public services buildings including

112 LACDPW (2013), p. 24.
113 LACDPW (2013), p. 17.
114 LACDPW (2013), p. 25.
115 County of Los Angeles Draft 2035 General Plan, Public Facilities Element, p. 227.

police stations, fire stations, medical centers and utility service providers, and are developed with paved access roads. The remaining 29 sites are located in rural or remote areas with 28 sites accessible by paved road, and 1 site (site BUR) served by a dirt road. All roads appear in good repair.

E. Public Safety Telecommunications

More than 80 public safety agencies with a staff of 34,000 responders serve the greater Los Angeles area. Many of these agencies use aging and incompatible radio systems, making inter-agency communication a challenge. Public safety two-way radio communications services have been evolving and constantly changing. Service began primarily in the VHF Low Band (30-50MHz) and then gradually included other spectra in higher frequency radio bands as public safety personnel needed more radio channels and became more dependent on two-way radio to perform their duties. As a result, the spectrum assigned to public safety is fragmented and heavily used, limiting responders to mostly voice and low speed data (primarily text messages) that can be delivered on narrowband radio channels.[116]

While maintaining their traditional radio systems, public safety agencies are increasingly using commercial broadband systems to support their missions. These agencies are adopting systems in different shapes and forms, including use of laptop computers in vehicles, as secondary communications devices (e.g., a smartphone), or for remote video monitoring.

[116] Benefits of Transitioning to a Nationwide Wireless Broadband Network for Public Safety, The White House, June 2011.

3.10 Socioeconomic Resources

This section contains a demographic profile of the geographic area to be served by the Proposed Action, which is principally Los Angeles County and small portions of adjacent counties. The presence of low-income and minority populations is identified within each study area (defined below) of the 231 LTE sites so that impacts under Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) can be addressed in Section 4.10.

Since environmental justice analysis has no established unit of geographic analysis to determine the area potentially impacted by a proposed action, the geographic scale of the affected area varies depending on the nature of the proposed action. For this analysis, the unit of geographic analysis or "Area of Potential Effect" (APE) is generally defined as the area within a one-mile radius around each of the 231 LTE sites. Due to the urban nature of Los Angeles County and Orange County, and the small area size of each project site boundary, the one-mile APE was chosen as a reasonable unit of geographic analysis. This one-mile radius is also the most conservative geographic unit of analysis which generally covers the affected areas of the resources analyzed in this EA. This is the extent of the area where the Proposed Action is most likely to result in physical changes that could impact socioeconomic conditions, and it also provides wide enough coverage that avoids artificially diluting the affected minority population and/or low-income population.

This APE is used for all sites discussed in the analysis of socioeconomic resources. Out of the 231 LTE sites, the APEs for 223 sites are located entirely in Los Angeles County, while one site's APE (LACF192) is located entirely in Orange County. The remaining seven LTE sites are physically located within Los Angeles County, but small portions of their APE extend into the adjacent counties. Data used to determine population demographic and socioeconomic conditions are derived from Nielsen SiteReports for year 2012, which are based on the U.S. Census Bureau's most recent estimates (see Appendix G-2 Nielsen Demographic Update Methodology). In order to determine whether an action is likely to have disproportionately high and adverse human health or environmental effects on low-income populations and/or minority populations, the presence of these groups must first be identified within the APE of each of the 231 LTE sites.

3.10.1 Regulatory Setting

A. National Environmental Policy Act (NEPA)

Economic and social effects must be considered under NEPA when they are interrelated with natural and physical effects on the environment (40 CFR 1508.8(b)).

B. Executive Order 12898 (1994)

Executive Order 12898 includes provisions that require federal agencies, prior to taking action (including decisions to fund, lend, or permit), to assess the potential for their actions to disproportionately impact minority and/or low-income populations.

3.10.2 Resource Overview

The Los Angeles metropolitan area[117] is the second most populous metropolitan statistical area (MSA) in the United States. The total population for 2012 in Los Angeles County is estimated at 9.86 million. Total 2012 population estimate for Orange County is 3.04 million. Diverse communities and neighborhoods that have large representations of low-income and/or minority populations exist throughout Los Angeles County.

A. Minority Population

Over 71.8 percent of the total population in Los Angeles County is comprised of individuals who identify themselves as members of a Census-defined minority (i.e., American Indian or Alaskan; Asian or Pacific Islander; Black or African American; or Hispanic/Latino).[118] In neighboring Orange County, Census-defined minorities make up 55.3 percent of the total population. The CEQ Environmental Justice Guidance Under NEPA (CEQ, 1997) recommends that minority populations be identified in a NEPA analysis when such populations in the affected area exceed 50 percent, or when the minority population percentage of the affected area is meaningfully greater (i.e., 10 percent greater) than the minority population in the general population or other appropriate unit of geographic analysis. Among the proposed 231 LTE sites, 153 sites have been identified as having a minority population exceeding 50 percent of the total affected area.[119] The remaining 79 LTE sites located in Los Angeles County have a minority population of less than 50 percent.

Table 3.10-1 provides the race and ethnicity for Los Angeles County and for Orange County. In 2012, nearly half of the total population (48.3 percent) in Los Angeles County self-identified as Hispanic/Latino. In Orange County, the Hispanic/Latino population is 34.1 percent of the total population. Similarly, the APE for a majority of LA-RICS sites is comprised largely of individuals of Hispanic/Latino origin. Among the non-Hispanic/Latino minority populations, Asian and Pacific Islander populations constitute the second largest minority populations in Los Angeles County (14.3 percent) and Orange County (18.9 percent). African American population is the third largest minority population, making up 8.5 percent and 1.7 percent of the total population in Los Angeles County and Orange County, respectively. The American Indian and Alaskan Native population is the smallest identified minority (less than 1 percent) in both Los Angeles County and Orange County. The minority population percentage within the APE of each of the 231 sites is set forth in Appendix G-1.

117 CBSA Title identified by Office of Management and Budget is Los Angeles-Long Beach-Anaheim, CA Metropolitan Statistical Area.

118 See Appendix G-1 EJ Population Determinations for definition of "minority" and discussion on the thresholds used to identify minority population within the one-mile radius study area.

119 *Ibid.*

Table 3.10-1
Race and Ethnicity by County in 2012

	Races					Ethnicity
	White	Black/ African American	American Indian /Alaskan Native	Asian Pacific Islander	Other*	Hispanic/ Latino
Los Angeles County	4,928,121 (50.0%)	841,797 (8.5%)	72,483 (0.7%)	1,406,400 (14.3%)	2,611,542 (26.5%)	4,759,943 (48.3%)
Orange County	1,818,685 (59.8%)	51,134 (1.7%)	18,019 (0.6%)	573,442 (18.9%)	576,397 (19.0%)	1,036,776 (34.1%)

Source: Nielsen SiteReports

*"Other" includes U.S. Census race categories "Some other race" and "Two or more race", which make up the total percentage of the race categories, but are not race categories mandated by the Office of Management and Budget's (OMB) 1997 standards.

B. Low-Income Population

The CEQ Environmental Justice Guidance under NEPA (CEQ, 1997) calls for the use of statistical poverty thresholds from U.S. Census Bureau to identify low-income population in an affected area. but the same poverty thresholds are used throughout the United States and do not vary geographically. To take into consideration the local costs of living, U.S. Department of Housing and Urban Development's (HUD) percentage of area median income (AMI)[120] is used in conjunction with a Census-based poverty threshold (i.e., percentage of families below poverty level[121]) to identify low-income population in the study area. For the purpose of this analysis, a population within the study area is considered low-income if the study area population has:

(1) a percentage of families below poverty level meaningfully greater (i.e., 10 percent) than the reference county's percentage of families below poverty level; or

(2) a median household income[122] less than 80 percent AMI. The reference county's 2012 median household income is used as the AMI.

For Los Angeles County, 80 percent of the Area Median Household Income (AMI) is approximately $41,709, and the threshold for percentage of families below poverty level is 22.6 percent. For Orange County, 80 percent AMI is approximately $57,074 and the threshold for percentage of families below poverty level is 17.2 percent.

A total of 57 out of 231 LTE sites are surrounded by populations that meet the environmental justice thresholds for low-income, as defined in low-income threshold (2) above. Among the LTE

120 See Appendix G-1 EJ Determinations for definition of "low-income" and discussion on the thresholds used to identify low-income population within the one-mile radius study area.

121 Census-based poverty threshold at the individual level is unavailable from Nielsen SiteReports. Consequently, families below poverty level data are supplemented by the use of a percentage of AMI (area median household income) to account for non-family population.

122 Median household income includes both one-person households and multi-person households of unrelated individuals.

sites that meet low-income threshold (2), 25 of these 57 sites also meet low-income threshold (1), which is percentage of families below poverty level 10 percent greater than the reference county's percentage. In general, the study areas for these low-income sites tend to have higher poverty rates and lower median household incomes than at the county level. Appendix G-1 contains site-specific information on income and minority.

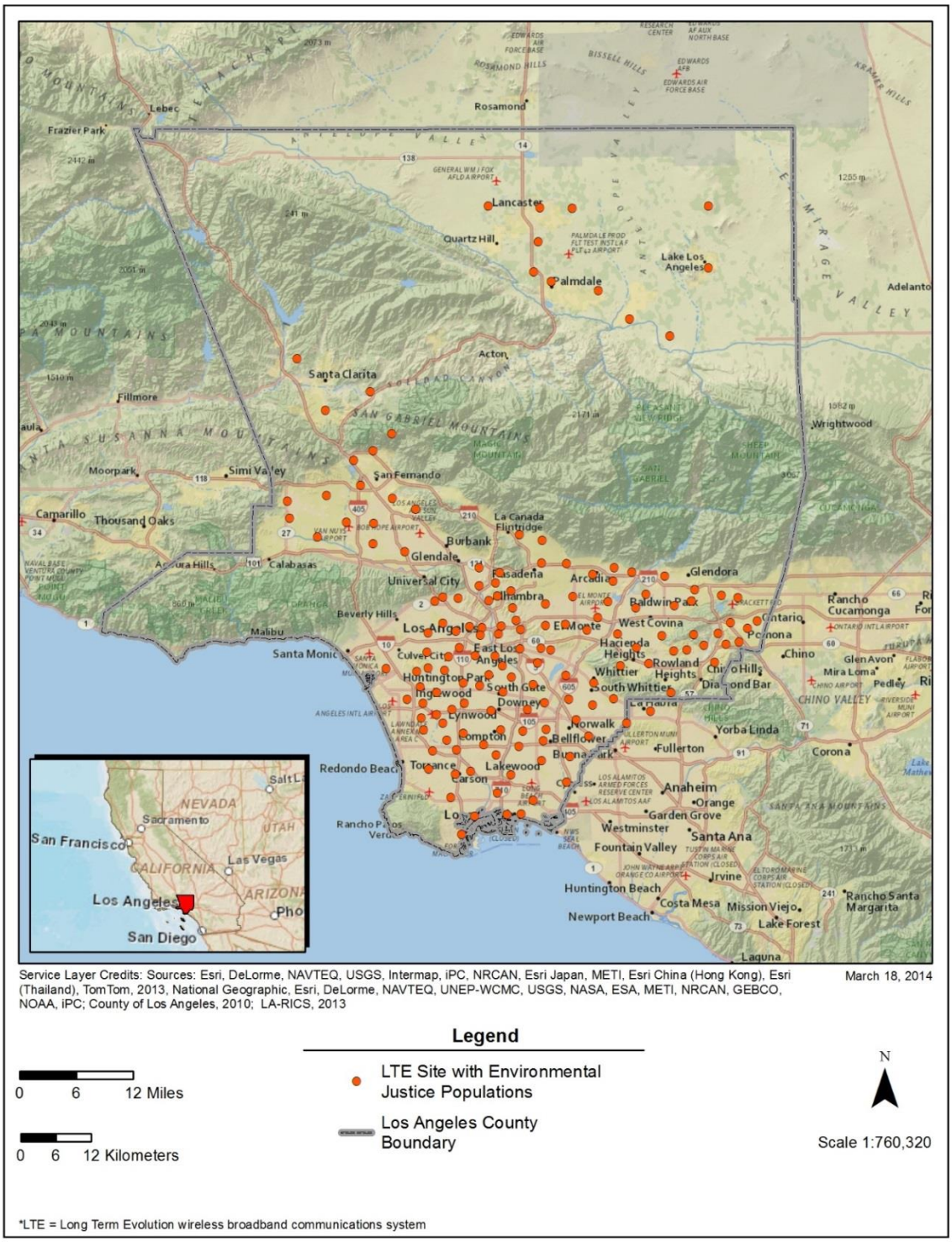
C. Environmental Justice Populations

A total of 156 LTE sites are identified as having environmental justice populations based on composition of minority and low-income populations described above in Section 3.10.2 (A) and 3.10.2 (B) and in Appendix G-1. Environmental Justice populations are broadly identified by the following groups:

- Ninety-nine sites based on ethnicity/minority population only.
- Three sites based on low-income population only.
- Fifty-four sites based on both ethnicity/minority and low income population.

Figure 3.10-1 is an overview map showing the locations of all 156 LTE sites surrounded by environmental justice populations. For more site-specific information, please refer to Appendix G-1.

Figure 3.10-1
LTE Sites with Environmental Justice Populations



3.11 Human Health and Safety

This section addresses public and worker health and safety issues typically associated with construction and operation of the Proposed Action. Issues addressed include exposure to contaminated soils and groundwater, hazards to aeronautical navigation, exposure to wildland fires, and methane generated by nearby landfills or oil and gas wells.

3.11.1 Regulatory Setting

A. Hazardous Materials Handling, Storage, Disposal

Federal laws addressing hazardous materials include the Resource Conservation and Recovery Act (RCRA), which gives the Environmental Protection Agency (EPA) the authority to control the generation, treatment, storage, and disposal of hazardous waste, petroleum or other hazardous substance. Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a trust fund has been established to provide authority for cleanup of releases or threatened release of hazardous substance that could endanger public health or the environment. As part of CERCLA, the EPA compiles a list of national priorities among the known releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories, known as the National Priorities List (NPL). These locations are commonly referred to as "Superfund sites."

At the state level, hazardous materials are addressed by the California Department of Toxic Substances Control (DTSC). The objective of the DTSC is to protect human health and the environment from exposure to hazardous material and waste. The RWQCB, which protects ground and surface water quality, is also involved with regulating the handling, storage, and disposal of hazardous substances in construction projects.

B. Worker Safety

The federal Occupational Health and Safety Administration (OSHA) published Standard 1910.120, which addresses dangers in the workplace.[123] The standard requires that employers evaluate the potential health hazards that hazardous materials pose in the workplace and communicate information concerning hazards and appropriate protective measures to employees.

Cal-OSHA assumes primary responsibility for developing and enforcing workplace safety regulations within California. Cal-OSHA regulations pertaining to the use of hazardous materials in the workplace (Title 8 of the CCR) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and preparation of emergency action and fire prevention plans.

[123] 29 CFR § 1910.120.

C. Aeronautical Safety

The FAA regulates obstructions in navigable airspace, administers notice requirements that apply to certain construction activities, provides for aeronautical studies to determine a potential project's effect on the safe and efficient use of airspace, and conducts public hearings on the hazardous effect of proposed construction or alteration. A notice of proposed construction activity or alternation to an existing tower provides a basis for the FAA to evaluate the effect on operational procedures. The emphasis is on determining whether the construction activity poses a hazard to air navigation and to determine appropriate measures for continued safety (if needed) of air navigation beyond that required by the current FAA Advisory Circular AC 70/7460 1 entitled "Obstruction Marking and Lighting.''

Under 47 CFR 17, any proposed or existing antenna structure that requires notice of proposed construction to the FAA must also be registered with the Federal Communications Commission prior to construction or alteration. FCC regulates structures used as part of stations licensed by the FCC for the transmission of radio energy, and through the registration process, the FCC implements the antenna structure marking and lighting requirements for air navigation safety.

D. Airport Safety Regulations

California ALUCs serve as the means to protect the "public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses."

E. Wildland Fires

The USFS and BLM have management and administrative responsibility for certain federal lands proposed for siting of LTE system components. Each agency has the legal authority to protect those lands from the effects of wildfire. This is primarily accomplished through the implementation of resource management and fire management plans that contain policies addressing vegetation management and creation of defense zones to address the Wildland/Urban Interface.[124]

California Public Resources Code Sections 4201-4204 and Government Code Sections 51175-51189 require identification of fire hazard severity zones within the state of California, and specify standards for brush clearance around buildings or structures located in, upon, or adjoining any mountainous, forest, brush, or grassland area. Fire hazard severity zones are measured qualitatively, based on vegetation, topography, weather, crown fire potential (a fire's tendency to burn upwards into trees and tall brush), and ember production and movement within the area in question. Fire prevention areas considered to be under state jurisdiction are referred to as "state responsibility areas." In state responsibility areas, the California Department of Forestry and Fire

[124] The wildland fire management programs of these agencies are highly integrated, and they operate from a common policy "1995 Federal Wildland Fire Management Policy (revised in 2001)", the "2009 Guidance for Implementation of Federal Wildland Fire Management Policy", the "Interagency Standards for Fire and Fire Aviation Operations", "part 620 of the DOI Departmental Manual", and the "Forest Service Manual 5100."

Protection is required to delineate three hazard ranges: moderate, high, and very high. In "local responsibility areas," which are under the jurisdiction of local entities (e.g., cities, counties), local agencies are required only to identify very high fire hazard severity zones.

F. Methane

The State Public Resources Code, Division 3, Chapters 1 through 4, charges the State Division of Oil, Gas and Geothermal Resources (DOGGR) with the responsibility of supervising oil, gas, and geothermal well drilling, operation, maintenance, and abandonment operations to prevent damage to life, health, property, and natural resources. DOGGR operates the "Construction-Site Plan Review Program," which assists local permitting agencies that regulate land-use development by identifying and reviewing the status of oil wells near or beneath proposed structures.

Section 91.106.4.1 of the City of Los Angeles Municipal Code established citywide methane mitigation requirements and construction standards to control methane intrusion into buildings. The ordinance gives the Department of Building and Safety the authority to withhold permits on projects located within a Methane Zone or Methane Buffer Zone. Permits may be issued upon submittal of detailed plans that show adequate protection against flammable gas incursion by providing the installation of suitable methane mitigation systems. All new buildings and paved areas located in a Methane Zone or Methane Buffer Zone must comply with these requirements and the Methane Mitigation Standards established by the Superintendent of Building. The Methane Mitigation Standards provide information describing the installation procedures, design parameters and test protocols for the methane gas mitigation system.

3.11.2 Resource Overview

A. Existing Hazardous Waste Sites

Eight facilities listed on the Superfund Program's National Priorities List (NPL) are located within one mile of an LTE project site. The eight LA-RICS LTE project sites are summarized in Table 3.11-1.[125]

[125] EPA Superfund Information Systems. Updated June 23, 2009. Internet URL: http://cfpub2.epa.gov/supercpad/cursites/csitinfo.cfm?id=0902091. Last accessed: January 2, 2014.

Table 3.11-1
Superfund Sites within One Mile of LTE Project Site

Name of Facility	Location	Status	LTE Site
Omega Chemical Site	12504 East Whittier Boulevard	Groundwater treatment system began operation in 2009. Soil vapor extraction systems installed in 2010 and 2012. The facility does not currently meet the criteria for Site-wide Ready for Anticipated Use; although, portions are suitable for reuse.	LACF028
San Gabriel Valley Area 1	Includes Cities of Azusa, Baldwin Park, La Puente, Industry, West Covina, El Monte, South El Monte, Monrovia, Arcadia, Rosemead, Alhambra	This site is being remediated in five phases through groundwater treatment. The EPA determined that residents near the San Gabriel Valley (Area 1) site are protected while studies are taking place and final cleanup actions are planned.	MRFD002
San Gabriel Valley Area 3	Includes cities of Alhambra, Rosemead, San Gabriel, San Marino, South Pasadena, and Temple City.	Since 2003, the EPA has installed eight monitoring wells and conducted sampling. Currently, all drinking water served within Area 3 meets federal and State drinking water standards.	ALHPD01
San Gabriel Area 4	Includes cities of Alhambra, Rosemead, San Gabriel, San Marino, South Pasadena, and Temple City.	EPA overseeing project to protect drinking water. The cleanup system consists of groundwater extraction wells and water treatment plants for the intermediate zone, shallow zone north and shallow zone south remedy.	LASDIDT
San Fernando Valley Area 2	City of Los Angeles and Glendale	EPA oversaw construction and operation of treatment plant and well field capable of extracting and treating 5,000 gallons per minute of contaminated water. The plant began operating in 2000 and provides clean drinking water to the city.	GDWP001
San Fernando Valley Area 4	City of Los Angeles	This site is being addressed in two long-term remedial phases. The use of an interim alternate drinking water supply and the operation of wellhead treatment have reduced the potential of exposure to contaminated drinking water.	LAPDNED
Jet Propulsion Laboratory	City of Pasadena	Remedial action began in 1990. Additional treatment systems constructed in 2004 and 2011. The treatment systems installed on drinking water wells have reduced potential risks to human health and the environment.	LACFCP02

Table 3.11-1 (continued)
Superfund Sites within One Mile of LTE Project Site

Name of Facility	Location	Status	LTE Site
Pemaco	City of Maywood	EPA oversaw remedial action. Treatment plant began operation in 2007. EPA continues to monitor both the groundwater treatment system and vapor monitoring system on a daily and weekly basis. The sampling results show that cleanup activities are not impacting residents living in the neighborhood close to the site or the park.	LACF163

Source: U.S. EPA Superfund Information Systems

Of the 231 LA-RICS LTE project sites, 25 were listed in one or more of the regulatory databases as containing a Leaking Underground Storage Tank (LUST) in various stages of the remediation process (Table 3.11-2). All 25 sites listed in Table 3.11-2 have recognized environmental conditions that are known to represent a potential hazard to human health.[126]

Table 3.11-2
LTE Sites with LUSTS Undergoing Remediation or Assessment

Site ID	Address	Comments	Groundwater Depth at Site (Feet)
GLNDL28	4410 New York Avenue	Onsite: 1 open leaking underground storage tank eligible for closure. Within 0.25 mile: 2 leaking underground storage tank cleanup sites under assessment; 3 other cleanup sites under assessment; 1 on-site permitted underground storage tank; & 3 permitted underground storage tanks. No national priority list sites within 1 mile.	70
LACF004	2644 N San Gabriel Blvd.	Onsite Listing: Other cleanup site under assessment. Within 0.25 mile: 1 other cleanup site under assessment. Within 1 mile: No national priority list sites.	9

[126] ASTM E 1527 defines the term "recognized environmental condition" as the presence or likely presence of hazardous substances as defined by CERCLA, and petroleum products on a property under conditions that indicate an existing release, a past release or a material threat of a release into the ground, groundwater or surface water.

Table 3.11-2 (continued)
LTE Sites with LUSTS Undergoing Remediation or Assessment

Site ID	Address	Comments	Groundwater Depth at Site (Feet)
LACF090	10115 E Rush St.	Onsite Listing: Other cleanup site under assessment & interim remedial action. Within 0.25 mile: 6 other cleanup sites under assessment. Within 1 mile: No national priority list sites.	8
LACF095	137 W Redondo Beach Blvd.	Onsite leaking underground storage tank cleanup under assessment. Within 0.25 mile: 1 leaking underground storage tank cleanup site under assessment; 1 other cleanup sites under assessment/interim remedial action; & 4 permitted underground storage tanks. Within 1 mile: 1 Resource Conservation and Recovery Act site.	30
LACF105	18915 S Santa Fe Ave.	Onsite leaking underground storage tank cleanup under assessment. Within 0.25 mile: 1 leaking underground storage tank site under assessment & 1 leaking underground storage tank site under assessment & remedial action. Within 1 mile: No national priority list site.	20
LACF107	18239 W Soledad Canyon Road	Onsite leaking underground storage tank under assessment. Within 0.25 mile: 2 permitted underground storage tanks. Within 1 mile: No national priority list sites.	2
LACF111	26829 Seco Canyon Road	Onsite leaking underground storage tank in remediation. Within 0.25 mile: 1 leaking underground storage tank site in assessment & 3 permitted underground storage tanks. Within 1 mile: No national priority list sites.	20
LACF183	708 N San Antonio	Onsite: 1 open leaking underground storage tank under assessment. Within 0.25 mile: 2 permitted underground storage tanks. Within 1 mile: No national priority list sites.	330

Table 3.11-2 (continued)
LTE Sites with LUSTS Undergoing Remediation or Assessment

Site ID	Address	Comments	Groundwater Depth at Site (Feet)
LACF184	1980 W Orange Grove	Onsite: 1 open leaking underground storage tank under assessment. Within 0.25 mile: 1 leaking underground storage tank under assessment & 2 permitted leaking underground storage tanks. Within 1 mile: No national priority list sites.	46
LACF188	18-A Village Loop Road	Onsite: 1 open leaking underground storage tank under assessment & 1 permitted underground storage tank. Within 0.25 mile: 1 permitted underground storage tank. Within 1 mile: No national priority list sites.	121
LACFCP14	35100 San Francisquito Canyon Road	Onsite: 1 open leaking underground storage tank under assessment. Within 0.25 mile: no listing. Within 1 mile: No national priority list sites.	15
LACHAR	1000 West Carson Street	Onsite: 1 open leaking underground storage tank under assessment & 1 permitted underground storage tank. Within 0.25 mile: 1 leaking underground storage tank under assessment & 2 permitted underground storage tanks. Within 1 mile: No national priority list sites.	10
LACUSC	1200 North State Street	Onsite: 1 open other cleanup site eligible for closure; 1 closed leaking underground storage tank; & 6 permitted underground storage tanks. Within 0.25 mile: 1 leaking underground storage tank under assessment/interim remedial action & 1 permitted underground storage tank. Within 1 mile: No national priority list sites.	20
LAFD095	10010 International Road	Onsite: 1 open leaking underground storage tank eligible for closure & 1 permitted underground storage tank. Within 0.25 mile: 6 permitted underground storage tanks. Within 1 mile: No national priority list sites.	40

Table 3.11-2 (continued)
LTE Sites with LUSTS Undergoing Remediation or Assessment

Site ID	Address	Comments	Groundwater Depth at Site (Feet)
LAPDWIL	4861 Venice Boulevard	Onsite: 1 open leaking underground storage tank under assessment & 1 permitted underground storage tank. Within 0.25 mile: 2 leaking underground storage tanks in remediation; 1 leaking underground storage tank under assessment; & 3 permitted underground storage tanks. Within 1 mile: No national priority list sites.	16
LASDCSN	21356 S. Avalon Blvd.	Onsite: 1 open leaking underground storage tank in remediation & 1 permitted underground storage tank. Within 0.25 mile: 4 leaking underground storage tanks in remediation; 1 leaking underground storage tank under assessment; 1 other cleanup site is inactive; & 6 permitted underground storage tanks. Within 1 mile: No national priority list sites.	20
LASDCVS	4554 Briggs Ave.	Onsite: 1 open leaking underground storage tank under assessment & 1 permitted underground storage tank. Within 0.25 mile: 1 leaking underground storage tank in remediation; 2 leaking underground storage tanks under assessment; 1 other cleanup site under assessment; & 1 permitted underground storage tank. Within 1 mile: No national priority list sites.	60
LASDLKD	5130 Clark Ave.	Onsite: 1 open leaking underground storage tank under assessment & 1 permitted underground storage tank. Within 1 mile: No national priority list sites.	25
LASDLNX	4331 Lennox Blvd.	Onsite: 1 open leaking underground storage tank in remediation & 1 permitted underground storage tank. Within 1 mile: 1 Brownfield.	40

Table 3.11-2 (continued)
LTE Sites with LUSTS Undergoing Remediation or Assessment

Site ID	Address	Comments	Groundwater Depth at Site (Feet)
LASDNWK	12335 Civic Center Dr.	Onsite: 1 open leaking underground storage tank under assessment & 1 permitted underground storage tank. Within 0.25 mile: 4 permitted underground storage tanks. Within 1 mile: No national priority list sites.	9
LASDSCV	23740 Magic Mountain Pkwy.	Onsite: 1 open leaking underground storage tank in remediation & 1 permitted underground storage tank. Within 0.25 mile: 3 permitted underground storage tanks. Within 1 mile: No national priority list sites.	26
LASDTEM	8838 E. Las Tunas Dr.	Onsite: 1 open leaking underground storage tank eligible for closure & 1 permitted underground storage tank. Within 0.25 mile: 4 other cleanup sites under assessment; 1 other cleanup site is inactive; and 3 permitted underground storage tanks. Within 1 mile: No national priority list sites.	120
LBPDHQ	400 West Broadway	Onsite: Open leaking underground storage tank eligible for closure. Within 0.25 mile: 1 other cleanup site is inactive. Within 1 mile: 1 Brownfield.	10
LHS	27050 Agoura Rd.	Onsite: 1 open leaking underground storage tank eligible for closure & 1 permitted underground storage tank. Within 1 mile: No national priority list sites.	20
RANCHO	7601 East Imperial Highway	Onsite: open leaking underground storage tank under assessment. Within 0.25 mile: 3 permitted underground storage tanks. Within 1 mile: No national priority list sites.	8

Source: Water Resources Control Board, Department of Water Resources

Airspace and Airport Runway Zones

The 129 LTE sites listed in Table 3.11-3 would be subject to review based on the FAA Part 77 Notification Requirements to ensure that the proposed structures do not represent a hazard to aeronautical navigation. As part of this review process, proposed structures may be required to incorporate features into the design that increase visibility such as high contrast paint schemes, use of strobe lights, or more drastic measures such as height reductions or relocation to another site. The specific requirements would be set by the FAA during the notification process.

Table 3.11-3
LTE Project Sites Requiring FAA Notification

Site ID	Owner	Address
ALHPD01	Alhambra PD	211 South First Street
ARCPD01	Arcadia PD	250 West Huntington Drive
BHR	City of Beverly Hills	Beverly Hills Rexford Drive
BPPD001	Baldwin Park PD	14403 East Pacific Avenue
BUR	Los Angeles County	Burnt Peak
BURPD01	Burbank PD	200 North 3rd Street
CEN	LASD - Station	11703 Alameda Road
CJP	City of Diamond Bar	24142 Sylvan Glen Road
CLM	Claremont PD	1616 Monte Vista
CLRMPD1	Claremont PD	570 West Bonita Avenue
CPTFD04	Compton FD	950 West Walnut Street
CULV001	Culver City FD	9690 Jefferson Boulevard
ELMNTPD	El Monte PD	11333 Valley Boulevard
ELSGDPD	El Segundo PD	348 Main Street
FS5	Long Beach FD	7575 East Wardlow Road
GARD001	City of Gardena	1700 West 162nd Street
GDWP001	Glendale DWP	800 Airway
LACF004	LA County FD	2644 North San Gabriel Boulevard
LACF021	LA County FD	4312 West 147th Street
LACF023	LA County FD	9548 East Flower Street
LACF024	LA County FD	1050 West Avenue P
LACF030	LA County FD	19030 Pioneer Boulevard
LACF038	LA County FD	3907 West 54th Street
LACF044	LA County FD	1105 South Highland Avenue
LACF048	LA County FD	15546 East Arrow Highway
LACF058	LA County FD	5757 South Fairfax Avenue
LACF059	LA County FD	10021 Scott Avenue
LACF081	LA County FD	8710 West Sierra Highway
LACF083	LA County FD	83 Miraleste Plaza
LACF085	LA County FD	650 East Gladstone Street
LACF086	LA County FD	520 South Amelia Avenue
LACF087	LA County FD	140 South Second Avenue
LACF090	LA County FD	10115 East Rush Street
LACF091	LA County FD	2691 South Turnbull Canyon Road
LACF093	LA County FD	37941 57th Street East
LACF095	LA County FD	137 West Redondo Beach Boulevard
LACF096	LA County FD	10630 South Mills Avenue
LACF102	LA County FD	4370 North Sumner Avenue
LACF105	LA County FD	18915 South Santa Fe Avenue
LACF106	LA County FD	27413 Indian Peak Road
LACF112	LA County FD	8812 West Avenue E8
LACF117	LA County FD	44851 30th Street East
LACF123	LA County FD	26321 N Sand Canyon Road
LACF129	LA County FD	42110 6thStreet West
LACF141	LA County FD	1124 West Puente Avenue

Table 3.11-3 (continued)
LTE Project Sites Requiring FAA Notification

Site ID	Owner	Address
LACF146	LA County FD	20604 East Loyalton Drive
LACF153	LA County FD	1577 East Cypress Street
LACF154	LA County FD	401 North Second Avenue
LACF159	LA County FD	2030 West 135th Street
LACF161	LA County FD	4475 West El Segundo Boulevard
LACF162	LA County FD	12151 Crenshaw Boulevard
LACF169	LA County FD	5112 North Peck Road
LACF171	LA County FD	141 West Regent Street
LACF173	LA County FD	9001 South Crenshaw
LACF181	LA County FD	590 South Park Avenue
LACF183	LA County FD	708 North San Antonio
LACF184	LA County FD	1980 West Orange Grove
LACF187	LA County FD	3325 Temple Avenue
LACF188	LA County FD	18-A Village Loop Road
LACF192	LA County FD	520 South Harbor Boulevard
LACF194	LA County FD	1401 South Beach Boulevard.
LACHAR	County Hospital	1000 West Carson Street
LACOLV	County Hospital	14445 Olive View Drive Suite 2B182
LAFD005	LAFD	8900 South Emerson Avenue
LAFD019	LAFD	12229 Sunset Boulevard
LAFD049	LAFD	400 Yacht St
LAFD066	LAFD	1909 West Slauson Avenue
LAFD074	LAFD	7777 Foothill Boulevard
LAFD077	LAFD	9224 Sunland Boulevard
LAFD079	LAFD	18030 South Vermont Avenue
LAFD080	LAFD	6911 West World Way West
LAFD081	LAFD	14355 West Arminta Street
LAFD085	LAFD	1331 West 253rd Street
LAFD088	LAFD	5101 North Sepulveda Boulevard
LAFD093	LAFD	19059 Ventura Boulevard
LAFD094	LAFD	4470 Coliseum Street
LAFD095	LAFD	10010 International Road
LAFD101	LAFD	1414 West 25th Street
LAFD114	LAFD	16617 Arminta Street
LALG100	LA County FD	1200 Strand
LALG-HQ	LA County FD	2300 Ocean Front Walk
LAN	LASD - Station	501 West Lancaster
LAPD077	LAPD	7600 South Broadway Street
LAPDDVN	LAPD	10250 Etiwanda Avenue
LAPDFTH	LAPD	12760 Osborne Street
LAPDMIS	LAPD	11121 North Sepulveda Boulevard
LAPDNHD	LAPD	11640 Burbank Boulevard
LAPDPAC	LAPD	12312 Culver Boulevard
LAPDVNS	LAPD	6240 Sylmar Avenue
LAPDWIL	LAPD	4861 Venice Boulevard
LAPDWLA	LAPD	1663 Butler Avenue

Table 3.11-3 (continued)
LTE Project Sites Requiring FAA Notification

Site ID	Owner	Address
LAPDWVD	LAPD	19020 Vanowen Street
LASDCSN	LASD - Station	21356 South Avalon Boulevard
LASDLKD	LASD - Station	5130 Clark Avenue
LASDLNX	LASD - Station	4331 Lennox Boulevard
LASDSDM	LASD - Station	270 South Walnut Avenue
LASDTEM	LASD - Station	8838 East Las Tunas Drive
LBFD002	Long Beach FD	1645 East 3 Street
LBFD006	Long Beach FD	330 Windsor Way
LBFD009	Long Beach FD	3917 Long Beach Boulevard
LBFD012	Long Beach FD	6509 Gundry Avenue
LBFD013	Long Beach FD	2475 Adriatic Avenue
LBFD021	Long Beach FD	225 Marina Drive
LBFD026	Long Beach FD	3205 Lakewood Boulevard
LBPDHQ	Long Beach PD	400 West Broadway
LDWP220	LA City DWP	13501 San Fernando Rd.
LVFD002	La Verne FD	4785 Wheeler
LVRNPD	La Verne PD	2061 Third Street
MBFD001	Manhattan Beach FD	400 15th Street
MLM	LASD - Jail	45100 North 60th West
MNRVPD	Monrovia PD	140 East Lime Avenue
MOR	City of Santa Monica	Mount Olive Reservoir
MRFD002	Monrovia FD	2053 South Myrtle Avenue
PASA001	Pasadena	Goodrich
PLM	LASD - Station	750 East Avenue Q
RDBFD02	Redondo Beach FD	2400 Grant Avenue
RDNBPD	Redondo Beach PD	401 Diamond Street
REH	City of Long Beach	Reservoir Hill
SCH	City of Los Angeles	San Pedro City Hall
SEP	LAPD	145 West 108th Street
SFSFD03	Santa Fe Springs FD	15517 Carmenita Road
SLA	LASD - Station	1350 West Imperial Highway
SMFD002	Santa Monica FD	222 Hollister Ave.
SVP	City of Los Angeles	San Vicente Peak
TORC001	Other	3031 Torrance Boulevard
TORFD02	Torrance FD	25135 Robinson Way
TORFD04	Torrance FD	5205 Calle Mayor
WAL	LASD - Station	21695 East Valley Boulevard
WHD	LASD - Station	720 North San Vicente Boulevard

Source: FAA On-line Notice Criteria Tool, Obstruction Evaluation Version 2013.3.2

Fire Hazard Severity Zones

Forty two LTE sites located in the Santa Monica Mountains, ANF, and other parts of Los Angeles County are within a high fire hazard severity zone. Table 3.11-4 lists the site identification and address for each LTE site while Figure 3.11-1 and Figure 3.11-2 show the location of LTE sites in fire hazard severity zones.

Table 3.11-4
LTE Sites in Areas Designated as a Very High Fire Hazard Severity Zone

Site ID	Agency	Address
BMT	Los Angeles County	Bald Mountain
GLNDL23	Glendale FD	3303 East Chevy Chase Drive
GLNDL24	Glendale FD	1734 Canada Road
LACF053	LA County FD	6124 Palos Verdes Drive South
LACF056	LA County FD	12 Crest Road West
LACF065	LA County FD	4204 N Cornell Road
LACF068	LA County FD	24130 Calabasas Road
LACF069	LA County FD	401 S. Topanga Canyon Blvd.
LACF071	LA County FD	28722 W Pacific Coast Hwy
LACF072	LA County FD	1832 South Decker Road
LACF076	LA County FD	27223 Henry Mayo Dr.
LACF077	LA County FD	46833 Peace Valley Road
LACF078	LA County FD	17021 West Elizabeth Lake Road
LACF080	LA County FD	1533 West Sierra Hwy
LACF081	LA County FD	8710 West Sierra Hwy
LACF083	LA County FD	83 Miraleste Plaza
LACF088	LA County FD	23720 W Malibu Road
LACF091	LA County FD	2691 South Turnbull Canyon Road
LACF099	LA County FD	32550 Pacific Coast Highway
LACF106	LA County FD	27413 Indian Peak Road
LACF108	LA County FD	28799 N. Rock Canyon Dr.
LACF123	LA County FD	26321 North Sand Canyon Road
LACF132	LA County FD	29310 Sand Canyon Road
LACF140	LA County FD	8723 Elizabeth Lake Road
LACF144	LA County FD	31981 Foxfield Dr.
LACF149	LA County FD	31770 Ridge Route
LACF157	LA County FD	15921 Spunky Canyon Road
LACF194	LA County FD	13540 S. Beach Boulevard
LACFCP14	LA County FD	35100 San Francisquito Canyon Road
LACOLV	LAC/Oliveview+UCLA	14445 Olive View Drive Ste. 2B182
LAFD019	LAFD	12229 Sunset Boulevard
LAFD047	LAFD	4575 S. Huntington Drive
LAFD076	LAFD	3111 N. Cahuenga Boulevard
LAFD077	LAFD	9224 Sunland Boulevard
LAFD097	LAFD	8021 Mulholland Drive
LALG300	LA County FD	30050 Pacific Coast Highway
LASDCVS	LASD Station	4554 Briggs Ave
LASDNCC	LASD	29340 The Old Road
LHS	LASD Station	27050 Agoura Rd
MTW	City of LA	721 Lark Court
SVP	City of LA	17500 Mulholland Dr.
WCFD004	West Covina FD	1815 S Azusa Ave

Source: California Department of Forestry and Fire, Los Angeles County Fire Department

Figure 3.11-1
Fire Hazard Severity Zones, State Responsibility Areas

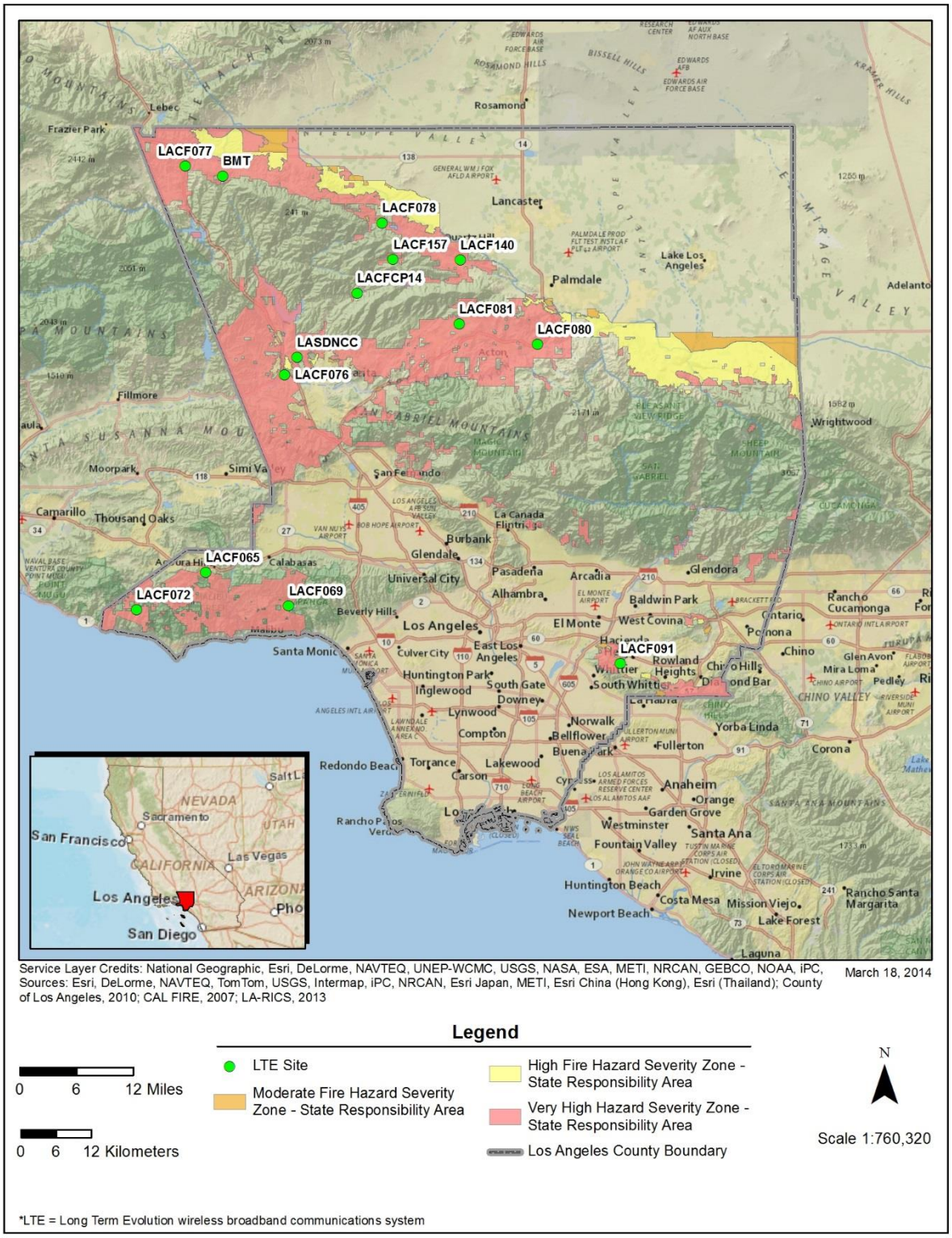
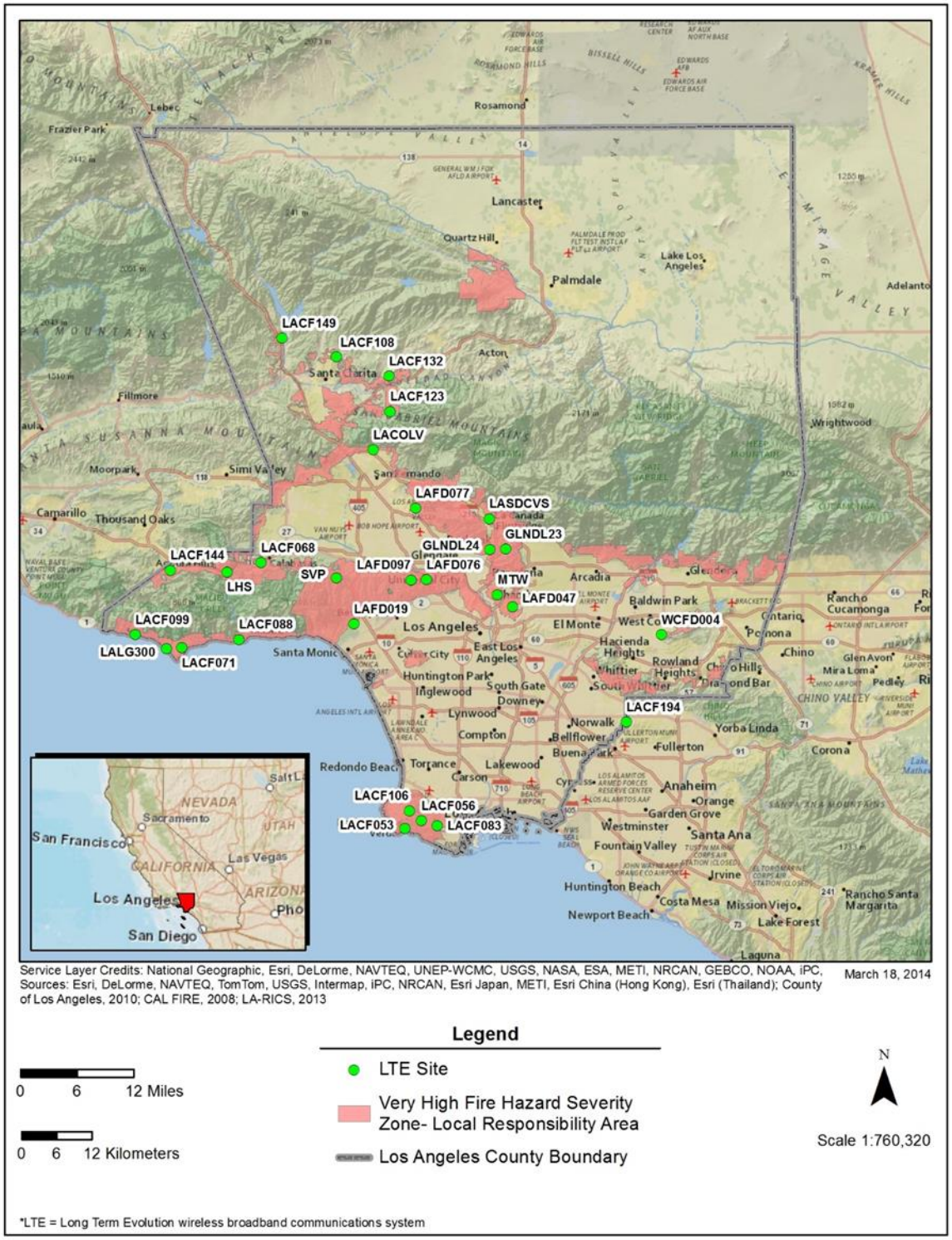


Figure 3.11-2
Fire Hazard Severity Zones, Local Responsibility Area



Methane Hazards

Four LA-RICS LTE Project sites are located within 200 feet of an oil well, and three LA-RICS LTE Project sites are located within 1,000 feet of a landfill. Another fifteen LA-RICS LTE Project sites are located within a City of Los Angeles designated Methane Zone. Table 3.11-5 lists those sites with a potential for methane exposures.

Table 3.11-5
LTE Sites with Methane Hazard

Site ID	Owner	Address	Comment
FCCF	LA County FD	1320 N Eastern Avenue	Within 700 feet of closed Blanchard St. Dump.
LACF038	LA County FD	3907 West 54th Street	Methane Zone
LACF048	LA County FD	15546 E Arrow Hwy	Within 163 feet of Irwindale Disposal Site.
LACF095	LA County FD	137 West Redondo Beach Boulevard	Within 120 feet from oil well.
LACUSC	County Hospital	1200 North State Street	Methane Zone
LAFD015	LAFD	915 West Jefferson Boulevard	Methane Zone
LAFD029	LAFD	4029 West Wilshire Boulevard	Methane Buffer Zone
LAFD049	LAFD	400 Yacht Street (Boat)	Methane Zone
LAFD061	LAFD	5821 West 3rd Street	Methane Zone
LAFD066	LAFD	1909 West Slauson Avenue	Methane Buffer Zone
LAFD077	LAFD	9224 Sunland Boulevard	Methane Buffer Zone
LAFD080	LAFD	6911 West World Way West	Methane Zone
LAFD085	LAFD	1331 West 253rd Street	Methane Zone
LALG-HQ	LA County FD	2300 Ocean Front Walk	Methane Zone
LAPDCEN	LAPD	251 East Sixth Street	Methane Zone
LAPDHLB	LAPD	2111 East First Street	Methane Buffer Zone
LAPDWIL	LAPD	4861 Venice Boulevard	Methane Zone
LAPDWLA	LAPD	1663 Butler Avenue	Methane Buffer Zone
MNTBLPD	City of Montebello PD	1600 W Beverly Blvd	Within 126 feet of oil well.
SFSFD04	Santa Fe Springs FD	11736 Telegraph Road	Within 176 feet of oil well.
SLA	LASD - STATION	1350 West Imperial Highway	Within 151 feet of oil well.
WCFD004	West Covina FD	1815 S Azusa Ave	Within 750 feet of BKK Landfill.

Source: State Division of Oil, Gas and Geothermal Resources, City of Los Angeles

4.0 ENVIRONMENTAL CONSEQUENCES

This chapter evaluates the impacts of implementation of the Proposed Action and the No Action Alternative on the resources presented in Chapter 3, Affected Environment. Because this EA evaluates implementation of 231 individual project sites, and in keeping with CEQ guidance that an EA be concise, this chapter focuses on summary results generated from site-specific analysis. A more localized "hard look" at the environmental effects of implementation of the Proposed Action and the No Action Alternative at each of the 231 individual LTE project sites is presented in Appendix B.

For this EA, the terms "impact" and "effect" are used interchangeably, and are considered synonymous.

Three types of impacts are analyzed for each resource area analyzed in this EA. These include direct, indirect, and cumulative effects.

- *Direct impacts* are impacts that are caused at the time and place an action is implemented.
- *Indirect impacts* are caused by an action but occur later in time or farther removed from the action.
- *Cumulative impacts* result from the incremental addition of an action to other past, present, or reasonably foreseeable future actions. For this EA, analysis of cumulative impacts generally considers the impact of a proposed project in the context of actions that are planned or under construction but not yet implemented.

As identified in Chapter 2, the Proposed Action includes CMRs that will be included in the project design for each site, to prevent significant environmental impacts to biological or cultural resources from occurring during construction and operation of the LTE system. This chapter assumes that the CMRs are part of the Proposed Action for purposes of analysis. The CMRs differ from the MMs identified in Chapter 4 in that they are built into the project design and only address biological or cultural resources, whereas the MMs address potentially significant impacts to any resource area that would occur as a result of the Proposed Action even after implementation of the CMRs. This chapter also discusses BMPs for certain resource areas. BMPs are generally accepted measures included in applicable regulations, or in the CMRs, that would be implemented in connection with the Proposed Action.

4.1 Noise

This section presents the results of the short-term (construction) and long-term (operational) noise impacts of the project. Details of the methods and calculations are in Appendix C.

4.1.1 Proposed Action

A. Short-Term (Construction Impact)

Direct Impacts

The main noise sources during construction are pieces of construction equipment. Noise is produced by engines, by exhaust fumes exiting from tailpipes, by friction with the ground as the equipment moves, and by beeping backup signals. At many sites, impulsive noise sources, such as jackhammers and pile drivers, contribute noise and vibration to the symphony. Noise from construction worker commuting vehicles, material delivery trucks, and waste disposal trucks make a relatively small contribution.

To evaluate direct noise impacts from construction at individual LTE sites, a construction scenario resulting in maximum potential for noise impacts to the community surrounding a site was defined. This scenario consisted of the following construction activities that may generate noise emissions:

- Demolition of existing pavement and structures.
- Preparation (through cuts and fills) of the area where the monopole, equipment shelters, and emergency generator would be installed.
- Excavation for the monopole's foundation.
- Concrete pad construction.
- Monopole erection and antenna equipment installation.
- Installation of cabinets, emergency generator and other ground-based equipment.

As discussed in Appendix C, demolition of existing pavement and structures was determined to result in the highest one-hour average noise exposure. However, demolition would not occur at all sites, and would be brief where it does. The second noisiest construction phase, excavation and soil handling for the monopole foundation, was chosen because it would occur at almost all sites, and may take more than one day; therefore, it would have a greater potential for "annoyance" to sensitive receivers. The one-hour average exposure at 50 feet from the assumed location of the activity (near the future monopole position) would be approximately 81.0 dBA L_{eq}. This value was used as a reference for calculating noise exposures at increasing distances from the construction activity.

Figure 4.1-1 shows noise exposure contours (lines of equal noise exposure) for a generic site in a rural or remote area, where "soft" ground surfaces absorb a substantial amount of noise energy. Sensitive receivers located within about 399 feet of rural and remote LTE sites would be exposed to

at least 55 dBA L_{eq} during excavation and drilling. One remote LTE site and 12 rural LTE sites have at least one sensitive receiver within this distance. Figure 4.1-2 shows noise exposure contours for a generic site in an urban area, where the "hard" ground surface allows the noise to carry further. Sensitive receivers located within about 1,002 feet of urban LTE sites would be exposed to at least 55 dBA L_{eq} during excavation and drilling. Among the urban LTE sites, 153 have at least one sensitive receptor within this distance.

As seen in Figure 4.1-1 and Figure 4.1-2, some sensitive receivers would have short-term noise exposures exceeding the 55-dBA L_{eq} criterion. These exposures would be reduced by several factors:

- Construction contractors would be required to follow applicable noise ordinances,[127] which may include restricting construction activities to certain hours of the day and days of the week.
- Each project site's construction activities are not expected to exceed 30 days, with only intermittent noise generated during that period.
- Construction would only occur during daylight hours.
- Field investigation has determined that many sites are surrounded by walls that serve as noise barriers. These walls can reduce noise transmission by about 10 dBA.
- As seen in Figures 4.1-1 and 4.1-2, buildings near the site would shield more distant buildings; this shielding would reduce exposures substantially.
- The LTE sites are too far apart for their aggregate noise impacts to be significant.

In conclusion, there would be no significant direct noise impacts from construction activities.

The analysis also addressed vibration impacts during construction. The ground motion caused by vibration is measured as PPV in inches per second and is referenced as VdB. Typical outdoor sources of perceptible groundborne vibration are construction equipment and traffic on rough roads. The Federal Transit Administration (FTA) uses a PPV of 0.2 inch per second as a vibration damage threshold for fragile buildings and a PPV of 0.12 inch per second for extremely fragile historic buildings (FTA, 2006). According to the FTA, vibration levels from typical heavy-duty construction equipment (excluding pile drivers and other heavy equipment, which would not be used on the project) at 50 feet from the vibration source ranges from about 0.0011 to 0.0315 inches per second (FTA, 2006). As no fragile buildings are within 50 feet of any site, there would be no significant vibration impacts.

[127] Information on local noise ordinances is presented on the site data sheets, which are in Appendix B.

Figure 4.1-1
One Hour Average Noise Exposure vs. Distance for Rural and Remote Areas

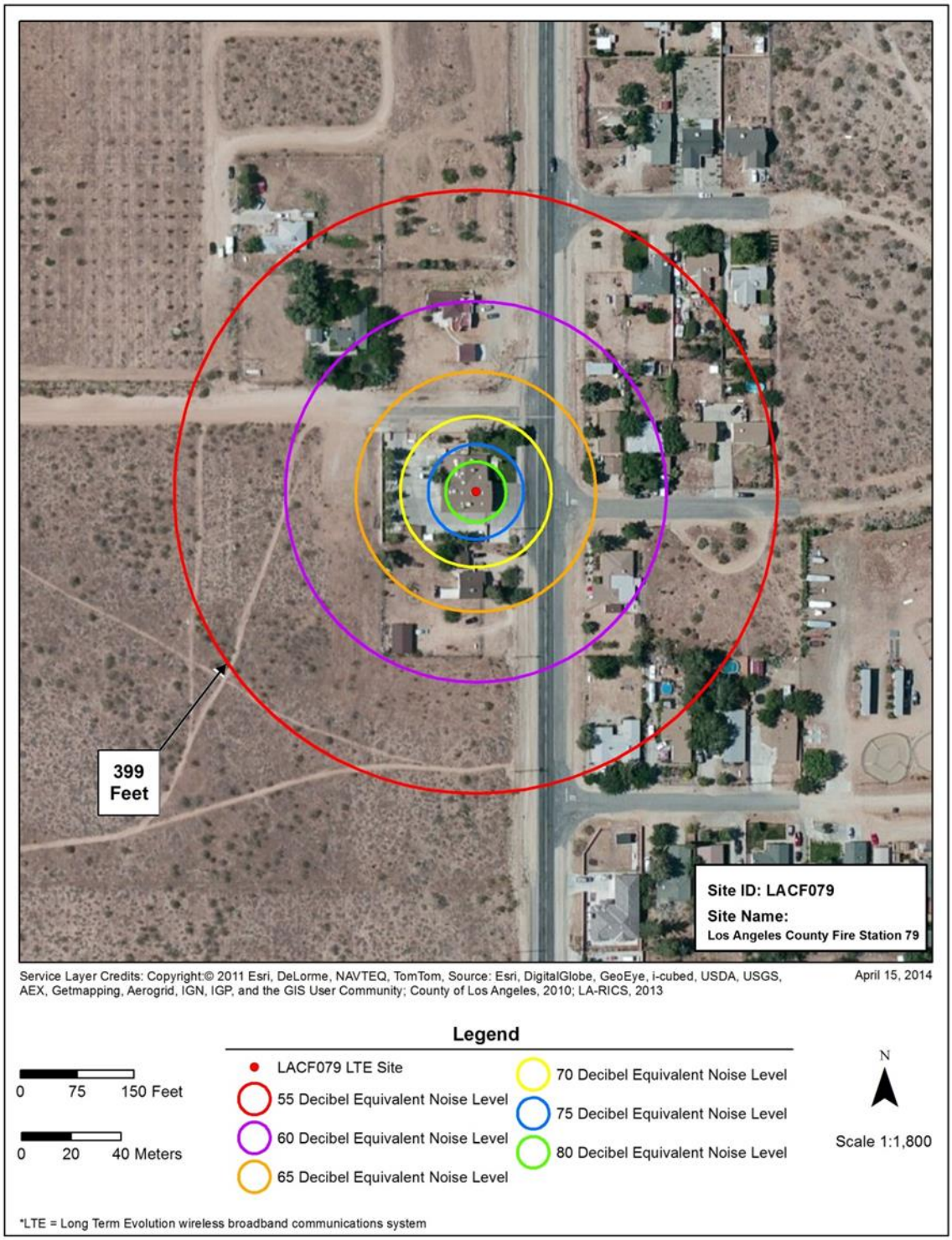
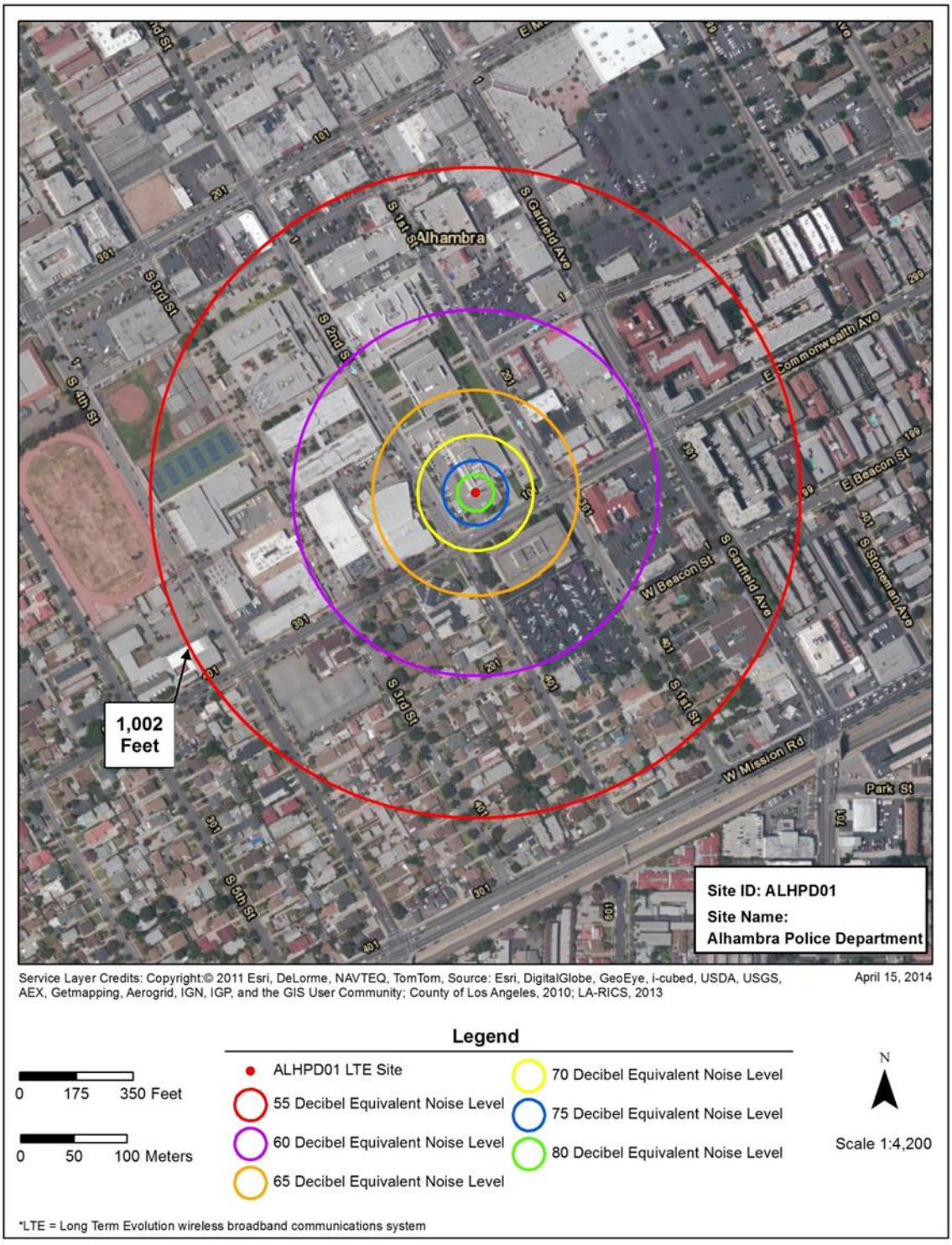


Figure 4.1-2

One Hour Average Noise Exposure vs. Distance for Urbanized Areas



Indirect Impacts

No significant indirect noise impacts would result from construction of LTE sites.

B. Long-Term (Operational)

Direct Impacts

The main potential noise sources associated with operations at each site would be the hum from some pieces of communications equipment; the occasional use of emergency generators; routine facilities maintenance; and heating, ventilating and air conditioning (HVAC) systems for the equipment cabinets. The equipment housing walls that would encase the communications equipment would provide sufficient attenuation so that communications equipment would not be audible to sensitive receivers near the sites.

The noise from maintenance activities, which could include landscaping, routine site inspections, and occasional equipment repairs, would not be substantially different from current levels at the host facilities. Therefore, this noise source was not evaluated further.

Noise emissions from diesel generator sets vary greatly with size and design. Most new models have built-in attenuation. A review of specifications for 11 commercially available diesel generators ranging from 25 to 40 kW found noise ratings of 56 to 98 dBA at 23 feet.[128] The median noise rating was 66 dBA at 23 feet. This is equivalent to 59.3 dBA at 50 feet. Furthermore, the emergency generators at the LTE sites would be in solid wall enclosures, which would attenuate at least 10 dBA. The resulting noise emissions would be 49.6 dBA at 50 feet. This is comparable to the ambient noise at most locations. Generator noise was therefore not considered further.

The method for estimating noise emissions from the HVAC for the equipment cabinets is described in Appendix C. Noise from HVAC systems depends upon their cooling load, which in turn depends upon electrical power use and ambient temperature. The air conditioning requirement for each of the four cabinets was estimated to be about 1.5 tons.[129] Typical noise ratings for refrigeration units with 1.5 tons capacity are 63 to 67 dBA.[130,131] The analysis conservatively assumes that the noise emissions from each of the four equipment cabinets would be 67 dBA. Noise exposure resulting from air conditioner operation was calculated using the Air-Conditioning & Refrigeration Institute's "Application of Sound Rating Levels of Outdoor Unitary Equipment,"[132] which is described in Appendix C.

The following assumptions were used in applying ARI Standard 275 to the case of the air conditioning units:

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128 Devices reviewed include Cummins DSFAA, John Deere HJW 30 T6, Kipor KDE35E, Kohler 30REOZK4 and 40REOZK4, Kubota SQ-33, Kwiet DGK45C, PowerPro 25, Winco PSS30 and PSS40, and Winpower DR3014.

129 A ton of refrigeration is equivalent to 12,000 British thermal units per hour.

130 "PC7, Classic & Classic Plus Series Specification." DENSO Corporation, Kariya, Japan. Internet URL: http://www.movincool.com/downloads/MovinCool_Overview_Specs.pdf.Accessed April 3, 2011.

131 These values assumed to have been determined by Air-Conditioning and Refrigeration Institute (ARI) Standard 270.

132 "1997 Standard for Application of Sound Rating Levels of Outdoor Unitary Equipment," Standard 275, Air-Conditioning and Refrigeration Institute, Arlington, Virginia. 1997.

- A reference sound level of 67 dBA.[133]
- Air conditioners would be on the ground, within 10 feet of a reflective surface.

Because air conditioning units would run 24 hours a day, the CNEL noise metric was used to account for the greater perceived noise impact during normal sleeping hours. Table 4.1-1 shows how the estimated noise exposure decreases with distance from the noise source.

Table 4.1-1
Noise Exposure from Air Conditioner as a Function of Receiver Distance

Distance (feet)	Equipment in Cabinets	
	Exposure (dBA L_{eq})	Exposure (dBA CNEL)
4	57.5	70.2
5	55.5	68.2
6	54.0	66.7
7	52.5	65.2
8	51.5	64.2
9	50.5	63.2
10	49.5	62.2
15	46.0	58.7
20	43.5	56.2
25	41.5	54.2
30	40.0	52.7
40	37.5	50.2
50	36.0	48.7
60	34.0	46.7
70	32.5	45.2
80	31.5	44.2
90	30.5	43.2
100	29.5	42.2
125	27.5	40.2
150	26.0	38.7
175	24.5	37.2
200	23.5	36.2
400	17.5	30.2

Source: Calculated by UltraSystems.

Table 4.1-1 shows that, even without any mitigation measures, beyond about 15 feet, the CNEL value is below 60 dBA, which is considered "normally acceptable" for outdoor residential exposure. (See Table 3.1-2.) Therefore, there would be no significant direct impacts from noise as a result of project activities, and no significant indirect impacts have been identified.

[133] The ARI noise rating for the air conditioners serving outdoor communications equipment housing will be 70 dBA.

Indirect Impacts

No significant indirect noise impacts would result from operation of LTE sites.

In conclusion, there would be no significant long-term direct impacts from noise as a result of project activities, and no significant indirect impacts have been identified.

4.1.2 No Action Alternative

Under the No Action Alternative, all LTE sites would remain in their current state, and no telecommunication infrastructure or related facilities would be installed. There would be no project-related construction activity at any of the sites, hence no noise exposures from construction equipment, worker commuting vehicles or material transport trucks. In conclusion, no significant noise impacts (direct or indirect) would be associated with the No Action Alternative.

4.2 Air Quality and Greenhouse Gases

This section evaluates air pollutant and GHG emissions that would result from implementing the Proposed Action. Specific topics include emissions from construction, a localized construction impact analysis, and emissions from LTE system operation.

4.2.1 Proposed Action

A. Short-Term (Construction Impact)

Direct Impacts

During construction, air pollutants enter the atmosphere in three ways: combustion of diesel fuel by construction equipment, combustion of gasoline and diesel fuel by construction worker commuting vehicles and material transport trucks, and entrainment of dust from demolition activities and from soil disturbance. Diesel engine exhaust contains nitrogen oxides from the high-temperature reaction of oxygen and nitrogen in the combustion air. The exhaust also contains many gaseous products of incomplete combustion of the fuel, including unburned hydrocarbons, carbon monoxide, and a variety of organic compounds, such as formaldehyde and benzene. Perhaps most important from a human health perspective, diesel exhaust contains many tiny particles collectively known as diesel particulate matter (DPM). DPM is associated with elevated cancer risk. Finally, complete combustion of diesel fuel results in formation of carbon dioxide, a greenhouse gas. Small amounts of the GHGs methane and nitrous oxide are also generated. Emissions from construction worker commuting vehicles (mainly automobiles and light-duty trucks) contain mainly the same types of pollutants as those from diesel vehicles, without the DPM.

During demolition, small pieces of broken material become dust particles in the air. In addition, activities such as excavation or passage of motor vehicles over unpaved areas release dust particles to the air. The larger dust particles rapidly settle out. The lighter particles remain suspended in the air and are available to be inhaled. Finally, dust particles that have fallen to the ground can become airborne anew when wind blows across disturbed soil surfaces or soil storage piles.

To estimate emissions from construction of the LTE sites, a construction scenario for a generic site with maximum activity levels was defined. This scenario consisted of the following construction activities that may generate air emissions:

- Demolition of existing pavement and structures.
- Preparation (through cuts and fills) of the area where the monopole, equipment shelters, and emergency generator will be installed.
- Excavation for the monopole's foundation.
- Concrete pad construction.
- Monopole erection and antenna equipment installation.

- Installation of cabinets, emergency generator and other ground-based equipment.

Methods for estimating emissions from construction at the generic site are described in Appendix D.1. Various assumptions about the types of equipment used and their deployment schedules were used in conjunction with the California Emissions Estimator Model (CalEEMod®), a widely used emissions estimation model that was developed for the California Air Pollution Control Officers Association (CAPCOA), and applicable statewide (EIC, 2013a, 2013b).

Modeling results were compared with the SCAQMD and AVAQMD significance thresholds for regional impacts, which were presented in Section 3.2.2. Fifteen of the proposed LTE sites are located in the jurisdiction of the AVAQMD, and the remaining 216 are in the jurisdiction of the SCAQMD.

CalEEMod runs indicated that daily and annual construction emissions for a single site would be below the significance thresholds of both agencies. Tables 4.2-1 and 4.2-2 show the estimated maximum daily[134] construction emissions for a typical site in the jurisdiction of SCAQMD and AVAQMD, respectively. The criteria pollutant whose emissions came closest to its respective significance threshold was NO_x. Because multiple sites would be constructed simultaneously, the analysis also estimated the number of sites that could be constructed simultaneously while staying below the SCAQMD and AVAQMD daily thresholds. (See Appendix D.1.)

Table 4.2-1
Construction Emissions Per Site within the South Coast Air Quality Management District

	Maximum Daily Emissions (lbs/day)				
	ROG	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Unmitigated Emissions	0.71	6.6	3.7	0.38	0.29
Mitigated Emissions	0.60	5.9	3.8	0.27	0.21
SCAQMD Threshold	*75*	*100*	*550*	*150*	*55*

Source: CalEEMod Version 2013.2.1

[134] Annual emissions were not estimated in Table 4.2-1 because the SCAQMD's thresholds are only for daily emissions.

Table 4.2-2
Construction Emissions Per Site within the Antelope Valley Air Quality Management District

	Maximum Daily Emissions (lbs/day)					Maximum Annual Emissions (tons/year)				
	ROG	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Unmitigated Emissions	0.71	6.6	4.0	0.38	0.29	0.02	0.20	0.11	0.01	0.009
AVAQMD Threshold	*137*	*137*	*548*	*82*	*82*	*25*	*25*	*100*	*15*	*15*

Source: CalEEMod Version 2013.2.1

Examination of a large number of simulated construction scenarios concluded that all 216 LTE sites in the SCAB could be built in approximately 177 calendar days (assuming construction takes place seven days per week) without exceeding the SCAQMD daily NO_x threshold.[135] Up to 15 sites could be started on a single day, and up to 48 sites could be under construction simultaneously. No mitigation measures would be necessary to achieve this schedule.

Annual emissions for sites in the jurisdiction of the AVAQMD (in the Antelope Valley portion of the Mojave Desert Air Basin) were calculated with the assumption that seven of the 15 sites within the AVAQMD would be constructed in 2014 and eight would be built in 2015. The analysis also determined that all 15 sites within the AVAQMD could be constructed simultaneously without exceeding the AVAQMD daily NO_x threshold.

Although the simultaneous construction of sites described above would not exceed daily NO_x thresholds, the analysis acknowledges the uncertainties inherent in construction schedules, which might require more simultaneous site construction than described above to meet the BTOP grant funding deadlines. Therefore, the analysis examined construction schedules in which NO_x emissions were mitigated with a requirement that some onsite construction equipment have engines that comply with EPA Tier 4 emission limits. (See AIR MM-1, below.) Tier 4 emission factors were obtained from the CalEEMod documentation. Table 4.2-1 shows maximum daily mitigated emissions. With this mitigation measure, all 216 sites in the SCAB could be built in approximately 131 calendar days. Up to 15 sites could be started on a single day, and up to 57 sites could be under construction simultaneously. AIR MM-1 would only be necessary in the event that more simultaneous site construction than was assumed in the first construction scenario above is needed to meet the BTOP grant funding deadlines.

Finally, the issue of exposure of sensitive receptors in the SCAQMD to construction emissions was addressed.[136] (Because the AVAQMD has not developed a similar evaluation procedure, a localized significance analysis was not performed for sites in that jurisdiction.) The nearest sensitive receptors to all the LTE sites are identified in the site data sheets in Appendix B. The localized significance analysis evaluated all 15 source-receptor areas (SRAs) within which LA-RICS LTE sites would be located. These SRAs are 1 (Central Los Angeles), 2 (Northwest Coastal), 3 (Southwest

135 Detailed results of the construction scheduling analysis are in Section D.1 of Appendix D.

136 For its review of proposed projects, the South Coast Air Quality Management District requests (but does not require) a localized significance analysis of construction emissions.

Coastal), 4 (South Coastal), 5 (Southeast), 6 (West San Fernando Valley), 7 (East San Fernando Valley), 8 (West San Gabriel Valley), 9 (East San Gabriel Valley), 10 (Pomona – Walnut Valley), 11 (South San Gabriel Valley), 12 (South Central Los Angeles), 13 (Upper Santa Clara River Valley), 15 (ANF), and 16 (Northern Orange County). Emissions would not exceed the District's SRA-specific thresholds at any of the 216 sites located in the SCAQMD.

As discussed in Section 4.2.1A, diesel construction equipment would emit diesel particulate matter (DPM), a carcinogen. However, exposure of sensitive receptors would be short-term, so that the average annual exposure over the 70-year lifetime normally used in air toxics health risk assessments would be minor, and there would be no significant impact.

In conclusion, no significant short-term, direct impacts to regional air quality in the South Coast Air Basin are expected. In addition, there would be no significant direct impacts to short-term regional air quality in the MDAB.

Indirect Impacts

Construction of the LTE sites would not induce population and/or housing growth or increase traffic other than that related to construction. The activity would not be an indirect emission source. Therefore, no significant indirect air quality impacts would result from construction of LTE sites.

B. Long-Term (Operational)

Direct Impacts

Vehicles used for transporting personnel for routine maintenance of the LTE equipment would emit criteria pollutants and greenhouse gases. The method for estimating emissions from these vehicles is described in Appendix D.3.1. It was conservatively assumed that maintenance would be required twice a year such that maintenance for all 231 sites would be divided evenly among 12 months of a given year.

In addition, emergency generator testing would result in the same types of pollutants as discussed above for diesel construction equipment. It was assumed that the emergency generator would be tested for one hour each month at each site. It was also assumed that test days would be distributed evenly during the month, so that about eight sites would be tested on any given day. The method for estimating diesel emergency generator emissions is presented in Appendix D.3.2.

Table 4.2-3 shows that the total daily operational emissions from maintenance vehicles and emergency generator testing will not exceed the SCAQMD's operational emission thresholds.

Table 4.2-3
Total Operational Emissions for 216 Sites within the SCAQMD

	Maximum Daily Emissions (lbs)				
	ROG	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Daily Maintenance Emissions	0.23	0.69	5.7	0.01	0.01
Generator Testing Emissions	0.49	1.8	1.7	0.14[137]	0.14
Total Daily Emissions	0.72	2.5	7.4	0.15	0.15
Threshold (lbs/day)	55	55	550	150	55
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2013.2.1 and UltraSystems.

Table 4.2-4 shows that the total operational emissions from maintenance vehicles and emergency generator testing in the 15 sites within the AVAQMD will not exceed the AVAQMD operational emission thresholds for either daily emissions or annual emissions.

Table 4.2-4
Total Operational Emissions for 15 Sites within the AVAQMD

Category	Maximum Daily Emissions (lbs)					Maximum Annual Emissions (tons)				
	ROG	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**ROG**	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Daily Maintenance Emissions	0.02	0.05	0.40	0	0					
Generator Testing Emissions	0.07	0.26	0.25	0.02	0.02					
Total Daily Emissions	0.09	0.31	0.65	0.02	0.02					
Daily Threshold (lb/day)	137	137	548	82	82					
Exceeds Daily Threshold?	**No**	**No**	**No**	**No**	**No**					
Annual Maintenance Emissions						<0.01	<0.01	<0.01	<0.01	<0.01
Annual Generator Emissions						<0.01	0.02	0.02	<0.01	<0.01
Total Annual Emissions (tons)						<0.01	0.02	0.02	<0.01	<0.01

[137] The SCAQMD emission factor is stated only as "PM." For this analysis, all PM was assumed to be $PM_{2.5}$, so it also, by definition, PM_{10}.

Table 4.2-4 (continued)
Total Operational Emissions for 15 Sites within the AVAQMD

Category	Maximum Daily Emissions (lbs)					Maximum Annual Emissions (tons)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Annual Threshold (tons)						25	25	100	15	15
Exceeds Annual Threshold?						**No**	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2013.2.1 and UltraSystems.

For both air quality management districts, annual emissions would be below the thresholds for a federal general conformity determination (see Table 3.2-2). Therefore, a general conformity determination is not required for this project.

Finally, annual average DPM exposure over the 70-year lifetime assumed for air toxics health risk assessments would be negligible, and there would be no significant health impact from diesel generator operation.

Indirect Impacts

Operation of the LTE sites would not induce population and/or housing growth or increase traffic other than that related to construction. The activity would not be an indirect emission source. Therefore, no significant indirect air quality impact would result from construction of LTE sites.

C. Greenhouse Gas Emissions

Methods for estimating greenhouse gas emissions from the proposed project are presented in Appendix D.4. The analysis included GHG emissions from off-road construction equipment and on-road vehicles used to transport construction workers. Construction emissions were amortized throughout the life of the project (assumed to be 30 years).[138] GHG emissions from motor vehicle traffic for site maintenance and from monthly generator testing were also calculated. Finally, indirect greenhouse gas emissions such as those from electricity consumption were included in the analysis.

Table 4.2-5 shows the combined annual GHG emissions from all 231 sites throughout the life of the project (assumed to be 30 years). The values in Table 4.2-5 include emissions from construction, amortized over 30 years; from biannual maintenance vehicle trips, from emergency generator testing, and from indirect communication tower electricity use per year. GHG emissions within the SCAQMD and the AVAQMD were combined because climate change is a global phenomenon.

[138] Amortization over 30 years is suggested by the South Coast Air Quality Management District in its draft guidance for CEQA analysis of GHG emissions (Smith and Krause, 2008).

Table 4.2-5
Total GHG Emissions (231 Sites Combined) Through Life of Project

GHG Emission Source	Annual Emissions (metric tons)
Construction (Amortized Over 30 Years)	7720
Routine Maintenance	10
Generator Testing	39
Indirect (Electricity Generation)	14,088
Total	**14,157**

Source: CalEEMod Version 2013.2.1 and UltraSystems

Total annual GHG emissions from the proposed project are estimated to be 14,157 metric tons per year. As discussed in Section 3.2.2-E, NTIA's *Environmental Assessment Guidance for BTOP Award Recipients* (USDOC, 2010) acknowledges CEQ's "presumptive effects threshold of 25,000 metric tons of CO_2 equivalent emissions" for when federal agencies should consider GHG emissions and climate change in NEPA.[139] There would be no significant impact to climate change resulting from the Proposed Action through the release of greenhouse gases.

D. Mitigation Measures

AIR MM 1: (1) At the beginning of each week of construction, the contractor will, for each day of the week, project the types and numbers of pieces of onsite construction equipment that will operate at all LTE project sites within the SCAB; (2) At the beginning of each week, the contractor will estimate the combined total of NO_x emissions from all construction activities at all LTE project sites in the SCAB, for each day of the week, and verify that the total does not exceed 100 pounds; (3) On every day for which combined NO_x emissions are forecast to exceed 100 pounds, the contractor will substitute equipment with Tier 4 engines for all types of offroad equipment to which Environmental Protection Agency regulations apply, or otherwise limit construction activity to the extent necessary to reduce daily basinwide NO_x emissions to 100 pounds.

4.2.2 No Action Alternative

Under the No Action Alternative, all LTE sites would remain in their current state, and no telecommunication infrastructure or related facilities would be installed. There would be no project-related construction activity at any of the sites, hence no air pollutant emissions from diesel construction equipment, worker commuting vehicles or material transport trucks; or from soil disturbance. There would be no need for mitigation measures to ensure that emission thresholds are not exceeded. Because no new diesel generators would be installed under the No Action Alternative, there would be no increase in diesel combustion emissions from those sources. Without the Proposed Action's new equipment, there would be no routine maintenance visits, hence no emissions from vehicles transporting maintenance personnel. In conclusion, no significant impact (direct or indirect) to air quality and climate would be associated with the No Action Alternative.

[139] USDOC (2010), p.10.

4.3 Geology and Soils

This section analyzes direct and indirect impacts from seismic hazards and erosion associated with the Proposed Action and the No Action Alternative.

4.3.1 Proposed Action

A. Direct and Indirect Impacts

Seismic Hazards

For every LTE site, site-specific geotechnical studies and evaluations would be conducted and construction activities would be performed in accordance with applicable federal, state and county requirements, codes and permit conditions to avoid or minimize impacts. Impacts may include structural damage to equipment, buildings and monopoles, and disruption of LTE function. Four LTE sites (LACF004, LACF140, LACOLV, and REH) are within an Alquist-Priolo Earthquake Fault Zone. Implementation of the LTE system at these four sites, despite their location within the Alquist-Priolo Earthquake Fault Zone, is necessary to provide coverage for the Authority's service area (i.e., Los Angeles County) and because other potential nearby sites would not meet the criteria for site selection described in Chapter 1. These sites are listed in Table 3.3-1, and shown in Figure 3.3-1.

Compliance with Los Angeles County building code standards and permit requirements[140] would ensure that these LTE facilities are constructed to avoid hazards from surface rupture. For these reasons, and with implementation of Mitigation Measures GEO MM 4.3-1 and GEO MM 4.3-2, no significant impacts (direct or indirect) due to seismic hazards are anticipated.

B. Soil Erosion

Implementation of the Proposed Action would result in short-term disturbance to soils within LTE sites. The primary disturbance to undisturbed native soil profiles would be from operation of augers and other construction equipment for monopole installation. Excavation of up to 80 cubic yards of earth would be necessary to construct each new monopole foundation and provide for ancillary components. Erosion of soils would be minimized or avoided during and after construction through implementation of erosion, sediment, tracking, wind erosion, non-stormwater management, and waste management and material pollution BMPs. No significant impacts (direct or indirect) to soils and from soil erosion would be anticipated because soils would be contained or stabilized during and after construction using established BMPs.

C. Mitigation Measures

GEO MM 1: Site-specific seismic impacts at LTE sites shall be evaluated by a thorough geotechnical investigation in order to design structures that would reduce the risk of loss, injury or death to a minimal level. A geotechnical report shall be

[140] Title 26, Los Angeles County Building Code, http://library.municode.com/index.aspx?clientId=16274. Accessed January 2014

prepared according to the California Building Code (24 CCR 1802.8) to "provide completed evaluations of the foundation conditions of the site and the potential geologic/seismic hazards affecting the site. The geotechnical report shall include, but shall not be limited to, site-specific evaluations of design criteria related to the nature and extent of foundation materials, groundwater conditions, liquefaction potential, settlement potential and slope stability. The report shall contain the results of the analysis of problem areas identified in the engineering geologic report. The geotechnical report shall incorporate estimates of the characteristics of site ground motion provided in the engineering geologic report.

The geotechnical report shall be prepared by a geotechnical engineer registered in the state of California with the advice of the certified engineering geologist and other technical experts, as necessary."[141] The approved engineering geologic report shall be submitted to LARICS with or as part of the geotechnical report.

GEO MM 2: Final design of structures, including seismic safety design, shall be developed using feasible and effective engineering methods, and shall include design criteria specified or recommended in the geotechnical report prior to approval or issuance of construction permits.

4.3.2 No Action Alternative

Under the No Action Alternative, no LTE sites would be constructed and no new equipment would be installed. No new activity would occur within or near Alquist-Priolo Earthquake Fault Zones. No activities that would cause soil erosion would occur. For these reasons, no significant impacts (direct or indirect) to geologic features or soils would occur.

[141] 24 CCR 1802.8.1

4.4 Water Resources

This section evaluates direct and indirect impacts to water resources associated with implementation of the Proposed Action and the No Action Alternative.

4.4.1 Proposed Action

A. Surface Water

Construction

Potential mechanisms for surface water discharges and contamination by project construction under the Proposed Action Alternative include:

- Ground disturbance that may result in soil erosion during precipitation events, and entrainment of sediment in storm water runoff.
- Surface discharge of groundwater from dewatering during excavation at LTE sites where the groundwater table is higher than the lowest elevation of excavation.
- Damage to existing underground pipelines and storage tanks during excavation.
- Contamination of storm water runoff from leaks or spills of commonly used lubricants, coolant, and similar fluids found in construction equipment and around construction sites.

No significant impacts (direct or indirect) from storm water and non-storm water discharges from LTE sites during construction would occur because:

- Proposed LTE site construction would occur on previously disturbed ground, and soil disturbance, if any, would be less than 0.08 acre.
- Excavated earth would be used as backfill or exported to sites that require import of earth.
- Waste materials including soil, asphalt and concrete would be disposed at a facility licensed to accept such waste.
- Underground utility locating surveys would be completed to identify and avoid underground pipelines and tanks prior to ground disturbance during construction
- BMPs would be implemented to control sediment and pollutants in storm water and non-storm water runoff associated with construction according to protocols established by the California Stormwater Quality Association (CASQA)[142], or policies of the federal land managing agencies for sites on federal lands.
- There would be no significant impacts to surface water bodies by dredge and fill operations because these operations are not needed to construct or operate LTE sites.

[142] CASQA, July 2012, Stormwater Best Management Practice Handbook Portal: Construction: California Stormwater Quality Association: www.CASQS.org.

Operation

Potential mechanisms for surface water discharges and contamination during project operation under the Proposed Action Alternative include contamination of storm water runoff by leaking fuel storage tanks for the emergency generator. No significant impacts (direct or indirect) from storm water and non-storm water discharges from LTE sites during operation would occur because the tank design would meet or exceed industry standards[143] for leakage prevention for aboveground tanks for flammable and combustible liquids.

There would be no significant impact on Piru Creek, a wild and scenic river, because the nearest LTE site is in a separate watershed more than seven miles away.

B. Groundwater

If dewatering is required during soil excavation, the construction contractor would need to obtain an NPDES permit from jurisdictional RWQCBs for surface discharge of groundwater.

There would be no significant impacts to local groundwater resources because temporary dewatering would only reduce the groundwater table to the depth of trench excavations. No significant impact to regional groundwater aquifers or resources from this slight decrease in local groundwater levels would occur. With implementation of the requirements included in Section 3.11.1.A, impacts to groundwater from contamination releases during construction, if any, would not be significant.

C. Floodplains

Ten sites would be located either wholly or partially in a FEMA Flood Zone A (100-year floodplain), as determined by the most recent flood insurance rate maps (FIRMs) and pertinent letters of map revision (LOMRs) or letters of map change (LOMCs). The LTE design at these locations would comply with applicable municipal flood hazard ordinances. For each LTE site determined to be in Flood Zone A, the base flood elevation (BFE) or the sheet flow depth for the site would be determined during system design. If BFE data are not available for a particular LTE site, then the BFE at the site would be estimated using the methods prescribed in FEMA Publication 265, *Managing Floodplain Development in Approximate Zone A Areas - A Guide for Obtaining and Developing Base (100-Year) Flood Elevations,* or equivalent methods. Structures that could potentially be damaged by floodwaters would be constructed with finished floor (at the top of concrete pad) 12 inches above the BFE or elevations required by local flood control regulations, whichever is higher.

The 10 LTE sites within Flood Zone A are within six local jurisdictions, which have municipal codes that govern construction in a flood hazard zone. Requirements for construction vary among cities and depend on the classification of the construction (i.e., whether it is new construction, substantial improvement, etc.). The following are the major relevant local code provisions:

[143] National Fire Protection Association (NFPA) Code 30: Flammable and Combustible Liquid. http://www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=30

- **City of Hermosa Beach**:[144] § 8.52.160, Standards for Construction, specifies design requirements; § 8.52.120, Flood Damage Prevention Permit, requires a flood damage prevention permit.

- **City of Long Beach**:[145] § 18.73.230, City of Long Beach Municipal Code: Title 18: Buildings and Construction, Chapter 18.73: Flood Resistant Design and Construction, 18.73.230: Standards of Construction

- **City of Los Angeles**:[146] § 5, Section 5 of Ordinance 170281, which amends the Specific Plan for the Management of Flood Zones

- **City of Malibu**:[147] § 15.20, Malibu Municipal Code: Title 15: Buildings and Construction, 15.20: Floodplain Management

- **City of Santa Clarita**:[148] § 10.06.050, Provisions for Flood Hazard Reduction, contains standards for construction in special flood hazard zones.[149]

- **Los Angeles** County:150 § 22.44.220, Los Angeles County, California, Code of Ordinances: Title 22: Planning and Zoning, Division 1: Planning and Zoning, Chapter 22.44: Part 4: Flood Protection Districts, 22.44.220: Building Restrictions

With adherence to these local codes, no significant direct impacts *to the 10 facilities* of siting them in Flood Zone A would occur. For the 221 sites outside Flood Zone A, there would be no significant flooding impacts to or from the facilities. No significant indirect impacts to any of the facilities are anticipated.

There would be no significant impacts to the ecosystem services provided by the floodplains in which proposed LTE sites would be located. All ten sites are already paved or have disturbed surfaces that prevent floodwater storage. The proposed LTE sites would not change the impermeable surface area and thus would not change the floodwater storage characteristics. No natural vegetation would be permanently removed from any of the ten sites; hence floodwater storage would not be reduced, and floodwaters would not damage existing ecosystems because of the project. As discussed above, structures that could potentially interfere with floodwaters would be constructed with finished floor (at the top of concrete pad) 12 inches above the BFE or elevations required by local flood control regulations, whichever is higher. The project would therefore have no significant impact upon floodwater flows. The project would introduce a new

144 City of Hermosa Beach Municipal Code. http://www.hermosabch.org/index.aspx?page=411#020. Accessed January 16, 2014.

145 Long Beach Municipal Code. http://library.municode.com/index.aspx?clientId=16115. Accessed February 18, 2014.

146 City of Los Angeles Ordinance No. 172081, An Ordinance amending the Specific Plan for the Management of Flood Hazards established by Ordinance No. 154,405 and amended by Ordinance No. 163,913. http://eng.lacity.org/projects/fmp/pdf/ORD_172081.pdf. Accessed January 16, 2014.

147 Malibu Municipal Code. http://qcode.us/codes/malibu/view.php?cite=section_15.20. Accessed February 18, 2014.

148 City of Santa Clarita Municipal Code. http://www.codepublishing.com/CA/SantaClarita/html/SantaClarita10/SantaClarita1006.html#10.06.050. Accessed February 18, 2014.

149 Revisions to § 10.06.050 have been proposed but have not yet been adopted. The revisions are at http://www.santa-clarita.com/Modules/ShowDocument.aspx?documentID=7308. Accessed January 17, 2014.

150 Los Angeles County, California, Code of Ordinances. https://library.municode.com/index.aspx?clientId=16274. Accessed February 18, 2014.

potential source of contamination of surface water during floods: diesel fuel leaking from emergency generator fuel storage tanks. However, the tanks and their supporting pads would be placed above the BFE and thus not come into contact with floodwaters. The risk from contamination during flooding would therefore be minimal. No significant direct or indirect impacts of the facility on floodplain resources are anticipated.

4.4.2 No Action Alternative

Under the No Action Alternative, no new LTE monopoles would be constructed and no new equipment would be installed. No additional water pollutants would be generated or released. No excavation would occur and, therefore, shallow groundwater would not be encountered. No LTE sites would be placed in Flood Zone A. For these reasons, there would be no significant direct or indirect impacts on surface water or groundwater resources, or water quality.

4.5 Biological Resources

This section focuses on the impacts associated with implementation of the Proposed Action and the No Action Alternative on biological resources. The resources analyzed include vegetation, wildlife, special status species, and sensitive habitats that occur within the BSA identified in Section 3.5.

4.5.1 Proposed Action

No significant impacts (direct or indirect) to biological resources would occur at any of the 231 proposed LTE sites as a result of implementation of the Proposed Action. This is largely a function of the early project planning and design process to preclude any potentially significant impacts, in order to meet the criteria for environmental protection identified in the CEQA statutory exemption discussed in Section 3.5. These criteria include prohibition of significant impacts on wetlands, riparian areas, or habitat of significant value. Additionally, the exemption requires that project implementation not harm any species protected by the ESA, the NPPA, the CESA, or habitat of species protected by these laws. In order to meet these requirements and prevent potential impacts, two major steps were taken.

- Site selection avoided, among other environmental concerns, locating LTE sites in areas where proposed project activities could result in potentially significant impacts to biological resources. Only sites with sufficient human-altered available lands (i.e., those sites with sufficient urban developed, ornamental landscaped, and ruderal habitats) were considered for inclusion in the proposed project.

- A set of CMRs was developed and embedded into the contract between the Authority and the construction contractor to further preclude or otherwise avoid potentially significant impacts to biological and other resources. These CMRs are integral to the project, must be incorporated into the detailed project design, and are enforceable by the Authority through the contract provisions.

- To meet the criteria for the statutory CEQA exemption, the CMRs ensure that the project, as designed, has no potential for any impacts to wetlands, riparian areas, or habitat of significant value, and no potential for harm to any species protected by the ESA, the NPPA, the CESA, or habitat of species protected by these laws.

Minimization or the elimination of impacts to biological resources is accomplished by applying one or more of the CMRs as provided in the construction contract. A copy of the CMRs employed at the individual LTE sites is included in Appendix A.

A. Vegetation

This section discusses potential effects to vegetation (discussed in terms of land cover) and potential impacts from the introduction or the spread of noxious weeds.

As discussed above, the site selection process avoided locations where proposed project activities could have significant impacts on biological resources. Further, because of the Proposed Action site selection process, and project CMRs, only existing human-altered areas would be available for use as a work area in construction. In addition, several CMRs were specifically designed to prevent or

eliminate impacts such as direct mortality or damage to plants, or disturbance of substrate supporting vegetation at work areas during and after the construction of the 231 LTE sites. The project CMRs designed to prevent impacts to vegetation are listed below. The full text of the CMRs are included in Appendix A.

- BIO CMR 6 Construction Monitoring
- BIO CMR 9 Establish Habitat Protection Zones
- BIO CMR 10 Protect Native Vegetation
- BIO CMR 17 Wetlands and Other Waters
- BIO CMR 18 Hazardous Substance Management

While total ground disturbance associated with the Proposed Action is anticipated to be approximately 19 acres, with implementation of the CMRs there would be no significant impacts to native habitat areas. Additionally, there would be no significant impacts to any areas outside pre-designated work areas, or to areas outside of the LTE site boundary (i.e., the FSA). An analysis of impacts to vegetation (land cover) associated with the Proposed Action is presented in Table 4.5-1. Overall, there would be no significant impacts (direct or indirect) to vegetation and general habitat.

Table 4.5-1
Vegetation (Cover Types) Impacted by the Proposed Action (Combined 231 Sites)

Vegetation or Land Cover Type	Total Area Within LTE Site (Acres)	Total Cover Impacted (Acres)
Chamise Chaparral	7	-
Coast Live Oak Woodland	7	-
Coast Live Oak Woodland (disturbed)	<0.5	-
Coastal Sage Scrub	<0.5	-
Coastal Sage Scrub (disturbed)	4	-
Ephemeral Stream	<0.5	-
Mojave Creosote Bush Scrub	<0.5	-
Non-native Grassland	14	-
Non-vegetated Streams and Canals	<0.5	-
Open Water Marine	-	-
Rabbitbrush Scrub	1	-
Riversidean Alluvial Fan Sage Scrub	<0.5	-
Scrub Oak Chaparral	<0.5	-
Southern Mixed Chaparral	1	-

Table 4.5-1 (continued)
Vegetation (Cover Types) Impacted by the Proposed Action (Combined 231 Sites)

Vegetation or Land Cover Type	Total Area Within LTE Site (Acres)	Total Cover Impacted (Acres)
Urban or Built-up Land/Ornamental/Ruderal	658	19
Total Acres	**696**	**19***
KEY LTE = long term evolution		

*Total area impacted is estimated as 3,600 ft² X 231 sites.

Operations activities associated with the Proposed Action would only require use of existing developed areas for occasional repair and maintenance activities. No significant direct impacts to vegetation would result from these activities.

Potential introduction of weeds is discussed in Section 4.5.1B.

B. Noxious Species (Weeds)

Currently, invasive plant species exist within and adjacent to work areas throughout many of the 231 LTE sites. Invasive weed species are typically found within patches of native plant communities, and in areas that have been disturbed from human activities, including along the edges of developed sites and ornamental or landscaped areas.

Whenever a construction project occurs, there is potential for weed infestations to occur in areas where the soil has been disturbed. Grading or other disturbance that exposes soil may create suitable conditions for invasive species. Weed infestations in disturbed and ornamental habitats may spread to natural vegetation communities where they may out-compete native species, altering vegetation patterns, fire regimes, and use by wildlife.

CMRs have been developed to minimize or greatly reduce the advancement of noxious species. These CMRs require specific efforts and actions by contractors and construction teams to minimize and contain noxious weeds. The full text of the CMRs are included in Appendix A.

As part of the Proposed Action, these CMRs require substantial measures to avoid the introduction and spread of weeds. As a result, no direct significant impacts from introduction or spread of noxious species would occur. Post-construction weed surveys and eradication efforts through BIO CMR 12 would ensure that no significant indirect impacts would occur.

Operations associated with the Proposed Action would only require use of existing developed areas for occasional repair and maintenance activities. No significant weed-related impacts (direct or indirect) from these activities would occur.

C. Wildlife

This section discusses effects to wildlife, which includes invertebrates, fish, amphibians and reptiles, birds, and mammals.

Project design employed substantial measures early in the planning process to select sites to avoid significant impacts to wildlife, and habitat, and to develop CMRs to further avoid significant impacts and to protect biological resources. The site selection process located LTE sites on existing facilities, previously disturbed areas and locations where habitat was determined to be of marginal or no value to wildlife. Further, CMRs, discussed above in Section 4.5.1A, provide additional protection, and it is anticipated that there would be no loss of habitat for wildlife under the Proposed Action. However, no significant direct effects to common wildlife would be expected with project implementation. These effects would most likely result from temporary human activity adjacent to habitat areas, resulting in temporary minor increases in dust and noise. During specific periods of the year, particularly at times of breeding and nesting activity, there is a potential for these effects to become more amplified. For example, noise could potentially drive off adult nesting birds prior to the fledging of the young from the nest. While there is a potential for mortality of small mammals and other species that might hide in undetected burrows within unvegetated or ruderal areas, this would likely be a rare occurrence, as most species would prefer higher value habitat and thus would not be expected to occur in these highly altered areas.

In an effort to further reduce these effects, specific CMRs were designed and incorporated into the proposed project to preclude potentially significant impacts to wildlife. CMRs require contractors to take specific avoidance measures if the construction occurs during nesting, or other sensitive seasons. In this event, requirements are designed to avoid impacts to and maximize protection of the species with preconstruction surveys, delineated no-work zones, and an authority vested in the monitor to stop work if necessary. The CMRs also require the contractor to schedule construction outside of nesting or other sensitive seasons to the extent feasible.

The CMRs designed for the protection of all wildlife are listed below, and are intended to supplement the CMRs identified for protection of vegetation (habitat) identified in Section 4.5.1A, Vegetation. Some non-special status species, including burrowing owl and monarch butterfly, were identified for specific protection through employment of CMRs, and are discussed in this section. The several CMRs intended to prevent impacts to special status wildlife species are discussed in Section 4.5.1D, Special status Species. Given these strenuous measures, no direct significant impacts to wildlife are expected.

BIO CMR 1 Pre-Construction Survey for Nesting Birds

- BIO CMR 3 Burrowing Owl
- BIO CMR 5 Pre-Construction Surveys and Avoidance Measures for Bats
- BIO CMR 6 Construction Monitoring
- BIO CMR 7 Non-listed Amphibians, Reptiles, and Small Mammals
- BIO CMR 8 Open Trenches and Ditches

The full text of these CMRs are included in Appendix A. No significant indirect impacts to wildlife associated with construction or operations associated with the Proposed Action would occur.

D. Special Status Species

This section discusses potential impacts to sensitive species that are protected under ESA, BGEPA, MMPA, FSS, BLMS, and to state-regulated species.

Federal Endangered Species Act

Impacts to species listed under the ESA are presented in Table 4.5-2. For purposes of clarity, the terminology associated with the ESA is used in the table to classify effect. Under ESA, a no effect would equate to no effect or impact under NEPA. A "not likely to adversely affect" finding under ESA would equate to a finding of no impact under NEPA. No findings of "likely to adversely affect," not likely to jeopardize", or "likely to jeopardize" were made.

Table 4.5-2
Impact Analysis Summary for ESA-Listed Species

Common Name *Scientific Name*	ESA Status	Applicable Site(s)	SOP	Effects (ESA)	Rationale for Effects Determination
Plants					
Santa Monica Mountains liveforever *Dudleya cymosa* ssp. *ovatifolia*	FT	LACF069	M	NE	Impacts would be similar to general plant impacts described in Section 4.5.1A. CMRs identified in Section 4.5.1A would preclude significant impacts to this species.
Braunton's milk-vetch *Astragalus brauntonii*	FE	CULV01	L	NE	Impacts would be similar to general plant impacts described in Section 4.5.1A. CMRs identified in Section 4.5.1A would preclude significant impacts to this species.
		LACF068	M		
		LAFD097	L		
Lyon's pentachaeta *Pentachaeta lyonii*	FE CH	LACF065	M	NE	Impacts would be similar to general plant impacts described in Section 4.5.1A. CMRs identified in Section 4.5.1A would preclude significant impacts to this species.
		LACF083	L		
Marcescent dudleya *Dudleya cymosa* ssp. *marcescens*	FT	LACF069	H	NE	Impacts would be similar to general plant impacts described in Section 4.5.1A. CMRs identified in Section 4.5.1A would preclude significant impacts to this species.

Table 4.5-2 (continued)
Impact Analysis Summary for ESA-listed Species

Common Name *Scientific Name*	ESA Status	Applicable Site(s)	SOP	Effects (ESA)	Rationale for Effects Determination
Plants					
Nevin's barberry *Berberis nevinii*	FE	CLM	L	NE	Impacts would be similar to general plant impacts described in Section 4.5.1A. CMRs identified in Section 4.5.1A would preclude significant impacts to this species.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	FC	BUR LACFCP09	NA	NE	There would be no significant impacts to the species because it is presumed to be absent from ANF sites.
		LACF078	M	NE	Impacts at LACF078 would be similar to general plant impacts described in Section 4.5.1A. CMRs identified in Section 4.5.1A would preclude significant impacts to this species at this site.
Invertebrates					
Palos Verdes blue butterfly *Glaucopsyche lygdamus palosverdensis*	FE	LACF053	L	NL	Individual Palos Verdes blue butterflies may pass through the site during construction. However, no significant impacts on the species would occur. For host plants, including deerweed and rattlepod, impacts would be similar to general plant impacts described in Section 4.5.1A. CMRs identified in Section 4.5.1A would result in no significant impacts to this species.
		LACF056	H		
		LACF083	L		
		LACF106	L		
		TORFD04	L		
Fishes					
Steelhead trout (NMFS) *Oncorhynchus mykiss*	FE	LACF069	H	NE	Impacts to the species are not expected. The measures identified in Section 4.5.1, would prevent occurrence of any significant impacts.
Unarmored threespine stickleback** *Gasterosterus aculeatus williamsoni*	FE	LACFCP14	L	NE	Impacts to the species are not expected. The measures identified in Section 4.5.1, would prevent occurrence of any significant impacts.

Table 4.5-2 (continued)
Impact Analysis Summary for ESA-listed Species

Common Name *Scientific Name*	ESA Status	Applicable Site(s)	SOP	Effects (ESA)	Rationale for Effects Determination
Amphibians					
Arroyo toad *Anaxyrus californicus*	FE	LACF076	L	NL	No significant impacts to the species are expected. The measures identified in Section 4.5.1, would prevent occurrence of any significant impacts. . Measures specifically addressed to further prevent potential impacts to arroyo toad are identified in BIO CMR 15 (Appendix A).
California red-legged frog** *Rana draytonii*	FT	LACFCP14	M	NE	No significant impacts to the species are expected. The measures identified in Section 4.5.1, would prevent occurrence of any significant impacts .
Reptiles					
Desert tortoise *Gopherus agassizii*	FT CH	BRK	H	NL	No significant impacts to the species are expected. The measures identified in Section 4.5.1 would prevent any impact occurrence. Measures specifically addressed to further preventing potential impact to desert tortoise are discussed in BIO CMR 14 (Appendix A).
Birds					
California condor* *Gymnogyps californianus*	FE	BMT	M	NL	The project would not have significant impacts on the condor, which has a very large home range and would find suitable foraging habitat elsewhere. The project would not affect the nesting activities of the condor due to the absence of suitable nesting habitat within 0.5 mile. There would be some slight concern that a condor could ingest trash or hazardous substances generated at the site. However, BIO CMR 18 would require that best management practices be selected by the monitor to prevent condors from ingesting trash or hazardous substances to preclude this occurrence.
		BRK	M		
		BUR	M		
		LACFCP09	M		
		LACFCP14	M		
		LACF077	M		

Table 4.5-2 (continued)
Impact Analysis Summary for ESA-listed Species

Common Name *Scientific Name*	ESA Status	Applicable Site(s)	SOP	Effects (ESA)	Rationale for Effects Determination
Birds					
Coastal California gnatcatcher *Polioptila californica*	FT	CLM	H	NL	No significant impacts to the species are expected. The measures identified in Section 4.5.1 would minimize potential impact occurrence. Measures specifically addressed to further prevent potential impacts to desert tortoise are identified in BIO CMR 19, coastal California gnatcatcher (Appendix A).
		LACF056	H		
		LACF099	M		
		LACF194	H		
		WCFD004	H		
Least Bell's vireo *Vireo bellii pusillus*	FE	LACF069	H	NL	Suitable habitat for this species is located across a busy highway from the site and down in a canyon, where noise levels are highly unlikely to exceed 60 dB L_{eq} or background. Project noises may be periodically audible, but would not interfere with the nesting activities of this species. Implementation of measures described in Section 4.5.1 would ensure that there would be no significant impacts to the species.
		LACF076	H	NL	The project would have no significant impact on least Bell's vireos' foraging, nesting, or migrations. Implementation of measures described in Section 4.5.1 would ensure that there would be no significant impacts to the species.
Southwestern willow flycatcher *Empidonax trailli extimus*	FE	LACF069	H	NL	Suitable habitat for this species is located across a busy highway from the site and down in a canyon, where noise impacts are highly unlikely to exceed 60 dB L_{eq} or background. Project noises may be periodically audible, but would not interfere with the nesting activities of this species. No significant impacts are expected. Measures described in Section 4.5.1 would minimize potential impacts to the species.
		LACF076	H	NL	

Table 4.5-2 (continued)
Impact Analysis Summary for ESA-listed Species

Common Name *Scientific Name*	ESA Status	Applicable Site(s)	SOP	Effects (ESA)	Rationale for Effects Determination
Birds					
Western snowy plover *Charadrius nivosus nivosus*	FT	LALG-HQ	L	NL	No significant impacts to western snowy plovers would occur if work takes place outside of the nesting season. Implementation of BIO CMR 4 would result in no significant impacts to nesting western snowy plovers during the nesting season.
		LALG100	L		
		LALG300	M		No impacts would occur if work takes place outside of the nesting season

[1]Species in this table represent those determined to have a not anticipated (NA), low (L), moderate (M), or high (H) potential of occurrence at the 231 LTE sites. The preferred habitats and rationale for species occurrence shown in this table are provided in Appendix E-2., which also provides a complete inventory of special status species considered for this EA, including those not anticipated to occur.
[2]ESA-listed mammals are not anticipated to occur.
*SOP was extended to 0.5 mile for these species.
**SOP was extended to 800 feet for these species.

KEY
Species Names: ssp. = subspecies; var. = variety
ANF = Angeles National Forest
FC= Federal Candidate for listing
FE = Federal Endangered
ESA = Federal Endangered Species Act
FT = Federal Threatened
NE = No effect (ESA)
NL = May effect, but is not likely to adversely affect (ESA)
FSA = field survey area
SOP = species occurrence potential

Under the Proposed Action, there would be no significant impacts to individual species protected under the ESA. Temporary human activity adjacent to habitat areas would result in temporary minor increases in dust and noise. However, in addition to the CMRs discussed in Section 4.5.1, specific CMRs for four individual ESA-listed species (arroyo toad, desert tortoise, coastal California gnatcatcher, and western snowy plover) would result in no significant impacts to these species. These CMRs are listed below and the full text of the CMRs are included in Appendix A.

- BIO CMR 4: Pre-Construction Surveys and Avoidance Measures for Western Snowy Plovers (SNPL).
- BIO CMR 14: Desert Tortoise Preconstruction Surveys and Monitoring.
- BIO CMR 15 Avoidance Measures for Arroyo Toad.
- BIO CMR 19: Coastal California Gnatcatcher.

Bald and Golden Eagles

During construction under the Proposed Action, no significant impacts to BGEPA-listed species would be expected to occur. It is anticipated that there would be no loss of habitat under the Proposed Action, as the CMRs discussed in Section 4.5.1A, Vegetation would be employed. Temporary human activity may result in temporary minor increases in dust and noise, or visual activities that disrupt normal bird behaviors, particularly at times of breeding and nesting activity. However, implementation of BIO CMR 2, related to bald and golden eagles, would ensure that there would be no significant impacts to these species. The full text of this CMR is included in Appendix A.

The bald eagle and the golden eagle, which have very large home ranges, would find suitable foraging habitat elsewhere. The project would not affect the nesting activities of the bald eagle or golden eagle due to the absence of suitable nesting habitat within 0.5 mile of the LTE sites listed in Table 4.5-2.

Table 4.5-3
Impact Analysis Summary for BGEPA-listed Species

Common Name Scientific Name	Applicable Site(s)	Anticipated Impact
Bald eagle *Haliaeetus leucocephalus*	LACFCP14	Not significant
Golden eagle *Aquila chrysaetos*	BMT, BRK, BUR, LACF078, LACF157, LACFCP09, LACFCP14	Not significant
KEY BGEPA = Bald and Golden Eagle Protection Act		

Marine Mammal Protection Act Species

While marine habitats exist adjacent to proposed LTE sites, no marine habitat occurs within an LTE site and no construction is anticipated in marine or aquatic environments or near marine mammal rookeries. BIO CMR 17 (discussed in Section 4.5.1A, Vegetation and 4.5.1E Sensitive Habitats) was specifically developed to prevent runoff from any site adjacent to aquatic habitats, thereby precluding potential runoff that could potentially affect aquatic species, including marine mammals. BIO CMR 18 requires that hazardous substances be managed in accordance with applicable regulations and provides for training, prevention of materials that could be discharged into waters, management of stockpiled materials, and spill prevention that would preclude releases of hazardous substances into the aquatic environment. No significant impact to the bottlenose dolphin, California sea lion, common dolphin, or harbor seal would be expected to occur.

Table 4.5-4
Impact Summary for MMPA-Listed Species

Common Name (synonym)	Scientific Name (synonym)	Applicable Site(s)	SOP	Effects	Rationale for Effects Determination
bottlenose dolphin	*Tursiops truncatus*	LAFD049, LBFD006, LBFD021, SCH	L	N	Marine areas are present within the field survey area. No significant impacts are anticipated to occur on any protected marine mammal, as work would not occur within any marine water or near any known marine mammal rookery sites. CMRs 17 & 18 would reduce or eliminate sediment and runoff impacts. Noise and vibration levels are highly unlikely to exceed background levels, due to distance from construction activities to marine waters. No significant impacts on these species are expected as a result of this project
		LALG100, LALG300, LALG-HQ	M	N	
California sea lion	*Zalophus californianus*	LAFD049, LALG100*, LALG300*, LALG-HQ*, LBFD006* LBFD021*, SCH	M	N	
common dolphin	*Delphinus delphis*	LAFD049, LALG100, LALG300, LALG-HQ LBFD006 LBFD021, SCH	L	N	
harbor seal	*Phoca vitulina*	LAFD049, LALG100*, LALG300*, LALG-HQ*, LBFD006* LBFD021* SCH	L	N	

KEY
MMPA = Marine Mammal Protection Act
SOP = species occurrence potential (L= low, M = moderate)
N = no effect
*Contains potential pinniped haul out locations, such as rock jetties or marina docks.

Forest Service Sensitive and Management Indicator Species

Forest Service Sensitive Species

Table 4.5-4 reveals that no significant impacts are expected to occur to FSS plant and animal species. Effects to plants and wildlife are discussed in Section 4.5.1A, Vegetation, and Section 4.5.1C, Wildlife, and in the table below.

Table 4.5-5
Impact Summary for Forest Service Sensitive Species

Common Name	Scientific Name	Applicable Site(s)	SOP	Effect	Rationale
Forest camp sandwort	*Eremogone macradenia* var. *arcuifolia*	LACFCP09	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
Hall's monardella	*Monardella macrantha* ssp. *hallii*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Late-flowered mariposa lily	*Calochortus fimbriatus*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Mojave paintbrush	*Castilleja plagiotoma*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Mt. Gleason's paintbrush	*Castilleja gleasoni*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Orcutt's linanthus	*Linanthus orcuttii*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Palmer's mariposa lily	*Calochortus palmeri* var. *palmeri*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Parish's checkerbloom	*Sidalcea hickmanii* ssp. *parishii*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Parry's spineflower	*Chorizanthe parryi* var. *parryi*	LACFCP09	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.

Table 4.5-5 (continued)
Impact Summary for Forest Service Sensitive Species

Common Name	Scientific Name	Applicable Site(s)	SOP	Effect	Rationale
Peirson's lupine	*Lupinus peirsonii*	LACFCP09	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
Rock Creek broomrape	*Orobanche valida* ssp. *valida*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Salt Spring checkerbloom	*Sidalcea neomeaxicana*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
San Bernardino aster	*Symphyotrichum defoliatum*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
San Bernardino grass of Parnassus	*Parnassia cirrata* var. *cirrata*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
San Gabriel bedstraw	*Galium grande*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
San Gabriel linanthus	*Linanthus concinnus*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
San Gabriel manzanita	*Arctostaphylos glandulosa* ssp. *gabrielensis*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Short-joint beavertail	*Opuntia basilaris* var. *brachyclada*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	

Table 4.5-5 (continued)
Impact Summary for Forest Service Sensitive Species

Common Name	Scientific Name	Applicable Site(s)	SOP	Effect	Rationale
Short-sepaled lewisia	*Lewisia brachycalyx*	LACFCP09	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
Southern jewel-flower	*Streptanthus campestris*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
Urn-flowered alumroot	*Huechera caespitosa*	BUR	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, there would be no significant impacts to this species.
		LACFCP09	M	N	
San Gabriel Mountains blue butterfly	*Plebujus saepiolus aureoles*	BUR	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, impact there would be no significant impacts to this species.
		LACFCP09	M	NS	
California legless lizard	*Aniella pulchra pulchra*	BUR	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
		LACFCP09	M	NS	
California mountain kingsnake (San Bernardino population)	*Lampropeltis zonata parvirubra*	BUR	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
		LACFCP09	M	NS	
Coastal rosy boa	*Lichanura orcuttii*	BUR	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
		LACFCP09	M	NS	
San Gabriel Mountains slender salamander	*Batrachoseps gabrieli*	LACFCP09	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.

Table 4.5-5 (continued)
Impact Summary for Forest Service Sensitive Species

Common Name	Scientific Name	Applicable Site(s)	SOP	Effect	Rationale
Yellow-blotched salamander	*Ensatina escholtzii croceator*	LACFCP09	M	NS	Suitable nesting and foraging habitat is present. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
Bald eagle	*Haliaeetus leucocephalus*	LACFCP14	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
California spotted owl	*Strix occidentalis occidentalis*	BUR	L	NS	Suitable nesting and foraging habitat is present. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
		LACFCP09	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
Gray vireo	*Vireo vicinior*	BUR	M	NS	Suitable nesting and foraging habitat is present. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
		LACFCP09	M	NS	
Northern goshawk	*Accipiter gentilis*	BUR	M	N	Large amounts of suitable foraging habitat for the northern goshawk are available outside of the project site. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to this species.
		LACFCP09	M	N	
Fringed myotis	*Myotis thysasnoides*	BUR	L	NS	Specific impacts to bats are discussed in Section 4.5.1C, Wildlife. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, and BIO CMR 5, there would be no significant impacts to this species.
		LACFCP09	M	NS	

Table 4.5-5 (continued)
Impact Summary for Forest Service Sensitive Species

Common Name	Scientific Name	Applicable Site(s)	SOP	Effect	Rationale
Pallid bat	*Antrozous pallidus*	BUR	M	NS	Specific impacts to bats are discussed in Section 4.5.1C, Wildlife. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, and BIO CMR 5, there would be no significant impacts to this species.
		LACFCP09	M	NS	
Townsend's big-eared bat	*Corynorhynus townsendii*	BUR	M	NS	Specific impacts to bats are discussed in Section 4.5.1C, Wildlife. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, and BIO CMR 5, there would be no significant impacts to this species.
		LACFCP09	M	NS	

KEY:
SOP = species occurrence potential (L=low, M= moderate, H= high)
Effect N= no effect, NS = not significant.

Bureau of Land Management Sensitive Species

Table 4.5-6 reveals that no significant impacts are expected to occur to BLMS plant or animal species. Effects to plants and wildlife are discussed in Section 4.5.1A, Vegetation, and Section 4.5.1C, Wildlife, and in the table below.

Table 4.5-6
Impact Summary for Bureau of Land Management Sensitive Species

Common Name	Scientific Name	FSA SOP	Effect	Rationale
Barstow woolly sunflower	*Eriophyllum mohavense*	M	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, no significant impacts to this species would occur.
Parry's spineflower	*Chorizanthe parryi* var. *parryi*	H	N	With implementation of the measures identified in Section 4.5.1A, Vegetation, no significant impacts to this species would occur.
Burrowing owl	*Athene cunicularia*	H	NS	With implementation of the measures identified in Sections 4.5.1A and 4.5.1C, no significant impacts to this species would occur. In addition, BIO CMR 3 provides specific protections for burrowing owl. The full text of the CMR is included in Appendix A.

Table 4.5-6 (continued)
Impact Summary for Bureau of Land Management Sensitive Species

Common Name	Scientific Name	FSA SOP	Effect	Rationale
Golden eagle	*Aquila chrysaetos*	M	NS	Due to the presence of large amounts of suitable foraging habitat for golden eagles outside of each of the LTE sites, there would be no significant impacts to this species. In addition, BIO CMR 2 provides protections for golden eagle. The full text of the CMR is included in Appendix A.
Gray vireo	*Vireo vicinior*	H	NS	Suitable nesting and foraging habitat is present. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts on this species.
Swainson's hawk	*Buteo swainsoni*	L	NS	Foraging Swainson's hawks would find higher quality foraging habitats elsewhere. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts on this species.
White-tailed kite	*Elanus leucurus*	L	NS	Large amounts of suitable foraging habitat for white-tailed kites are available outside of the project site. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts on this species.
Fringed myotis	*Myotis thysasnoides*	L	NS	Specific impacts to bats are discussed in Section 4.5.1C, Wildlife. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, and BIO CMR 5, there would be no significant impacts on this species.
Mohave ground squirrel	*Spermophilus mohavensis*	M	NS	With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, and BIO CMR 13, there would be no significant impacts on Mohave ground squirrels The full text of the CMR is included in Appendix A.

Table 4.5-6 (continued)
Impact Summary for BLM Sensitive Species

Common Name	Scientific Name	FSA SOP	Effect	Rationale
Pallid bat	*Antrozous pallidus*	M	NS	Specific impacts to bats are discussed in Section 4.5.1C. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, and BIO CMR 5, there would be no significant impacts on this species.
Townsend's big-eared bat	*Corynorhynus townsendii*	M	NS	Specific impacts to bats are discussed in Section 4.5.1C. With implementation of the measures identified in Section 4.5.1A, Vegetation and 4.5.1C, Wildlife, and BIO CMR 5, there would be no significant impacts on this species.
KEY: SOP = species occurrence potential (L=low, M= moderate, H= high) FSA = field survey area Effect N= no effect, NS = not significant.				

CESA, CFP, and NPPA Species

There is some potential for direct effects to CESA and NPPA-listed, and CFP-regulated species as a result of temporary human activity associated with project implementation. These effects would most likely result from temporary human activity adjacent to habitat areas, resulting in temporary increases in dust and noise. However, with implementation of the CMRs identified in Sections 4.5.1A and 4.5.1C, there would be no significant impacts to these state-regulated. BIO CMR 13 Mohave Ground Squirrel would further ensure that there would be no significant impacts to Mohave ground squirrel, a CESA-listed species. The full text of this CMR is included in Appendix A.

Table 4.5-7
Impact Analysis Summary for CESA and NPPA-listed, and CFP Species

Common Name Scientific Name	CESA Status	Applicable Site(s)	SOP	Effect (NEPA)	Rationale
Lyon's pentachaeta *Pentachaeta lyonii*	CE	LACF065	M	N	Impacts would be similar to general plant impacts described in Section 4.5.1. CMRs identified in Section 4.5.1 would ensure that there are no significant impacts to this species.
		LACF083	L	N	
Marcescent dudleya *Dudleya cymosa* ssp. *marcescens*	CR*	LACF069	H	N	Impacts would be similar to general plant impacts described in Section 4.5.1. CMRs identified in Section 4.5.1 would ensure that there are no significant impacts to this species.

Table 4.5-7 (continued)
Impact Analysis Summary for CESA and NPPA-listed, and CFP Species

Common Name Scientific Name	CESA Status	Applicable Site(s)	SOP	Effect (NEPA)	Rationale
Nevin's barberry *Berberis nevinii*	CE	CLM	L	N	Impacts would be similar to general plant impacts described in Section 4.5.1. CMRs identified in Section 4.5.1 would ensure that there are no significant impacts to this species.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	CE	LACF078	M	N	Impacts would be similar to general plant impacts described in Section 4.5.1. CMRs identified in Section 4.5.1 would ensure that there are no significant impacts to this species.
Santa Susana tarplant *Deinandra minthornii*	CR*	LACF072	M	N	Impacts would be similar to general plant impacts described in Section 4.5.1. CMRs identified in Section 4.5.1 would ensure that there are no significant impacts to this species.
Unarmored threespine stickleback *Gasterosterus aculeatus williamsoni*	CE	LACFCP14	L	N	Impacts would be similar to general plant impacts described in Section 4.5.1. CMRs identified in Section 4.5.1 would ensure that there are no significant impacts to this species.
Desert tortoise *Gopherus agassizii*	CT	BRK	H	NS	With implementation of the measures identified in Section 4.5.1, there would be no significant impacts to this species. Measures specifically addressed at further prevention of potential impact to desert tortoise are discussed in BIO CMR 14, Desert Tortoise Preconstruction Surveys and Monitoring (Appendix A).
Bald eagle* *Haliaeetus leucocephalus*	CFP	LACFCP14	M	NS	The bald eagle has a very large home range and would find suitable foraging habitat elsewhere. The project would not affect the nesting activities of the bald eagle due to the absence of suitable nesting habitat within 0.5 mile. With implementation of the measures identified in Section 4.5.1, there would be no significant impacts to this species.

Table 4.5-7 (continued)
Impact Analysis Summary for CESA and NPPA-listed, and CFP Species

Common Name Scientific Name	CESA Status	Applicable Site(s)	SOP	Effect (NEPA)	Rationale
California condor* *Gymnogyps californianus*	CE CFP	BMT	M	NS	The condor has a very large home range and would find suitable foraging habitat elsewhere. The project would not affect the nesting activities of the condor due to the absence of suitable nesting habitat within 0.5 mile. There would be some slight concern that a condor could ingest trash or hazardous substances generated at the site. However, with implementation of BIO CMR 18, there would be no significant impacts on this species.
		BRK	M	NS	
		BUR	M	NS	
		LACFCPO9	M	NS	
		LACFCP14	M	NS	
		LACF077	M	NS	
Golden eagle* *Aquila chrysaetos*	CFP	BUR	M	NS	Golden eagles would have large amounts of suitable foraging habitat outside of each of the LTE sites listed. With implementation of the measures described in Section 4.5.1, there would be no significant impacts to the species.
		LACF078	M	NS	
		LACF157	M	NS	
		LACFCP09	M	NS	
		LACFCP14	L	NS	
		BRK	M	NS	
		BMT	M	NS	
Least Bell's vireo *Vireo bellii pusillus*	CE	BUR LACFCP09	NA	N	There would be no significant impacts to the species because it is presumed to be absent from ANF sites.
		BRK	NA	N	There would be no significant impacts to the species because it is presumed to be absent from this site.
		LACF069	H	N	There would be no significant impacts to the species because it is presumed to be absent from this site.
		LACF076	H	N	There would be no significant impacts to the species because it is presumed to be absent from this site.

Table 4.5-7 (continued)
Impact Analysis Summary for CESA and NPPA-listed, and CFP Species

Common Name Scientific Name	CESA Status	Applicable Site(s)	SOP	Effect (NEPA)	Rationale
Southwestern willow flycatcher *Empidonax trailli extimus*	CE	LACF069	H	NS	Suitable habitat for this species is located across a busy highway from the site and down in a canyon, where noise levels are highly unlikely to exceed 60 dB L_{eq} or background. Project noises may be periodically audible, but would not interfere with the nesting activities of this species. With implementation of measures described in Section 4.5.1, there would be no significant impacts to the species.
		LACF076	H	NS	
Swainson's hawk *Buteo swainsoni*	CT	BRK	L	NS	Swainson's hawks would find higher quality foraging habitats elsewhere. With implementation of the measures identified in Sections 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to the species.
		LACF072	L	NS	
		LACF076	M	NS	
White-tailed kite* *Elanus leucurus*	CFP	BRK	L	NS	White-tailed kites would have large amounts of suitable foraging habitat outside of the project site. With implementation of the measures identified in Sections 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to the species.
		LACF071	M	NS	
		LACF088	M	NS	
		LAFD029	M	NS	
		LAFD049	M	NS	
		LAFD099	M	NS	
		LAFD101	M	NS	
		LALG100	M	NS	
		LALG300	M	NS	
		LALGHQ	M	NS	
		LBFD021	M	NS	
		SCH	M	NS	
Mohave ground squirrel *Spermophilus mohavensis*	CT	BRK	M	NS	With implementation of the measures identified in Sections 4.5.1A, Vegetation and 4.5.1C, Wildlife, there would be no significant impacts to the species. Measures specifically addressed at further prevention of impacts to Mohave ground squirrels are discussed in BIO CMR 13, Mohave ground squirrel (Appendix A).
		LACF092	M	NS	
		LACF093	M	NS	
		LACF114	L	NS	

Table 4.5-7 (continued)
Impact Analysis Summary for CESA and NPPA-listed, and CFP Species

Common Name Scientific Name	CESA Status	Applicable Site(s)	SOP	Effect (NEPA)	Rationale
*Species identified as CR are listed on NPPA. Species Names: ssp. = subspecies; var. = variety CE = California Endangered CESA= California Endangered Species Act CFP = California Fully Protected CR = California Rare (also listed under California Native Plants Protection Act) CT = California Threatened FSA = field survey area NEPA = National Environmental Policy Act NPPA = Native Plant Protection Act SOP = species occurrence potential (L = low, M = moderate, H = high) Effect: N = no effect, NS = not significant					

West Mojave Plan

The Proposed Action would cause no loss of habitat of species covered under the WEMO because all work would be performed within urban/disturbed, ruderal, or ornamental habitats, and CMRs developed for the project would ensure that sensitive habitats where sensitive plant species and vegetation communities could occur are not directly impacted. However, temporary human activity adjacent to habitat areas could result in temporary minor increases in dust and noise, or in visual activities that disrupt normal bird behaviors. With implementation of BIO CMR 1 related to nesting birds, there would be no significant impacts to species covered under the WEMO.

Desert tortoises could pass through an LTE site as part of its home-range movements, although the sites themselves do not appear to have any intrinsic value for the species in terms of foraging, reproduction, or refugia. With implementation of BIO CMR 14 developed to restrict the desert tortoise from entering LTE sites, including protocols for biologists with the proper permits to remove desert tortoises should they access sites, there would be no significant impact to desert tortoises. CMRs 6, 7, and 8 would protect the Mojave fringe-toed lizard by providing a construction monitor who would conduct daily sweeps prior to construction, monitoring, and maintenance of BMPs, and would ensure that all ditches are covered or filled at the end of each day. With implementation of those measures, there would be no significant impacts to Mojave fringe-toed lizards.

Table 4.5-8 lists the species covered under the WEMO with Low, Moderate, High, or Observed SOP at BRK. CMRs for the protection of these species are also provided.

Table 4.5-8
WEMO Species at BRK

Common Name	Scientific Name	SOP	Effects	Rationale
Plants				
Barstow woolly sunflower	*Eriophyllum mohavense*	M	N	The species could be present outside of the project site but within the survey area. The following CMRs would result in no significant impacts to the Barstow woolly sunflower: by providing a biological construction monitor, establishing habitat protection zones, protecting native vegetation, limiting the spread of invasive plants, and conducting a post-construction noxious weed survey. BIO CMRs 6, 9, 10, 11, and 12.
Reptiles				
Desert tortoise	*Gopherus agassizii*	H	NS	The following CMRs would protect the desert tortoise by ensuring that desert tortoises are excluded from the work area and that workers and equipment do not enter areas where the desert tortoise may occur. BIO CMRs 6, 8, 9, and 14. Excluding the desert tortoise from the work area would not constitute a significant impact to this species.
Mojave fringe-toed lizard	*Uma scoparia*	M	NS	The following CRS would ensure that there would be no significant impact to this species by construction: by providing a biological monitor, ensuring that ditches are covered or provide a means of escape, and that the species is excluded from entering the site to the extent possible. BIO CMRs 6, 7, 8, and 9.

Table 4.5-8 (continued)
WEMO Species at BRK

Common Name	Scientific Name	SOP	Effects	Rationale
Birds				
Burrowing owl	*Athene cunicularia*	H	NS	With implementation of the following CMRs there would be no significant impacts to the burrowing owl: preconstruction surveys, burrow monitoring, and avoidance. BIO CMRs 3 and 6.
California condor	*Gymnogyps californianus*	M	NS	The condor has a very large home range and would find suitable foraging habitat elsewhere. The project would not affect the nesting activities of the condor due to the absence of suitable nesting habitat within 0.5 mile. The following CMR would ensure that condors do not ingest trash or hazardous substances at the site, and that there would be no significant impacts on this species. BIO CMR 18.
Ferruginous hawk	*Buteo regalis*	M	NS	The project would have at most, slight temporary impacts on the species, which has a very large home range and would find suitable foraging habitat elsewhere.
Golden eagle	*Aquila chrysaetos*	M	NS	With implementation of the following CMRs, there would be no significant impacts to nesting golden eagles during the nesting season: BIO CMRs 1 and 2. There would be no significant impacts to foraging golden eagles, due to the presence of large amounts of suitable foraging habitat outside of the project site.
Gray vireo	*Vireo vicinior*	H	NS	With implementation of the following CMR, there would be no significant impacts to nesting gray vireos during the nesting season: CMR 1. There would be no significant impacts to the gray vireo if work takes place outside of the nesting season. There would be no significant impacts to foraging gray vireos, due to the presence of large amounts of suitable foraging habitat outside of the project site.

Table 4.5-8 (continued)
WEMO Species at BRK

Common Name	Scientific Name	SOP	Effects	Rationale
Birds				
LeConte's thrasher	*Toxostoma lecontei*	M	NS	With implementation of the following CMR, there would be no significant impacts to nesting LeConte's thrashers during the nesting season: CMR 1. There would be no significant impacts to the LeConte's thrasher if work takes place outside of the nesting season. There would be no significant impacts to foraging LeConte's thrashers, due to the presence of large amounts of suitable foraging habitat outside of the project site.
Loggerhead shrike	*Lanius ludovicianus*	M	NS	With implementation of the following CMR, there would be no significant impacts to nesting loggerhead shrikes during the nesting season: CMR 1. There would be no significant impacts to the loggerhead shrike if work takes place outside of the nesting season. There would be no significant impacts to foraging loggerhead shrikes, due to the presence of large amounts of suitable foraging habitat outside of the project site.
Prairie falcon	*Falco mexicanus*	M	NS	The project would have no significant impacts on the prairie falcon, which would find suitable foraging habitat elsewhere. The project would not affect the nesting activities of the prairie falcon.
Swainson's hawk	*Buteo swainsoni*	L	NS	The project would have no significant impacts to foraging Swainson's hawks, which would find higher quality foraging habitats elsewhere.
White-tailed kite	*Elanus leucurus*	L	NS	The project would have no significant impacts to foraging white-tailed kites, which would find higher quality foraging habitats elsewhere.

Table 4.5-8 (continued)
WEMO Species at BRK

Common Name	Scientific Name	SOP	Effects	Rationale
Mammals				
Mohave ground squirrel	*Spermophilus mohavensis*	H	NS	With implementation of the following CMRs there would be no significant impacts to the Mohave ground squirrel: constructing temporary fencing, protecting habitat and providing a biological monitor. BIO CMRs 6, 8, 9, 10, 11, 12, and 13.
Pallid bat	*Antrozous pallidus*	M	NS	The project would have no significant impacts to the foraging activities of this species.
Townsend's big-eared bat	*Corynorhinus townsendii*	M	NS	The project would have no significant impacts to the foraging activities of this species.

KEY:

WEMO = West Mojave Plan
SOP = species occurrence potential (L = low, M = moderate, H = high)
Effect: N = no effect, NS = not significant

E. Sensitive Habitats

Critical Habitat

Five LTE sites were identified as containing Critical Habitat within the site boundary. Of these, only one site (LACF056) was identified as containing approximately 500 square feet (approximately 0.01 acre) of Critical Habitat PCE within the project site. There are approximately 2.2 acres available of non-PCE areas, including areas that are already developed and heavily disturbed. As no destruction or modification of vegetation would occur, no significant impact to Critical Habitat would occur, With implementation of the following BIO CMRs, there would be no significant impacts to critical habitat. Analysis in Section 4.5.1A, Vegetation, also supports this conclusion.

- BIO CMR 4 Pre-Construction Surveys and Avoidance Measures for Western Snowy Plovers
- BIO CMR 6 Construction Monitoring
- BIO CMR 8 Open Trenches and Ditches (within LTE sites)
- BIO CMR 9: Establish Habitat Protection Zones
- BIO CMR 10 Protect Native Vegetation
- BIO CMR 11 Limit the Spread of Invasive Plants

Six sites were identified as having Critical Habitat adjacent to the LTE site, within the FSA. Further evaluation determined that these Critical Habitat areas contain PCE features necessary to support the listed species. However, construction and operations at all six of these sites would not result in significant impacts to Critical Habitat because: (1) no direct impacts will occur outside the LTE site (i.e., within the PCE areas); and (2) no indirect impacts are anticipated to occur as BIO CMR 10 Protect Native Vegetation, BIO CMR 11 Limit the Spread of Invasive Plants, and BIO CMR 12 Post-

construction Noxious Weed Survey would prevent indirect effects on the PCE (and non-PCE) areas adjacent to the LTE site.

Essential Fish Habitat

None of the LTE sites contains EFH. Eight LTE sites are located near or adjacent to EFH. Because EFH does not occur onsite, potential direct impacts would be limited to potential runoff from project activities. The potential for direct impact to occur is minimized through implementation of CMRs listed below. The full text of these CMRs are included in Appendix A. There would be no significant impacts to essential fish habitat.

- BIO CMR 17 Wetlands and Other Waters
- BIO CMR 18 Hazardous Substance Management

Wetlands

Wetlands were identified as potentially occurring at one proposed LTE site (BRK) and adjacent to an additional 52 sites, all identified in Section 3.5.2D. No dredge or fill activities in or near wetlands would occur, and project disturbance near wetlands would be limited to less than 0.1 acre per site. Site BRK has an ephemeral drainage within the project site. This drainage would be protected by CMRs listed below, which would require the site biological monitor to mark the wetland with highly visible means, such as flagging or signage so that no physical disturbance takes place, and for the containment of runoff or discharges from construction. Other wetlands or waters are typically either ephemeral drainages, concrete-lined stormwater drainages, canals or man-made lakes. There are some small, lacustrine fringe type wetlands and palustrine emergent seasonally-flooded wetlands, but all are small, less than 0.1 acre with no woody riparian habitat. With implementation of the following CMRs, the full texts of which are included in Appendix A, there would be no significant impacts to wetlands.

- BIO CMR 17 Wetlands and Other Waters
- BIO CMR 18 Hazardous Substance Management

West Mojave Plan Habitat Conservation Plan

Consistency with the terms and conditions of the WEMO HCP would ensure that there would be no significant impacts to protected species, their habitats, or regulated aquatic resource areas.

4.5.2 No Action Alternative

Under the No Action Alternative, the project would not be built. As a result, there would be no significant impacts (direct or indirect) impact to biological resources.

4.6 Historic and Cultural Resources

This section describes the direct and indirect effects associated with implementation of the Proposed Action and the No Action Alternative on archaeological, architectural, Native American, and paleontological resources in and near each LTE site. As noted in Section 3.6, the APE for direct effects is the work area within each proposed LTE site, while the indirect APE encompasses an area within a half-mile radius of the proposed LTE site.

Construction activity is subject to the PA, implemented October 3, 2014, and CMRs described in Section 2.0, Proposed Action and Alternatives. The LTE Project Cultural Resource Management (CRM) CMRs are provided in Appendix A and summarized as follows.

CRM CMR 1 and 2	Requires qualified archaeological and Native American monitors to be present during ground disturbing activities at project sites where records indicate potential presence of archaeological resources. Requires specific procedures be followed if such materials are encountered.
CRM CMR 3 and 4	Sets forth procedures to be followed by the LA-RICS Project Archaeologist if buried cultural resources and/or human remains are encountered during project-related earthmoving.
CRM CMR 5	Requires a qualified paleontological monitor to be present during all subsurface excavation at project sites where records indicate geological strata with a high potential for vertebrate paleontological resources. Requires specific procedures be followed if a paleontological resource is uncovered.
CRM CMR 6	Requires certain construction-related procedures to be followed when attaching equipment to any building that is more than 45 years old.

4.6.1 Proposed Action

Project construction could impact historic buildings and nearby archaeological, Native American, and paleontological resources at any of the new tower LTE sites. Each is discussed below. No significant impacts are anticipated to historic and cultural resources.

A. Archaeological Resources

No archaeological resources have been identified through the CHRIS records search in the direct APE of any of the LTE sites where new monopoles or collocation on existing towers are proposed. Three archaeological resources, including two sites and one isolate artifact, were observed during field surveys and submitted for recordation. However, none of these meet National Register criteria and can be easily avoided due to their small "footprint." Archaeological resources would not be directly impacted at any of the four roof-mounted sites as these are existing buildings. Therefore, a no effect finding associated with archaeological resources in the direct APE is appropriate for the Proposed Action. It is possible that buried archaeological resources could be encountered during construction. For this reason the PA andCRM CMR 1, CRM CMR 2 and CRM CMR 3 (see Appendix A) have been incorporated into the project processes to avoid potential effects on buried

archaeological resources. CRM CMR 4 has been incorporated into the project to avoid potential effects on human remains encountered during ground-disturbing activities.

No direct effects on archaeological resources are foreseen during operation because no further ground or construction disturbance is anticipated during the operational phase of the Proposed Action.

Archaeological resources were recorded as being located within the indirect APE of 43 LTE project sites (Appendix F-2). These resources would not be visually impacted by site construction or operation, and therefore cannot be indirectly affected either by construction or operation. For these reasons, a no effect finding associated with archaeological resources in the indirect APE is appropriate for the Proposed Action.

B. Architectural Resources

The analysis of the LTE project sites showed that no architectural resources in the direct APE would be adversely affected by construction (see Appendix F-6). Of the four roof-mounted LTE sites, an architectural resource was identified in the direct APE of one project site: SCH. Construction at SCH would result in the attachment of an antenna and mount to an existing antenna structure that had been previously mounted on the building, and the qualified architectural historian who examined the proposed LTE project sites determined that no adverse effect finding was appropriate. CRM CMR 6 has been incorporated into the project to ensure that all antenna placements would be constructed in accordance with Secretary of Interior standards at any four of the roof mounted locations, therefore, the Proposed Action would result in no adverse effect to architectural resources.

No direct effects on architectural resources are foreseen during operation.

Architectural resources were recorded as being located within the indirect APE at 160 of the 231 LTE project sites. Adverse visual effects to architectural resources during construction could occur if the proposed placement of the LTE monopole was predicted to alter the viewshed of an important architectural resource such that its viewshed would be compromised.

The analysis showed that adverse effects to architectural resources would be avoided due to conditions described by the qualified architectural historians during their fieldwork. These conditions include: (1) LTE construction taking place in an area occupied by existing monopoles, towers or a roof line with similar communications equipment; (2) LTE construction taking place within an urbanized environment where other buildings would block the LTE monopole from the viewshed of any important nearby architectural resources; and/or (3) LTE construction occurring within the viewshed of nearby important architectural resources but, in the judgment of the qualified architectural historian performing the analysis, construction would not constitute a visual impact to architectural resources. Since the analysis showed that no historic buildings would be indirectly affected by construction of any one LTE site, a no effect finding associated with architectural resources in the indirect APE is appropriate for the Proposed Action.

No indirect effects on architectural resources are foreseen during operation.

C. Native American Resources

No Native American resources have been identified in the direct APE at any of the 231 LTE sites. For this reason, a no effect finding associated with Native American resources in the direct APE is appropriate for this project.

Because previously unidentified Native American resources could be inadvertently encountered during construction, the PA and CRM CMR 1, CRM CMR 2 and CRM CMR 3 have been incorporated into the project to avoid potential effects on unknown and unrecorded Native American resources. If buried Native American remains are encountered during subsurface excavation, CRM CMR 4 has been incorporated into the project to avoid potential effects on unknown and unrecorded Native American human remains.

There would be no direct effects to Native American resources during operation of the project.

Although one Native American resource was potentially located in the indirect APE of one project site by the NAHC, following extensive efforts to contact local tribes, no Native American tribes expressed any knowledge or concerns for this resource during the tribal consultation effort described in Section 3.6. Therefore, a no effect finding associated with Native American resources in the indirect APE is appropriate for the Proposed Action.

There would be no indirect effects to Native American resources during operation of the Proposed Action.

D. Paleontological Resources

Seventy-four of 231 project sites are located on strata considered sensitive for buried paleontological resources, but according to results of the literature search conducted by the NHMLAC (see reports in Administrative Record), none of these sites exhibits exposed recorded paleontological resources. Therefore, a no effect finding associated with paleontological resources in the direct APE is appropriate for the Proposed Action during construction.

LTE sites administered by the ANF include BUR and LACFCP09. BUR is located over the Gneiss Complex, a Precambrian gneiss complex exposed in the elevated terrain near Burnt Peak; this metamorphic rock unit will be devoid of any significant vertebrate fossil remains. LACFCP09 is located over the Quartz Diorite, a late Cretaceous plutonic rock unit with outcrops in the elevated terrain near this project site; this igneous rock unit will be devoid of any significant vertebrate fossils remains.

Because previously unidentified paleontological resources could be inadvertently encountered during construction, CRM CMR 5 has been incorporated into the project to avoid potential effects on paleontological resources that could be encountered during construction in the direct APE of a project site.

There would be no direct effects to paleontological resources during operation of the Proposed Action.

Although paleontologically sensitive strata are located in the indirect APE of several LTE project sites, such resources are all subsurface and would not be visually affected by construction activity. Therefore, a no effect finding associated with paleontological resources in the indirect APE is appropriate for the Proposed Action during construction.

Due to their subsurface nature, there would be no indirect effects to paleontological resources during operation of the Proposed Action.

4.6.2 No Action Alternative

Under the No Action Alternative no construction or operations would occur, and no direct or indirect impacts to archaeological, architectural, Native American, or paleontological resources would occur. No significant impacts are anticipated.

4.7 Aesthetic and Visual Resources

4.7.1 Proposed Action

Short Term Construction Impacts

During the construction phase, equipment, work crews, and materials would be visible in the vicinity of all 231 LTE sites. At certain locations, views associated with grading and trenching activities, temporary fencing and storm water BMPs may also be visible while construction is underway. The construction contractor would ensure that sites are kept clean and free of debris throughout the construction phase. Packing material, excess wire and other discarded material would be removed and floors would be swept or vacuumed by the contractor daily. Upon completion of the work at the site, the contractor would remove all of its tools, materials and other articles from the site and clean all exterior and interior surfaces including floors and windows. Given the short term nature of construction-related views and with implementation of the BMPs listed above, no significant impacts would occur.

Long Term Operational Impacts

Twenty-five of the 231 LTE sites are located in the region of influence for visual resources. Four sites are located on federal land administered by the USFS, BLM or USACE; 15 sites are located in the coastal zone; five sites are near the coastal zone, and one site is located in a locally designated scenic corridor that is not part of the coastal zone. These 25 sites are located in areas having visual resources that are protected by federal, state or local plans, policies and regulations. Potential visual impacts associated with the implementation of the proposed action on these sites are discussed below.

Construction and operation of the Proposed Action on the remaining 206 LTE sites would not impede any significant views from public spaces, roadways, and or existing developments in the vicinity of these LTE sites. Where appropriate and in coordination with the Authority members and local jurisdictions, stealth technology would be used to disguise the proposed monopole towers as palm trees, pine trees, flagpoles, or hose towers, or incorporated into architectural elements. Therefore, no direct significant impacts of the proposed action on aesthetic and visual resources in the vicinity of these 206 sites would occur.

Angeles National Forest

As discussed in Section 3.7.6, two LTE sites (BUR and LACFCP09) are located on land in the ANF that is administered by the USFS. Both these sites are located in areas that have been assigned a "High" level SIO by the ANF LMP. The High SIO classification provides for conditions where human activities are not visually evident. This refers to landscapes where the valued (desired) landscape

character "appears" intact. Deviations (e.g., development) may be present but must repeat the form, line, color, texture, pattern, and scale common to the landscape character.[151]

The LMP includes aesthetic management standards designed to meet the SIOs. Design management activities are required to meet the assigned SIOs, but minor adjustments not to exceed a drop of one SIO level are allowed with the Forest Supervisor's approval.[152]

Proposed heights of new monopoles and project related impacts on visual resources associated with sites proposed in the ANF have been provided in Appendix B. Based on the analysis, no reduction in the SIO level would be expected to occur at any of the ANF-located LTE sites. Therefore, no significant impacts (direct and indirect) would occur as a result of implementation of the Proposed Action. The USFS has not yet determined if the project is consistent with LMP Standards for SIOs. Additional design details from the Authority, in particular the specific methods which would be used to disguise towers and other infrastructure, may be necessary prior to USFS making a NEPA decision and approving the use. There may also be specific compensatory mitigation required, which will be negotiated with the Authority and made a condition of approval.

Bureau of Land Management Administered Lands

One LTE site (BRK) is located on federal land administered by BLM. As the California Desert Conservation Area Plan requires, BLM's Visual Resource Management Program was used to analyze visual resources associated with site BRK.

Guidelines provided in BLM's Handbook H-8410-1 were used to determine the VRM Class and corresponding VRM objectives for the site. As discussed in Section 3.7, the visual quality of the proposed site is rated as Class C (common scenic quality with minimal diversity). As the site is located in a remote area with sparse development and low levels of activity, it can be concluded that the level of visual sensitivity within five miles around the site is low and within 5 to 15 miles around the site is medium. Based on this analysis, the proposed site was assigned a VRM Class III. The VRM objective for this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.[153]

The site is located on the grounds of a previously developed communications facility that contains a 60-foot communications lattice tower. Installation of another monopole tower and ancillary equipment would be consistent with existing development in the area and no significant changes to the existing character of the landscape are anticipated. As the Proposed Action would comply with the VRM objectives for the proposed site, no significant impacts (direct or indirect) on aesthetic and visual resources would occur.

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151 U.S. Department of Agriculture, Forest Service. Landscape Aesthetics, A Handbook for Scenery Management, December 1995.

152 U.S. Department of Agriculture, Forest Service. Southern California Forests Land Management Plan, Part 3 Design Criteria, page 6. September 2005.

153 Bureau of Land Management, Manual H-8410-1 Visual Resource Inventory, 1986, page 5. Available at http://www.blm.gov/nstc/VRM/8410.html. Accessed November, 2013.

U.S. Army Corps of Engineers

As discussed in Section 3.7, LAFD088 is located on federal land administered by the USACE. The USACE's Detailed Visual Impact Procedure[154] was used to analyze impacts to visual resources associated with LAFD088. The site is located in an intensely developed urban area. Communication equipment, including rooftop and wall mount antennas, is present on top of the existing fire station building on site. The only significant views in the area are those of distant hills that are visible from public roads. Views in all directions are dominated by utility infrastructure, including utility poles and distribution cables, which are an integral part of the existing visual character. No water bodies are present in the area surrounding the proposed site.

Development of the Proposed Action on LAFD088 would have no change on existing landforms or vegetation in the area. Addition of a new 70-foot monopole tower would be consistent with the existing aesthetic and visual character of the surrounding area. Construction of the Proposed Action on site LAFD088 would have no significant impact on views from public spaces, roadways, and or existing developments in the area. No significant direct impacts and no significant indirect impacts on aesthetic and visual resources would occur.

Coastal Zone

As discussed in Section 3.7.7, 15 LTE sites (LACF053, LACF069, LACF071, LACF072, LACF088, LACF099, LAFD049, LALG100, LALG300, LALG-HQ, LBFD006, LBFD021, MBFD001, RDNBPD, and SMFD002) are located within the coastal zone. All 15 sites located in the coastal zone are subject to visual resource policies and regulations provided in applicable LCPs and development codes identified in Section 3.7.

Appendix B includes proposed heights of new monopole structures and project related impacts on visual resources associated with the 15 coastal zone sites. Appendix B also includes a discussion of visual impacts associated with the development of the Proposed Action on four project sites (SCH, LAFD101, LBPDHQ and LBFD002) that are located within 0.25 mile of the coastal zone and one site (LACF056) that is located within a coastal viewshed.

Installation of new structures within and near the coastal zone under the Proposed Action would be consistent with applicable policies and plans regulating visual resources and would not be inconsistent with existing development in the coastal zone. If required, proposed monopole towers on sites located in locally designated scenic corridors would be disguised as monopines, flagpoles or hose towers, such that they blend with the surroundings and the overall scenic quality of the area is preserved. Therefore, construction and operation of the Proposed Action at all sites located within or near the coastal zone, except LACF053 and LACF072, would have no significant direct impact and no significant indirect impact on visual resources in the coastal zone.

LACF053 is located along Palos Verdes Drive, which has been designated as a scenic corridor in the Rancho Palos Verdes Coastal Specific Plan, which serves as the City's LCP. Scenic views of the

[154] U.S. Army Corps of Engineers, Visual Resource Assessment Procedure, Instruction Report EL 88-1, March 1988, Page 64.

Abalone Cove shoreline Park and Pacific Ocean are available from Palos Verdes Drive as well as open spaces and developments to the north of the site. LACF072 is located in a natural visual setting with scenic views of the Santa Monica Mountains in all directions. Based on the review of the Land Use Plan component of the Santa Monica Mountains LCP, LACF072 is located at the edge of a proposed scenic ridgeline within the viewshed of a public viewing area. Introduction of an 85 foot structure (with appurtenances) at the location of sites LACF053 and LACF072 would degrade overall visual quality and scenic views in the area without mitigation measures. To preserve the existing visual quality of the scenic corridor around LACF053 and scenic natural views around LACF072, stealth technology would be used to disguise the proposed monopole structures as monopines and the following mitigation measures would be implemented.

> **AES MM 1**: Neutral colors of paint would be used on the monopole tower to blend better with existing setting. Finishes or colors that would be shiny or reflective in sunlight would not be allowed.
>
> **AES MM 2**: The proposed communication tower would not be used for the purposes of signage to display a message of any kind with the exception of messages required for safety.

With the use of stealth technology and implementation of mitigation measures listed above, no significant direct impacts and no significant indirect visual impact would occur due to the development of the Proposed Action at sites LACF053 and LACF072.

Local Scenic Corridors

As discussed in Section 3.7, nine sites are located within locally designated scenic corridors. Seven of these sites are located in the coastal zone and impacts of the Proposed Action on visual resources associated with them are discussed above. Two non-coastal sites (LHS and SVP) are located near a locally designated scenic route. U.S. Highway 101 in the City of Calabasas and Mulholland Drive in the City of Los Angeles, respectively. These sites are discussed below.

A small part of site LHS is located within the scenic corridor surrounding U.S. Highway 101 and scenic views of the Santa Monica Mountains are available from public roads and developments in the area. Existing views are marked by the presence of an approximately 100-foot lattice communication tower structure located on site as well as other utility poles visible in the vicinity of the site. Introduction of an 85-foot (with appurtenances) structure would be consistent with the existing visual setting and would not significantly change existing views of the Santa Monica Mountains in the area. To preserve the existing visual quality of the scenic corridor, the LTE structures would be adequately set back from the scenic corridor and stealth technology would also be used to disguise the proposed tower structure. Accordingly, AES MM 1 and AES MM 2 specified above and AES MM 3 provided below would be implemented.

> **AES MM 3**: The proposed communication tower would be set back from the scenic corridor to the maximum extent feasible.

All except the southern tip of site SVP is located within the scenic inner corridor surrounding Mulholland Drive, which provides scenic views of the Santa Monica Mountains in the site vicinity.

Existing short-range views are marked by the presence of several monopole and silo structures up to 40 feet in height. There is also a popular lookout platform on one of the remnant missile site structures as well as other utility poles and fencing visible in the vicinity of the site. A new 70-foot monopole and 15-foot lightning rod (total height of 85-feet with appurtenances) is being proposed at the SVP site. LA-RICS is proposing to disguise the LTE structures (e.g., monopole) (see examples in Figure 2.1-6) and the ground level LTE structures would be set back from the scenic corridor, in accordance with AES MM 1 and AES MM 3 specified above. However, the NPS has expressed some concern about the height of the tower and the scenic view from the nearby lookout platform. Therefore, LA-RICS will continue working with the NPS on the design of the SVP tower site to preserve the visual quality of the scenic corridor.

With implementation of the mitigation measures listed above, no significant direct impact and no significant indirect visual impact would occur as a result of implementation of the Proposed Action at site LHS or SVP.

4.7.2 No Action Alternative

Under the No Action Alternative, no new communication towers, antennas or ancillary support structures would be installed. This alternative would not place any new antennas or monopoles in the ANF, there would be no significant impacts on scenic visual resources in the ANF and there would be no change in the existing visual quality or scenic integrity of the ANF. There would be no significant impacts on visual resources associated with BLM and USACE administered lands and no change in the existing visual quality of areas surrounding these lands. The No Action Alternative would not place any new structures or monopoles in the coastal zone, there would be no conflicts with applicable LCPs that govern visual resources in the coastal zone and no significant impacts (direct or indirect) on visual resources in the coastal zone. Under this alternative, no new structures would be constructed in the vicinity of locally designated scenic corridors and there would be no significant impacts on aesthetic and visual resources within locally designated scenic corridors.

4.8 Land Use

This section presents the likely effects to land use that would result from implementation of the Proposed Action and the No Action Alternative.

For purposes of this EA, the Proposed Action would be considered to have an impact if it would cause:

- Inconsistency with an applicable land use plan that covers federally-administered lands.
- Inconsistency with the California Coastal Act or applicable Local Coastal Program (LCP) land use policies.
- Inconsistency with local General Plan land use policies.

4.8.1 Proposed Action

Construction and operation under the Proposed Action would not conflict with applicable land use plans for federally-administered public lands, would not be inconsistent with the land use policies of the California Coastal Act or its applicable LCPs, and would not be inconsistent with land use plans and policies associated with the local agency General Plan(s).

The LTE equipment would be installed at sites that have been previously developed and are currently occupied by a police, sheriff, or fire station, or other public facility that transmits and receives public safety radio signals.

A. Direct Impacts

Consistency with Plans for Federally-Administered Lands

Bureau of Land Management: The Blue Rock (BRK) Site is located on public land administered by the BLM, but is not located on land with a designated multiple-use class under the CDCA Plan that would otherwise restrict land uses. Therefore, land use guidance under the CDCA Plan would not be applicable at BRK. Because the site is previously authorized as a communication facility (and a communication tower exists at this location), implementation of the Proposed Action would not result in any change to the existing land use and would be consistent with the CDCA Plan land use policy. Therefore, no significant impact would result. As required, application would be made for a new right-of-way (SF299) permit or a modification of the existing permit.

U.S. Army Corps of Engineers: LAFD088 Site is located on public land administered by the USACE, and generally within the Sepulveda Basin Plan (Basin Plan) area. The Basin Plan does not include land use policy guidance specific to the Proposed Action. Further, the site does not have any habitat or recreation resources that are managed under the Basin Plan and the property is previously developed with a fire station (LAFD088). Implementing the Proposed Action would not result in any substantial change to the existing public facility use. Therefore, no significant impact would result. As required, the Authority would obtain a new or amended outgrant prior to construction at this site.

U.S. Forest Service: Two LTE sites (BUR and LACFCP09) within the ANF are regulated by the ANF LMP development standards and guidelines. Both sites are located within the BC zone, which allows communication facilities in designated areas that are specifically listed in the ANF LMP as designated communications sites, and when a SUP is obtained from the USFS.

The ANF LMP includes a land use plan and development standards for telecommunication facilities that influence their location, type of use and development characteristics. Consistency with the Forest Plan is evaluated on a site-specific basis, considering land use designation, surrounding uses, and access. Site BUR is a previously designated communications site. LACFCP09 is previously developed with a fire station having communication equipment but not currently designated as a communications site.[155] As a result of the early consultation process for this EA and the Proposed Action, the USFS has been established as a cooperating agency, as provided pursuant to 40 CFR 1501.6.[156] In this role, the USFS will review this EA and related environmental and technical documents and complete a mandatory public scoping and notice process prior to making a final determination on the project for the two sites within the ANF.[157]

By letter dated February 11, 2014 and through the consultation process, USFS requested Authority staff to investigate the feasibility of two sites as potential alternatives to site LACFCP09. These sites are known as Loop Canyon and Contractor's Point. The Authority investigated the feasibility of these sites, both of which are located within a half mile of site LACFCP09, and determined they were not technically feasible as they would not effectively support the LTE system as a whole, and would not meet the criteria for site selection set forth in Chapter 1, including the requirement to construct all sites within the grant performance period. The Authority is therefore working with the USFS to ensure that any facility constructed on LACFCP09 (and BUR) will be consistent with the Forest Plan.

Part 3 of the ANF LMP establishes specific design guidelines for communications sites within the ANF. Included within the guidelines are height restrictions and BMPs. The ANF LMP requires that new communication facilities be no taller than existing towers, and also less than 199 feet. The proposed tower facility at BUR is to be 30-foot high (45 feet with appurtenances), while the proposed facility at LACFCP09 is a 70-foot monopole (85 feet with appurtenances). Existing communication facilities are located at each site, but with no towers of comparable type or equipment. Because site BUR is previously developed with public agency facilities, including existing communication equipment, implementation of the Proposed Action would not result in any substantial change from the existing use at this location. Although existing communication facilities are located at site LACFCP09, implementation of the Proposed Action would be inconsistent with the ANF LMP because this location is not a designated communications site. In order for the Proposed Action to be implemented at site LACFCP09, the USFS would need to approve this site for

155 Contreras, Thomas A., U.S. Department of Agriculture, Forest Service. Letter to Frank Monteferrante, National Telecommunications and Information Administration. February 11, 2014. Regarding the Los Angeles Interoperable Communications System.

156 40 CFR 1501.6. Internet: http://cfr.vlex.com/vid/1501-6-cooperating-agencies-19834872. Last accessed February 13, 2014.

157 Contreras, Thomas A., U.S. Department of Agriculture, Forest Service. Letter to Frank Monteferrante, National Telecommunications and Information Administration. February 11, 2014. Regarding the Los Angeles Interoperable Communications System.

communications uses and adopt an amendment to the ANF LMP to designate the location as a communications site. Because an amendment is required, a land use impact would result if site LACFCP09 is implemented under the Proposed Action. BMPs already required under Part 3 of the Forest Plan would minimize effects to the environment during the construction phase.

In conclusion, implementation of the Proposed Action would not directly conflict with the land use plans of federally-administered lands by the BLM or USACE because the CDCA Plan and Basin Plan, respectively, are not applicable. The Proposed Action would not be consistent with the ANF LMP at one of the two LTE sites proposed on the ANF because an amendment is needed to approve the Proposed Action for use of site LACFCP09 before installation could proceed. The amendment is needed to allow construction at a site not designated for communications site use. An additional amendment may be necessary if it is determined by the USFS through its consistency review that the Proposed Action cannot meet SIO requirement per standard S10 of Part 2 of the ANF LMP.

Sites within Contiguous Boundary of ANF Not Administered by USFS: As discussed in Chapter 3.8, three sites (LACF078, LACF157, LACFCP14) are located on lands within the contiguous boundary of (i.e., surrounded by) the ANF, but not administered by the USFS. The County and the USFS would jointly review these sites pursuant to the County General Plan and the underlying zoning, and through the County's development permit process to coordinate compliance with applicable resource management policies.

Consistency with Coastal Act and Local Coastal Plans

Development within the CZ is governed by the respective LCP or directly by the Coastal Act for LTE sites located within the CZ as described in Section 3.8.2 of this EA. Fifteen LTE sites (LACF053, LACF069, LACF071, LACF072, LACF088, LACF099, LAFD049, LALG-100, LALG-300, LALG-HQ, LBFD006, LBFD021, MBFD001, RDNBPD, and SMFD002) would be located within the CZ management area, and must therefore comply with the applicable coastal planning regulations. Compliance includes obtaining a coastal development permit (CDP) for each site within the CZ. During the CDP application process, each site would be reviewed for consistency with the Coastal Act.

Each certified LCP includes a land use plan and development standards or policy measures to implement the plan (such as zoning ordinances), which influence the physical characteristics of development, including telecommunication facilities. Certain cities, such as Malibu and Rancho Palos Verdes, protect coastal views to the extent that even relatively minor obstructions can be considered substantial. Determination of impacts in the context of coastal plan consistency uses the Coastal Act (Chapter 3) as a minimum standard and evaluates each site for slope, surrounding uses, visibility and accessible coastal resources. Some local agencies have adopted more specific or restrictive standards. Applicable CZ land use policy for each of the 15 CZ sites is summarized in Table 3.8-1 of this EA.

In summary, CZ land use policy for all 15 sites is both limited and broad, and with a few exceptions is non-specific to communication facility projects. None of the coastal programs for the 15 LTE sites preclude communication facility projects as an allowed use. In the cities of Rancho Palos Verdes and

Long Beach, as well as the Port of Los Angeles, facilities that are for government or emergency service agencies are exempt and thus are consistent within the CZ. In the cities of Malibu, Santa Monica, Manhattan Beach and Redondo Beach, communication facilities are specifically allowed when consistent with specified development standards, and thus are also a consistent use within the CZ. Chapter 3 of the Coastal Act does not specifically recognize communication facilities as an individual use, but requires that new development be found consistent with the Act's policies. Communication facilities developed under the Proposed Action would be intended for the benefit of the public and the service created by the LA-RICS LTE system would indirectly serve to protect existing resources and development throughout the CZ. Therefore, the land uses of the Proposed Action would be consistent with Chapter 3 policies of the Coastal Act.

The cities of Malibu, Santa Monica, Los Angeles and Redondo Beach establish specific height restrictions for development within the CZ. Both Malibu and Los Angeles (for the Venice area) have adopted height restrictions of 28 feet, while Santa Monica and Redondo Beach have height restrictions of 45 feet. The LTE monopoles proposed at sites LACF071, LACF088, LACF099, and LALG-300 would be 28 feet (35 feet with appurtenances), and would therefore be consistent with height restrictions of the Malibu LCP. The LTE monopoles proposed at sites SMFD002 and RBNDPD would be 44 feet (45 feet with appurtenances), and would therefore be consistent with height restrictions of the Santa Monica Coastal Policy/LUP and the Redondo Beach LCP. Because other height restrictions are not specifically established, or do not apply to government agency facilities, the remaining LTE sites within the CZ are also considered consistent with height restrictions under the Coastal Act or respective LCP. No other development restrictions apply.

Because the development proposed at the LTE sites is consistent with the Coastal Act and applicable LCP land use policies, the Proposed Action would have no significant direct impact related to the land use policies of these coastal programs. Further, because a finding of consistency must be made by the administering agency at the time the CDP is issued, the required permitting process would assure that consistency with the Coastal Act and applicable LCP is demonstrated and conditioned through permit approval.

To ensure that findings of consistency can be made and thus demonstrate consistency prior to a final decision on public funding, which must occur prior to administration of CDPs at the local level, the Authority initiated consultation with the CCC, which is the designated state authority for Consistency Findings with the CCMP. By letter dated April 24, 2014, the CCC issued a No-Effects Determination (NE-0004-14), concluding that federal funding of the Proposed Action would not adversely affect coastal resources and is consistent with the CCMP.[158] Prior to construction of project facilities at any of the 15 sites within the CZ, the Authority will obtain CDPs from the CCC and/or local governments.

[158] Lester, Charles, California Coastal Commission. Letter to Patrick J. Mallon, Los Angeles Regional Interoperable Communications System Authority. April 24, 2014. Regarding No-Effects Determination NE-0004-14 (Federal Funding for Public Safety Broadband Network, Los Angeles County).

Consistency with Airport Land Use Plans

Sites within the Los Angeles County ALUCP area were reviewed for compatibility with airport uses. Nine LTE sites (LACF129, LACF162, LACF005, LACF080, LACF095, LACF114, LASDLNX, LBFD026, and MLM) are located within boundaries of five County airport land use plan areas, which include the plans for the Los Angeles International, Palmdale, Van Nuys, Long Beach, and Fox Airfield airports. Because these sites are within an airport influence area, development associated with the Proposed Action would be required to comply with the land use policies of these airport plans. Relevant land use policies for the airport plans are discussed in Section 3.8.3 of this EA.

Site MLM is within compatibility zone E of the Fox Airfield Plan. Thus, development at this site must not create a hazard to flight or interfere with visual or electronic communication. Proposed development at site MLM is limited to 85 feet maximum (inclusive of all appurtenances). Thus, the Proposed Action would not require airspace review by the local Airport Land Use Commission (ALUC) because the proposed structures would not exceed 100 feet in height. However, development at MLM would require review by the FAA because the structure would be located within an imaginary plane that meets the criteria for FAA notification[159] (see discussion in Section 3.11, Health and Safety, of this EA). FAA review would ensure that the final design does not result in interference with visual or electronic communications. Therefore, development of the MLM site would be considered to be consistent with the land use policies of the ALUCP.

Proposed development at each of the other eight LTE sites within an airport land use plan area must be consistent with the County ALUCP. Proposed development at each of these eight LTE sites is limited to 85 feet maximum (inclusive of all appurtenances). None of the sites is located within a runway protection zone (RPZ). Site LACF162 is located immediately adjacent to a RPZ and final design would ensure that the proposed communication facility is not within the RPZ.

Each of the eight sites would require review by the FAA because the structure(s) would be located within an imaginary plane that meets the criteria for FAA notification (see discussion in Section 3.11, Health and Safety, of this EA). FAA review would ensure that the final design does not result in interference with visual or electronic communications and is consistent with height restriction standards and procedures set forth in FAA Federal Aviation Regulations (FAR) Part 77. Therefore, development at all eight of these LTE sites would be considered to be consistent with the land use policies of the ALUCP.

As discussed in Section 3.8.3 of this EA, applicable land use policies are:

G-4 Prohibit any uses which will negatively affect safe air navigation.

[159] The airport imaginary surfaces are established with relation to the airport and to each runway with the size of each such imaginary surface based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end. Internet: http://www.airspaceusa.com/FAR_77.25_Civil_Airport_Imaginary_Surfaces.htm. Last accessed January 15, 2014.

S-2 Prohibit above ground storage of more than 100 gallons of flammable liquids or toxic materials on any one net acre in a designated runway protection zone. It is recommended that these materials be stored underground.

S-3 Prohibit, within a runway protection zone, any use which would direct a steady light or flashing light of red, white, green or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following take-off or toward an aircraft engaged in a final approach toward landing at an airport.

S-4 Prohibit, within a designated runway protection zone, the erection or growth of objects which rise above an approach surface unless supported by evidence that it does not create a safety hazard and is approved by the FAA.

S-6 Prohibit uses which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation.

S-7 Comply with the height restriction standards and procedures set forth in FAR Part 77.

Because all nine LTE sites located within an ALUP area would be consistent with that plan, the Proposed Action would have no significant direct impacts. Further, all 231 LTE sites would be required to be compliant with FAA regulations to ensure that development is conducted under strict regulations to promote aviation safety. For sites located on or requiring access to airport property, the Authority must first obtain approval from the applicable airport owner/operator, such as the City of Los Angeles Department of Airports (for sites located at LAX) and City of Hawthorne (for site LACF162). Such authorization would occur through lease and access agreements obtained by the Authority prior to implementation of the Proposed Action.

Consistency with Local Land Use Plans

Consistency with County of Los Angeles General Plan: Ninety-five of the LTE sites are either located within unincorporated Los Angeles County (4 sites), owned by Los Angeles County and within unincorporated County area (32 sites), or owned by Los Angeles County but within incorporated city areas (59 sites). Three of these sites are administered by federal agencies (i.e., BLM and USFS), and one site is owned by another non-County entity (Los Angeles Department of Water and Power). The three sites on public lands administered by federal agencies are regulated by the applicable federal agency plans (see discussion above). Through a cooperative effort, federal agencies may coordinate with local agencies to achieve consistency with local land use plans, policies and regulations.

Except as discussed below, the Los Angeles County General Plan land use policies do not specifically address communication facility uses, and the General Plan (due to its general nature) lacks specific or detailed development standards that could establish design requirements. None of the development proposed for the 95 County-owned (located both within unincorporated County and incorporated City areas) or County-located sites would be inconsistent with the Los Angeles County General Plan or its land use based policies.

Two area plans that are components of the Los Angeles County General Plan and which address the Santa Monica Mountains, do include land use policies that specifically address communication facility uses. As discussed in Section 3.8.4, the Santa Monica Mountains Land Use Plan (SMM LUP) was (conditionally) adopted on April 10, 2014. As a result, sites LACF069 and LACF072 would be required to be consistent with land use policies of that plan, including policies CO-152, LU-50 and LU-51, which would require these two LTE sites to be sensitively designed and located so as to limit visual and safety impacts.

Seven of the County-owned sites (BMT, BRK, LACF065, LACF083, LACFCP09, LACFCP14, and SVP) are located within a County-designated Significant Ecological Area (SEA). These sites would be developed in a manner consistent with SEA policy requirements (see Section 3.8.4), which in turn requires that project activity be compatible with SEA resources. Because the analysis in Section 4.5 (Biological Resources) of this EA identified no significant effect to biological resources at the sites within an SEA, it is anticipated that the Proposed Action would be consistent with SEA policy requirements.

Consistency with Other Local Land Use Plans, Policies and Regulations: A total of 134 LTE sites are non-County owned and located within incorporated limits of 72 cities. In addition, one site is administered by the USACE, and one site is owned by the state of California. As discussed above, the one site on public lands administered by a federal agency is regulated by the applicable federal agency plan (i.e., USACE Basin Plan). Through a cooperative effort, federal agencies may coordinate with local agencies to achieve consistency with local land use plans, policies and regulations.

Fifty-seven of the 134 sites are owned by the City of Los Angeles. The City of Los Angeles owns one additional site (for a total of 58 sites) that is located in unincorporated Los Angeles County. Not including those sites within the City of Los Angeles, there are 77 other non-County owned LTE sites located within the incorporated areas of other cities (i.e., other than the City of Los Angeles), including one site in the city of La Habra in Orange County. These 77 sites are located on public agency property owned by the city in which the site is located.

Although development of the Proposed Action on sites (both County-owned and non-County owned) within incorporated city areas may be exempt from certain local zoning and land use based ordinances, development at these locations would be required to comply either with the County or the local agency land use policies.

This EA also considers local land-use plans, policies, and regulations to determine whether the Proposed Action would be consistent with them and whether any inconsistencies indicate the potential for environmental impacts. All but two sites would be consistent with local agency plans. These two sites (LHS and LALG-HQ) that have potential to be inconsistent are discussed below. Because the other LTE sites are anticipated to be substantially consistent with local agency land use policies, no significant impact is expected at 132 city-owned sites.

One County-owned site (LHS) is located at the Lost Hills/Malibu Sheriff's Station in the City of Calabasas. The Calabasas General Plan prohibits WTFs within the U.S. Highway 101 (Ventura Freeway) corridor, a locally-designated scenic corridor. Approximately one-third of the northern

portion of the LHS site is located within the scenic corridor boundary (the edge of which is established at a distance of 500 feet from U.S. Highway 101). City of Calabasas development standards further require that all WTFs within the city be designed to camouflage the facility. The precise location of LTE equipment within the LHS site would be determined through final project design. The property appears to have sufficient area to set back the facility adequately from the scenic corridor. Further, local policy requires that the design of WTFs utilize camouflage techniques acceptable to the City of Calabasas. It is expected that proposed development at LHS could demonstrate consistency with the Calabasas General Plan and local policy and regulations by locating the LTE structures a minimum of 500 feet from U.S. Highway 101 and outside of the local scenic corridor boundary and incorporating stealth technology to disguise the proposed tower structure, thus ensuring compatibility of the LTE use at this location. Because it is anticipated that these design accommodations could be made through final design and in cooperation with the City of Calabasas, development of the Proposed Action at LHS would be substantially consistent with the Calabasas land use policies and its General Plan, and no significant impact is expected.

Site LALG-HQ, located within the lifeguard headquarters facility at Venice beach, is owned by the City of Los Angeles and is in the city's incorporated area. The Venice CZ Specific Plan (which is a part of and implements the Los Angeles City General Plan) establishes both land use policy and zoning regulation for the LALG-HQ site.[160] Under the Venice CZ Specific Plan, development at Site LALG-HQ is limited to 28 feet in height. However, the Authority is exempt from the city's zoning requirements pursuant to the doctrine of intergovernmental immunity. Nevertheless, the Authority is committed to working cooperatively with the City of Los Angeles to address any concerns it may have regarding construction of LTE facilities at Site LALG-HQ. Even with the proposed installation of a 70-foot monopole and appurtenant equipment that could reach a total height of 85 feet development of the LTE facility at this location would not result in a significant aesthetic impact (see Section 4.7, Aesthetic and Visual Resources). Accordingly, proposed activities are anticipated to be consistent with the Coastal Act (see discussion above) and would not result in any significant environmental impact to surrounding land uses. Therefore, no significant impact is expected.

Indirect Impacts

Policy and plans for the federal, state and local land use planning components are required to be comprehensive, balanced and internally consistent so that land use applications that are implemented account for potential indirect land use impacts.

Further, because implementation of the Proposed Action would not directly involve conflicts with the existing land use environment and would be substantially consistent with land use policies associated with the federally-administered lands, the state Coastal Plan and its LCPs, County ALUPs, and the local General Plans, no indirect land use effects associated with the Proposed Action were identified. No significant indirect impacts are anticipated.

[160] Los Angeles, City of. 2003. *Venice Coastal Zone Specific Plan*. Los Angeles, CA: Author. December 2, 2003.

4.8.2 No Action Alternative

Under the No Action Alternative, all LTE sites would remain at their present developed status, and no LTE telecommunication infrastructure or related facilities would be installed. No new significant impact (direct or indirect) to land use would be associated with the No Action Alternative.

4.9 Infrastructure

4.9.1 Proposed Action

Utility Disruption

When construction occurs in an urban setting, crews may experience constraints associated with underground pipelines, communication cables, and similar urban infrastructure crossing a particular LTE site. Excavation for the monopole foundations would extend to a maximum depth of 35 feet below ground surface and this activity has potential to directly impact existing utility systems through a service disruption.

However, it is unlikely that construction crews would uncover previously unknown systems. As part of the engineering design process, the contractor would prepare a comprehensive survey report for each site under consideration. The contractor would contact the utility providers in order to locate and map all underground utilities as part of this engineering design process. The report would include an evaluation of all electrical, mechanical, structural, and civil requirements, and associated services available to each proposed site. This report would also identify any planned or proposed improvements/upgrades or modifications necessary to construct and operate the system at a particular LTE location. During final engineering design consideration would be given to existing utility system constraints, and plans would be made to avoid them as necessary. Finally, unintended damage caused during excavation or construction of the LTE system would be repaired immediately by the contractor at the contractor's expense. Therefore, no significant impacts (direct or indirect) are anticipated.

Electricity

Construction activity associated with the Proposed Action would require minor amounts of energy for power hand tools, lights, and construction equipment. This demand would be short term, ending when construction is completed.

Operation of the LTE system would create an estimated peak demand of approximately 69.3 megawatt-hours per day and total annual energy demand of approximately 25.3 gigawatt-hours. Based on the information provided in Section 3.9, Table 3.9-1, the total annual generation capacity of the electrical utilities providing electricity in the study area is 117,046 gigawatt-hours. The increase in demand for energy generated by the Proposed Action would be less than 0.1% of existing total annual generation capacity of the electrical utilities serving the area of the Proposed Action. The demand from sites within the service areas identified in Section 3.9 would also be a small fraction of the capacity of the relevant service providers identified in Table 3.9-1. Therefore, there will be no significant direct impacts to electrical supply, and no indirect impacts have been identified.

Solid Waste

Construction activity is anticipated to account for the majority of the solid waste generated during the lifespan of the Proposed Action.

During the construction phase, waste such as concrete, asphalt, packing material, plastics, cardboard, food packaging, vegetation and other debris would be generated to varying degrees at all 231 LTE sites. The type and amount of waste generated would be unique to the circumstances of each LTE site and the majority of the waste generated would be sent to unclassified landfills. Based on the guidance provided by the EPA for estimating amounts of construction and demolition materials for non-residential development (EPA, 2003), solid waste generated during construction of the Proposed Action is estimated to be 228 tons. Total currently-permitted unclassified landfill capacity in Los Angeles County is estimated to be 64.1 million tons. Therefore, solid waste generated as a result of construction of the Proposed Action would be less than 0.001% of current remaining landfill capacity.

Considering the sufficient remaining permitted capacity of unclassified landfills in Los Angeles County, solid waste generated during construction of the Proposed Action could be accommodated. There would be no significant impact (direct or indirect) to solid waste management.

Water

Limited amounts of non-potable water would be required during construction to suppress dust, stabilize stockpiled soils, and for cleanup at job sites. Concrete would be mixed at a central location for delivery as needed. Due to the small size of land disturbance requiring dust suppression at each LTE site (up to 3,600 square feet), the demand for water during construction at an individual LTE site would be limited and existing water connections located at 226 of LTE sites would be sufficient to meet construction demand. Water would be transported to five LTE sites (BMT, BRK, BUR, PHN and SVP) where existing plumbing connections might not be available.

During the operations phase, no demand for water (potable or non-potable) is anticipated.

In the greater Los Angeles region, total water supply for a single dry year is estimated to be approximately 2.55 million acre-feet/year (AFY).[161] The total demand for water during construction would be minor compared to regional water supply estimated by the Integrated Regional Water Management Plan. Since the Proposed Action does not have a long term water demand component, and given the current supply estimates, short term construction water demand generated by the Proposed Action would be minor and within the capacity of existing water supply systems. No significant impacts (direct or indirect) on water supply would be expected under the Proposed Action.

Transportation

During the construction phase, vehicle trips would be generated by workers traveling to and from the LTE sites, delivery of building materials, construction equipment, and other supplies, and removal of construction debris and waste during cleanup. System components would be pre-installed at manufacturers' facilities to be shipped and stored locally with the construction materials at a central location or multiple warehouses.

[161] Los Angeles County Flood Control District, Greater Los Angeles County Integrated Regional Water Management Plan, Region Acceptance Process Application, April 28, 2009, Page 25.

Construction-related traffic impacts would be short term and localized, involving potential lane narrowing at a driveway or detours in the parking lots of existing facilities. This could temporarily impair access on an adjacent roadway, potentially creating traffic hazards and limiting emergency access. With the implementation of TRANS MM 1, listed below, temporary impacts on access and circulation during the construction phase would be minimized. Vehicle trips generated during construction would not be of sufficient volume to affect the level of service of any roadway. After construction, vehicle trips associated with operations at each LTE site would be limited to those required for occasional inspections, maintenance, and repair. Vehicle trips generated during operations would not be of sufficient volume to affect the level of service of any roadway.

For these reasons, construction and operation of the Proposed Action would result in no significant impacts (direct or indirect) on access and circulation.

Public Safety Telecommunications

Implementation of the Proposed Action would have a beneficial impact on the public safety communication system. For law enforcement, the Proposed Action would enable transfer of data and communications to officers in the field that improve situational awareness and provide the opportunity for comprehensive identification. For fire fighters, the Proposed Action would improve situational awareness by enabling a firefighter to use a handheld device to download the floor plans of a building before arriving at the scene of an emergency.

Mitigation Measures

With implementation of the following mitigation measure, there would be no significant impacts associated with access and circulation during the construction phase of the Proposed Action.

TRANS MM 1: The construction contractor would be required to maintain site access roads in passable condition during the time project work is being performed at the site. Use of standard construction traffic control practices such as flagmen, warning signs, and other measures, would be implemented to ensure adequate vehicle circulation at all times.

4.9.2 No Action Alternative

The No Action Alternative would not increase energy demand. Similarly, the No Action Alternative would not generate solid waste, require water use, impede vehicle access, or affect telecommunications. No significant impacts (direct or indirect) to infrastructure are anticipated under the No Action Alternative.

4.10 Socioeconomic Resources

This section analyzes the potential for disproportionate human health and environmental effects of the Proposed Action and the No Action Alternative on environmental justice populations.

4.10.1 Proposed Action

This analysis identifies human health and environmental effects resulting from the Proposed Action to determine whether these effects would be felt disproportionately by the environmental justice populations identified in Section 3.10 and Appendix G-1.

The analysis of socioeconomic resources has not identified any disproportionate direct impacts resulting from the Proposed Action on the local communities, specifically on low-income and minority populations. There would be no significant impact from the construction and operation of the Proposed Action to such socioeconomic factors as accessibility to community services, community well-being, employment, economic development, and housing impact . In fact, the Proposed Action would actually help in increasing public safety for the local communities by providing a single interoperable communication system that can be operated by all agencies and result in a positive effect that extends beyond any defined study area or affected area. The analysis in this EA also has not identified any significant indirect impacts of the Proposed Action. For these reasons, the Proposed Action is not anticipated to create disproportionate health and environmental impacts, either direct or indirect, to low-income and minority populations. Therefore, environmental justice populations would experience no significant and disproportionate direct or indirect effects related to socioeconomic resources.

4.10.2 No Action Alternative

Under the No Action Alternative, no socioeconomic resources would be affected. Low-income and minority populations would experience no disproportionate significant impacts. The existing public safety communication system would continue to rely on commercial telecommunication services and operate with gaps within the network. Residents, businesses, and institutions would continue to operate as is, without the benefit of having a single interoperable communication system that can be operated by all public agencies. No significant impacts (direct or indirect) are anticipated under the No Action Alternative.

4.11 Human Health and Safety

4.11.1 Proposed Action

A. Direct and Indirect Impacts

Hazardous Materials

Construction of monopole towers on the grounds of any of the 25 facilities with an active LUST on file or located within one mile of the eight NPL sites would have a potential to directly expose workers to contaminated soil and/or groundwater during excavation activity. To address this potential hazard HS MM 1 has been identified which requires the construction contractor to prepare a Phase I Environmental Site Assessment to investigate and characterize these 33 LTE sites before construction proceeds. If additional study is deemed warranted, then a Phase II investigation would be conducted to determine levels of contamination. If the Phase II determines that human contact with contaminated soils would occur, then the Authority must mitigate safety risks prior to undertaking construction activity. With implementation of the identified mitigation measures, no significant direct impacts to human health would be associated with potential soil contamination.

Where dewatering is required during soil excavation, then the construction contractor must file a Notice of Intent for the discharge to surface waters of treated or untreated groundwater from dewatering operations and other wastewaters in accordance with the requirements of the General NPDES permit issued by the Regional Board. If the discharge is eligible under the terms of the general permit, the contractor would be notified and the appropriate monitoring and reporting program would be prescribed. To be covered under this general order, the construction contractor must demonstrate that pollutant concentrations in the discharge would not cause violation of any applicable water quality objective for the receiving waters, including discharge prohibitions, and that discharge would not exceed the water quality criteria for toxic pollutants. The contractor must demonstrate compliance through laboratory analysis using a representative sample of groundwater or wastewater to be discharged. The sample is analyzed and the data compared to the water quality screening criteria for the constituents listed in the Basin Plan to determine compliance. If the analytical test results exceed the water quality screening criteria, then a reasonable potential for discharge of toxics is considered to exist and treatment would be required before discharge would be allowed.

No significant indirect impacts associated with the Proposed Action would be expected given that the proposed use does not include any structure that would store, utilize, or generate hazardous materials during operation.

With implementation of mitigation measures, and compliance with existing regulations governing dewatering, no significant impacts (direct or indirect) associated with hazardous materials would occur during construction.

Worker Safety

All trenching or excavation of foundations and utility connections would be conducted consistent with Cal/OSHA regulations for safety, including those outlined in California Code of Regulations, Title 8, Section 1540, Excavations. Provided that all Cal/OSHA safety procedures are followed, the Proposed Action would not cause a significant impact (direct or indirect) to worker safety.

Aeronautical Hazards

The FAA has purview over promotion of air safety and efficient use of navigable airspace in the United States. Part of FAA's mandate is to evaluate potential obstructions (including communication towers) using the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) process and determine whether a proposed construction or alteration would be a hazard to air navigation. After reviewing proposed antenna structures submitted for review, FAA provides determinations on sites that have no impact on air safety, and provides further review/public noticing requirements for sites that may impact air safety. FAA always requires that aeronautical studies be conducted when obstructions exceed 200 feet above ground level (AGL), but uses a glide-slope calculation for obstructions less than 200 feet to determine if notification to FAA is required. This glide-slope calculation is based on tower height and proximity to FAA-listed airports or heliports; generally the closer to these airport or heliport facilities, the greater the restrictions (including height and lighting restrictions). Because none of the antenna support structures proposed for use in the proposed LTE system would be higher than 85 feet AGL, the glide-slope calculation is used for evaluating all sites. FAA has requested that 1A level surveys be conducted at each of the four on-airport LTE sites and these surveys are being undertaken.

NTIA initiated coordination in March 2014 with the FAA on the notification requirements for the proposed LTE antenna structures under Part 77 of FAA regulations as well as the FAA's obstruction evaluation and public notification process. A total of 129 sites met FAA's obstruction evaluation criteria requiring notification under 14 CFR Part 77 and filing of FAA Form 7460-1, Notice of Proposed Construction or Alteration. FAA has recommended that voluntary notification be made for all proposed LTE antenna structures as best practice, and therefore all 231 proposed LTE sites have been submitted to FAA for further review.

As part of the coordination process with FAA, NTIA contacted FAA senior management to facilitate fast-tracking of site reviews for each of the proposed LTE sites. To facilitate tracking the 231 sites as they progressed through the FAA approval process, a spreadsheet of the 231 sites that included output from the FAA OE/AAA process was developed. FAA review of the individual sites is continuing. (See Appendix I.)

For proposed sites on NFS lands, should the FAA require obstruction lighting on any proposed antenna structure, the Authority will request a lighting study such that the lighting required for air navigation safety would be acceptable to USFS.

Any site located within the airport influence area of an airport subject to the Los Angeles County ALUCP would be required to comply with the land use policies of that airport's plan. Compliance with these plans, in addition to FAA regulations, would ensure that no significant impact (direct or

indirect) to aviation safety due to implementation of the Proposed Action would occur. Refer to the land use analysis in Sections 3.8 and 4.8 of this EA for more information.

Wildland Fires

LTE sites located in fire hazard severity zones are depicted in Figures 3.11-2 and 3.11-3. Those 42 project sites located in the Santa Monica Mountains, ANF, and other remote parts of Los Angeles County are located within a high fire hazard severity zone based on some combination of rugged topography, limited or poor access, presence of combustible vegetation, and lack of urban fire services.

During the construction phase, equipment, vehicles, and personnel activities would be governed by an approved fire management plan to prevent potential fire ignition and guide activities in the event a small fire were to ignite (see HS MM 2). That plan would be developed and approved by the Authority and other land management agencies (e.g., USFS, BLM, etc.) with administrative authority and responsibility. With implementation of the fire management plan, no significant impacts would occur.

Methane Gas

Placement of structures at the seven sites located within 200 feet of an oil well or 1,000 feet from a landfill (see Table 3.11-5) could allow pockets of methane to collect beneath foundations or seep through soil and collect in structures where it represents a combustion hazard. Compliance with existing state regulations and Los Angeles County ordinance described above in Section 3.11.1 that require inclusion of methane gas collection, ventilation, or other commercially available control measures would avoid hazards to human health associated with exposure to methane from wells and landfills. No significant impacts (direct or indirect) would occur as a result of the Proposed Action.

Fifteen LTE sites are proposed on land listed as either a Methane Hazard Zone or Methane Buffer zone by the City of Los Angeles. Placement of structures at these locations could allow pockets of methane to collect beneath foundations or seep through soil and collect in structures where it represents a combustion hazard if not properly mitigated as outlined in HS MM 4 3. With implementation of mitigation measures, placement of structures at these 15 LTE sites would have no significant impact. No significant indirect impacts have been identified.

B. Mitigation Measures

HS MM 1: Prior to construction activity on the LTE sites listed in Tables 3.11-1 and 3.11-2, the construction contractor must prepare a Phase I Environmental Site Assessment meeting the standards outlined in the American Society for Testing Materials (ASTM), Practice for Limited Environmental Due Diligence: Transaction Screen Process E 1528. At locations where the Phase I determines there is a potential to expose workers to contaminated soils then a Phase II investigation meeting ASTM standard E1903 for Phase II Environmental Site Assessments, must be conducted to determine the nature and extent of the

contamination. If it is determined that levels of contaminants in the soil exceed Permissible Exposure Levels (PEL), then the contractor will prepare an action plan in consultation with the Local Enforcement Agency to ensure proper handling and removal, as required.

HS MM 2: Prior to construction activity, the Authority must work with the agency responsible for fire protection to develop and implement a fire management plan for use during construction activity on those LTE project sites proposed in areas designated as high fire hazard severity zones. The plan will contain notification procedures and emergency fire prevention and control measures.

HS MM 3: The Authority must include methane gas collection, ventilation, or other commercially available control measures into the design of the fifteen LTE Project sites located in a Methane Hazard Zone.

4.11.2 No Action Alternative

The No Action Alternative would not result in any contact with hazardous waste and would therefore, not affect human health and safety pertaining to the handling, storage, and disposal of such material.

Similarly, the No Action Alternative would not interfere with aeronautical navigation or conflict with an adopted airport land use compatibility plan.

The No Action Alternative would not place structures in a very high fire hazard severity zone nor does this alternative site structures near oil wells, landfills, or in methane hazard zone.

No significant impacts (direct or indirect) associated with the No Action Alternative have been identified.

4.12 Cumulative Effects

NEPA defines a cumulative impact as an "impact on the environment which results from the incremental impact of the action when added to other present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR § 1508.7). The following analysis makes no attempt to catalogue and describe the environmental effects of past projects. The contribution of past actions to the cumulative effects of the Proposed Action is reflected in baseline environmental conditions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects. This approach is consistent with the interpretive memorandum issued by CEQ dated June 24, 2005 that states: "agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions."

4.12.1 Determination of Present and Reasonably Foreseeable Future Projects

The cumulative projects selected for inclusion in the analysis varied according to the topic under consideration. For instance, impacts to air quality would be regional in nature as the emissions from construction and operation of the proposed project would not be restricted to the boundary of the site. Consequently, the cumulative impact analysis considered regional development in the air basin when evaluating cumulative air quality impacts. Environmental topics similar to that of air quality include hydrology and water quality, which are discussed in terms of watersheds.

In other cases environmental impacts, such as geology or soils related impacts, would be confined to individual sites, and would be based upon site-specific conditions. Impacts under these circumstances would not be influenced by development of a project at a distant location. Some impacts can be defined by a specific planning or service boundary, such as demand for electricity within the service area of a utility company. Topics that fit this type of boundary driven impact methodology include infrastructure and utilities.

Table 4.12-1 identifies planned or pending but yet to be constructed communication towers, commercial cellular antennas and other structures similar to the Proposed Action. These are projects that would be located within Los Angeles County and determined to have a potential to result in a cumulative impact that warranted study in the EA.

Table 4.12-1
Related Projects List

Project Name	Location	Project Type	Reason for Inclusion
LA-RICS Land Mobile Radio (LMR) Emergency Communications System	Multiple locations in Los Angeles County, CA	Installation of new lattice communication towers	The LMR project is planned on 41 of the proposed LTE sites. Potential for cumulative aesthetic, historic, and biological resource related impact.
New Wireless Application	4591 Park Granada, City of Calabasas, CA	Modification of existing wireless facility	Proposed near an LTE site. Potential for cumulative aesthetic and historic impacts.
New Wireless Application	4093 Old Topanga Rd, City of Calabasas, CA	New wireless telecommunication facility	Proposed near an LTE site. Potential for cumulative aesthetic and historic impacts.
New Wireless Application	24800 Cordillera, City of Calabasas, CA	Modification of existing wireless facility	Proposed near an LTE site. Potential for cumulative aesthetic and historic impacts.
New Wireless Application	27001 Agoura Rd, City of Calabasas, CA	Modification of existing wireless facility	Proposed near an LTE site. Potential for cumulative aesthetic and historic impacts.
New Wireless Application	Oat Mountain, Palo Sola Truck Rd, Los Angeles, CA	Modification of Existing Tower	Proposed within the Santa Susana Mountains on peak potentially visible from LTE sites. Potential for cumulative aesthetic impacts.
New Wireless Application	Mount Wilson, Los Angeles, CA	Modification of existing tower	Proposed within the Angeles National Forest. Potential for cumulative biological and aesthetic impacts.
Verdugo Peak Communication Facility Upgrade	1658 Vista Drive, Glendale, CA	Installation of new lattice tower	Proposed on peak potentially visible from LTE sites. Potential for cumulative aesthetic impacts.
Mount Lukens Communication Facility Upgrade	Mount Lukens, Angeles National Forest, CA	Installation of new lattice tower	Proposed within the Angeles National Forest. Potential for cumulative biological and aesthetic impacts.
New Wireless Application	6007 Reseda Blvd, Tarzana, CA	Installation of new monopole	Proposed near an LTE site. Potential for cumulative aesthetic impacts.
New Wireless Application	6318 S. Vermont Avenue, Los Angeles, CA	Installation of new monopole	Proposed near an LTE site. Potential for cumulative aesthetic impacts.
New Wireless Application	400 Lomita, El Segundo, CA	Installation of new monopole	Proposed near an LTE site. Potential for cumulative aesthetic impacts.
New Wireless Application	12438 San Fernando Road, Sylmar, CA	Installation of new antenna pole	Proposed near an LTE site. Potential for cumulative aesthetic impacts.
New Wireless Application	6805 Sierra Highway, Agua Dulce, CA	Installation of new monopole	Proposed near an LTE site. Potential for cumulative aesthetic impacts.

Source: https://wireless2.fcc.gov/ASR/service/nationalNoticeReport.faces

4.12.2 Cumulative Impact Analysis

A. Noise

The LTE sites are too far apart for their aggregate noise impacts to be considerable. Cumulative impacts at a given LTE site would result from contemporaneous construction of other projects near that site. Given the short-term nature of construction, no significant cumulative noise impacts are expected during the construction phase.

Operational noise impacts of the Proposed Action would not be substantial because resulting ambient noise levels are below 60 dBA beyond 15 feet. Therefore, no significant cumulative noise impacts are anticipated as a result of construction or operation of the Proposed Action.

B. Air Quality

The South Coast Air Quality Management District and AVAQMD emission thresholds were set to ensure that individual projects, when combined with other air pollution emitting activities in their jurisdictions, do not interfere with progress in meeting the National Ambient Air Quality Standards and CAAQS. In developing their attainment plans, the districts made various assumptions about growth in population and economic activity. The Proposed Action is not growth-inducing, and would not result in an economic activity that would violate the assumptions used in forecasting district-wide emissions. Therefore the project would have no significant cumulative impacts to air quality.

C. Geology and Soils

Development of the Proposed Action on each LTE site would comply with federal, state and county requirements, codes and permit conditions, as would all other cumulative projects. Assuming each future project implements these conditions and requirements, no significant cumulative impacts from seismic hazards and soil erosion would occur.

D. Water Resources

No significant cumulative impacts resulting from storm water and non-storm water runoff are anticipated because each LTE site would be developed using appropriate BMPs, and no significant site-specific impacts would occur.

E. Biological Resources

The Proposed Action has been designed to avoid significant impact on wetlands, riparian areas, and habitat of significant value. It would not harm any species protected by the Federal Endangered Species Act, the Native Plant Protection Act, the California Endangered Species Act, or habitat of species protected by these laws. No significant impacts on biological resources were identified. Additionally, no other reasonably foreseeable actions were identified that lead to an expectation of noticeable incremental increases beyond those described in that section. Given the above, no significant cumulative impacts (direct or indirect) would occur to biological resources.

F. Historic and Cultural Resources

Based on an analysis of existing cultural and paleontological resources in the area around proposed LTE sites and the proposed height for new monopole tower structures, it was determined that the APE would primarily comprise areas within several blocks around proposed LTE sites. Therefore, proposed projects involving the installation of new antennas, commercial towers, or improvements (such as height increment or replacement of existing communication towers) within 0.25 mile of a proposed LTE site were identified as potential projects that would affect the APE for the Proposed Action or potentially impact views in the APE. These projects are listed in Table 4.12-2.

Table 4.12-2
Projects Considered in Analysis of Cumulative Impacts on Historical and Cultural Resources

Proposed Project	Location	Nearest LTE Sites	Potential Cumulative Impacts
Modification of existing wireless facility (Includes the replacement of 12 existing antennas with three new antennas)	27001 Agoura Road, City of Calabasas, CA	LHS	Site LHS contains an existing lattice communication tower. Under the Proposed Action, installation of a 70-foot monopole on this site would be consistent with the existing visual setting and there would be no significant impacts (direct or indirect). The other communication project proposed in the vicinity of this site would decrease the number of existing antennas from 12 to three and have a beneficial impact within the APE. Therefore, there would be no significant cumulative impacts from the Proposed Action.
LA-RICS Land Mobile Radio (LMR) Emergency Communications System (Includes installation of new lattice towers)	41 different locations within Los Angeles County that are same as proposed LTE sites	LACF072, LACF099, LACF144, LACF157, LAPDVDC, LACF071, LACF084, LACF173, LAFD005, LAFD095, LACF056, LAFD079, LAFD084, LACF028, LACF151, LACFCP09, LASDCSN, ELSGDPD, LACF164, LACF169, LAPD077, LACF149, LAPDDVN, RDNBPD, LACF030, LAFD088, LACF091, WHD, LACF077, BUR, PHN, BMT, MTW, SCH, SVP, HUC, BRK, SWP, FCCF, CLM and MLM	The planned LMR project would place monopoles on 41 LTE sites, within areas having cultural resources that are protected by federal or state regulations. As discussed in Section 4.6, the Proposed Action would have no significant impacts (direct or indirect) on cultural resources associated with these sites. Development under the proposed LMR project would also be subject to environmental review. The LMR project would be developed in compliance with applicable plans and policies for cultural resources and mitigation measures would be implemented to minimize any potential impacts. Therefore, there will be no significant cumulative impacts (direct or indirect) within the APE of LTE project sites as a result of the Proposed Action.

Under the Proposed Action, new monopole towers would be free standing, self-supporting, hollow steel structures without guy wires. All LTE sites are located at developed public facilities including fire stations, police stations, medical centers or dedicated communication sites, most of which have existing communications infrastructure or tall structures such as fire hose towers. Implementation of the Proposed Action would be consistent with adopted plans and policies that protect cultural resources in the study area. As discussed in Table 4.12-2, project construction at all LTE Sites located in the vicinity of potential other projects (considered in the analysis of cumulative impacts) would have no significant impacts (direct or indirect) on cultural resources. Assuming that each of the cumulative projects is designed and operated in a manner consistent with pertinent land use

management plans, no significant cumulative cultural impacts would occur as a result of construction and operation of the Proposed Action.

G. Aesthetic and Visual Resources

Based on an analysis of existing landforms and topography in the area around proposed LTE sites and the proposed height for new monopole tower structures, it was determined that the APE or the local viewshed would primarily comprise areas within 0.25-mile buffers around proposed LTE sites. Therefore, for the purpose of analyzing cumulative impacts to aesthetic and visual resources, proposed projects involving the installation of new antennas, commercial towers, or improvements (such as height increment or replacement of existing communication towers) within 0.25 mile of a proposed LTE site were identified as potential projects that would affect the viewshed for the Proposed Action or potentially impact views in the APE. For the two LTE sites (BUR and LACFCP09) proposed on land administered by USFS, the buffer was extended to 0.5-miles to capture potential projects that would affect the viewshed for the Proposed Action in the Angeles National Forest. Potential other projects that were considered in the analysis of cumulative impacts are listed in Table 4.12-3, below.

Table 4.12-3
Projects Considered in Analysis of Cumulative Impacts on Aesthetic and Visual Resources

Proposed Project	Location	Nearest LTE Sites	Potential Cumulative Impacts
Modification of existing wireless facility (Includes the replacement of 12 existing antennas with three new antennas)	27001 Agoura Road, City of Calabasas, CA	LHS	Under the Proposed Action, installation of a 70-foot monopole on this site would be consistent with the existing visual setting and no significant visual impacts would occur. The other communication project proposed in the vicinity of this site would decrease the number of existing antennas from 12 to three and have a beneficial impact on local viewshed. Therefore, there would be no significant cumulative impacts of the Proposed Action.
LA-RICS Land Mobile Radio (LMR) Emergency Communications System (Includes installation of new lattice towers)	41 different locations within Los Angeles County that are same as proposed LTE sites	LACF072, LACF099, LACF144, LACF157, LAPDVDC, LACF071, LACF084, LACF173, LAFD005, LAFD095, LACF056, LAFD079, LAFD084, LACF028, LACF151, LACFCP09, LASDCSN, ELSGDPD, LACF164, LACF169, LAPD077, LACF149, LAPDDVN, RDNBPD, LACF030, LAFD088, LACF091, WHD, LACF077, BUR, PHN, BMT, MTW, SCH, SVP, HUC, BRK, SWP, FCCF, CLM and MLM	Proposed monopoles on six LTE sites (LACF072, LACF099, LACF071, LACFCP09, BUR, and BRK) would be located near proposed LMR lattice towers, within areas having visual resources that are protected by federal or state regulations. Sites LACFCP09 and BUR are located in the Angeles National Forest, Site BRK is located on BLM administered land and Sites LACF072, LACF099 and LACF071 are located in the coastal zone. As discussed in section 4.7, impacts of the Proposed Action on visual resources associated with these sites would not be significant. Remaining 33 LTE sites that are same as sites where lattice towers are proposed under the LMR project are not located in areas with visual resources that are protected by federal or state laws. As discussed in section 3.7, construction of the Proposed Action on these sites would have no impacts to visual resources. Development under the LMR project would also be subject to environmental review under NEPA and CEQA. The LMR project would be developed in compliance with applicable plans and policies for visual resources and mitigation measures would be implemented to ensure no significant visual impacts. Therefore, there would be no significant cumulative visual impacts on the local viewshed as a result of the Proposed Action.

Under the Proposed Action, new monopole towers would be free standing, self-supporting, hollow steel structures without guy wires. Underground conduits would be used for all electrical and communication cables. All LTE sites are located at developed public facilities including fire stations, police stations, medical centers or dedicated communication sites, most of which have existing communications infrastructure or tall structures such as fire hose towers. Implementation of the Proposed Action would be consistent with adopted plans and policies that protect visual resources in the study area. As discussed in Table 4.12-3 above, project construction at all LTE Sites located in the vicinity of potential other projects (considered in the analysis of cumulative impacts) would have no significant impacts on aesthetic and visual resources. There may be inconsistency with the ANF LMP for scenic integrity. However, due to the limited number of sites on NFS lands (two out of 231), cumulative effects on aesthetic and visual resources are unlikely. Assuming that each of the cumulative projects is designed and operated in a manner consistent with pertinent land use management plans, no significant cumulative visual impacts would occur as a result of the Proposed Action.

H. Land Use

With one exception, the Proposed Action would not directly involve conflicts with existing land uses and would be substantially consistent with land use policies associated with the Federally-administered lands, the state Coastal Plan and its LCPs, County ALUPs, and local general plans. The proposed use of site LACFCP09, located in the ANF, is not consistent with the ANF LMP for site selection. However, due to the limited number of sites (two out of 231), cumulative effects are unlikely. Because the Proposed Action would not generate any significant direct or indirect impacts, no significant cumulative impacts to land use are anticipated.

I. Infrastructure

The incremental increase in demand for electrical power created by operation of the Proposed Action is expected to be minor, when compared to current system capacity and demand. Therefore, there would be no significant cumulative impacts associated with the Proposed Action.

Similarly, the amount of solid waste generated under the Proposed Action is expected to be minor and short term. Solid waste would be generated during construction only and would be disposed in accordance with applicable regulations. As a result, no significant cumulative impacts on solid waste disposal facilities or management plans would occur as a result of the Proposed Action.

Non-potable water use associated with the Proposed Action would be limited and water would be required only during construction. No long term water demand is associated with the Proposed Action as water would not be required during project operation. As the Proposed Action would generate only a short term and minor demand for water, no significant cumulative impacts related to water supply are anticipated.

Construction activity on an LTE site would not involve changes to current or future traffic patterns in the county since all LTE sites are served by a fully developed circulation system. Any construction-related impacts would be short term and local in nature and would not be expected to

influence regional traffic conditions or impede emergency vehicle access. No significant cumulative traffic impacts would result from the Proposed Action.

J. Socioeconomic Resources

The analysis of socioeconomic resources, including accessibility to community services, community well-being, employment, economic development, and housing, has not identified any disproportionate direct impacts of the Proposed Action on low-income and minority populations from either construction or operation of the Proposed Action. Socioeconomic factors such as would not be significantly impacted by the Proposed Action. Therefore, no significant cumulative impact to socioeconomic resources would result from the Proposed Action.

K. Human Health and Safety

Many hazards associated with development activity in southern California are site specific, so construction at one location does not create a hazard that interacts with another created by development elsewhere to form a cumulative impact. Topics that fall in this category include construction activity near gas wells, oil wells or landfills, and worker safety. All development is subject to federal and state regulations that govern construction near landfills and gas wells and regulate worker safety on construction sites. No significant cumulative impact is anticipated.

In other cases, such as exposure to hazardous waste, negative health effects could result that are greater collectively than when considered on individual basis. However, implementation of HS MM 4.11-1 would avoid exposure to contaminated soils, so the Proposed Action would not contribute to a significant cumulative impact on human health. Moreover, the application, storage, and disposal of hazardous materials are subject to federal, state, and local regulations as described in Section 3.11.1. Compliance with these regulations on a case-by-case basis would ensure that exposure to hazards is controlled as each development is constructed.

All development conducted in a high fire hazard area is subject to federal, state, and local regulations. Activities conducted in the ANF, Santa Monica Mountains, or on BLM land are subject to the requirements of a fire management plan. The fire management plans of each federal agency contain recommendations based on the current vegetation type, topography, and spatial and temporal components of the landscape in question. These programs and policies are intended to reduce the frequency and intensity of human caused ignition. Similarly, development in state and local fire responsibility areas is subject to policies enacted through local ordinances and codes that serve to reduce the potential for human induced wildfire. No significant impacts are anticipated.

The Proposed Action and all cumulative development with potential to intrude into an airport's imaginary air surface would participate in the FAA procedures outlined in Part 77 of the Federal Aviation Administration Regulations. Compliance with this process would avoid the potential to contribute to a cumulative impact on aeronautical navigation.

5.0 FEDERAL AND STATE AGENCY CONSULTATION

This chapter provides a summary of the federal and state agency involvement activities undertaken by NTIA and the Authority to date for the Proposed Action, to satisfy regulatory requirements for agency consultation and coordination. This chapter also contains information regarding federal and state agencies that are participating in the NEPA process leading to the development of this EA. Consultation included formal written communications via letters and informal agency communications via phone and email, which are contained in Appendices H-1 to H-8.

5.1 U.S. Army Corps of Engineers

NTIA initiated consultation with USACE in August 2013 regarding permitting requirements for LAFD088. NTIA sent maps, a description of activities proposed at LAFD088, a site diagram and site photographs to USACE, along with a consultation letter introducing the project, requesting USACE's review of proposed project activities, and seeking USACE's guidance in applying for required permits. Copies of these documents can be found in Appendix H-1.

For the Proposed Action, a new or amended outgrant would be required from USACE prior to construction on LAFD088. Summaries of existing conditions and impacts associated with proposed project implementation at LAFD088 are included in Appendix B. On April 1, 2014, USACE indicated that it would initiate independent review of environmental impact associated with LTE development at LAFD088 in accordance with USACE guidelines (33 CFR 230.9). In a voicemail message to the Authority on August 1, 2014, Mr. Carvel Bass of USACE confirmed that USACE does not have any comments on the draft LA-RICS EA provided for review, but the USACE would require and would prepare a separate EA for the Authority proposed site development at LAFD088 along with a public review period. USACE permitting requirements will be documented in NTIA's Special Award Conditions for this project.

5.2 Bureau of Land Management

NTIA initiated consultation with the BLM in August 2013 about permitting requirements for site BRK, which is located on land administered by the BLM. NTIA sent maps, a description of activities proposed at BRK, a site diagram and site photographs to the BLM along with a consultation letter introducing the project, requesting BLM's review of proposed project activities, and seeking BLM's guidance in applying for required permits. Copies of these documents can be found in Appendix H-2.

Implementation of the Proposed Action may qualify for a Categorical Exclusion in accordance with BLM guidelines (516 Department of the Interior Manual Part 11). Summaries of existing conditions and impacts of the Proposed Action associated with development at Site BRK are included in Appendix B. Authorization for an archaeological field investigation at BRK (based on Work Permit CA-11-14) was obtained from the BLM by the Authority's consultants on February 4, 2014. A new or amended Right of Way grant is required from the BLM prior to construct at BRK. BLM plans to issue a Categorical Exclusion for the proposed LTE development at Site BRK (see correspondence

dated August 6, 2014 in Appendix H-2), and BLM's permitting requirements will be documented in NTIA's Special Award Conditions for this project.

5.3 U.S. Forest Service

Pursuant to 40 CFR 1501.6, the USFS is a cooperating agency in the NEPA process. In their role as a cooperating agency, the USFS staff is responsible for reviewing and approving environmental documents and providing feedback to NTIA and the Authority for questions regarding NFS lands.

NTIA initiated consultation with the USFS in August 2013 by submitting a proposal for constructing eNodeB facilities at two sites located on the ANF, BUR and LACFCP09. These are the only two proposed LTE sites located on NFS lands. In its August 2013 correspondence, NTIA sent maps, a description of activities proposed at sites BUR and LACFCP09, site diagrams, and site photographs to the USFS, along with a consultation letter introducing the project, requesting USFS' review of project activities, and seeking USFS guidance in applying for required Special Use Permits, which are required prior to use of NFS lands.

Prior to initiating its required NEPA review, the USFS screened the proposal for use of the two sites through its pre-NEPA process identified in 36 CFR 251.54(e)1. The proposal was determined complete by the Forest Supervisor and this was communicated to NTIA by letter dated February 11, 2014 (Appendix H-7), which reported that initial screening of proposals for the use of sites BUR and LACFCP09 had occurred. As a result of that screening, the USFS had determined that use of BUR was accepted, and may proceed through the USFS' NEPA process. However, the use of LACFCP09 as a potential LTE site was determined not consistent with the ANF LMP, as LACFCP09 is not designated as a communications site in the LMP. USFS further requested that Authority staff investigate the feasibility of two sites as potential alternatives to site LACFCP09: Loop Canyon and Contractor's Point. The Authority investigated use of the two alternate sites suggested by USFS and determined that they were not technically feasible as they would not effectively support the LTE system as a whole, and would not meet the criteria for site selection set forth in Chapter 1, including the requirement to construct all sites within the grant performance period. This report was submitted by the Authority to USFS on May 16, 2014, and the correspondence accompanying the report is provided in Appendix H-7. Consultation with USFS is ongoing.

USFS is required to provide NEPA review for proposed activities that pass the initial screening process under its implementing regulations at 36 CFR 254(e)6. In its February 11, 2014 letter, USFS formally requested to assume the role of cooperating agency pursuant to Council on Environmental Quality regulations found at 40 CFR 1501.6. The USFS acknowledged the NTIA's lead agency role for compliance with National Historic Preservation Act and Endangered Species Act compliance for the proposed project. As cooperating agency, USFS is required to comply with its implementing NEPA requirements, which include additional public notice and review of the project by USFS. USFS would be responsible for signing a separate decision document (i.e., a Finding of No Significant Impact/Decision Notice) for any sites determined acceptable for use on NFS lands. LA-RICS will be required to pass all USFS screening criteria for sites on NFS lands, and for the USFS to complete its NEPA decision and issue a Special Use Permit for construction and operation. Similar to NTIA, the USFS will not complete a NEPA decision until all legally required consultations, including the U.S.

Fish and Wildlife Service and the State Historical Preservation Office, are complete and documented.

5.4 U.S. Fish and Wildlife Service

NTIA initiated consultation with USFWS in August 2013. Consultation letters, along with a project description and maps, were sent to the USFWS' Carlsbad and Ventura wildlife offices, requesting their review and guidance. On November 5, 2013, the Authority submitted a written request for a species list for the LTE project and a single point of contact with USFWS for the Section 7 consultation under the ESA. On December 13, 2013, USFWS sent the Authority information on listed and candidate species that may occur in the vicinity of the proposed project along with the USFWS 2013 Revised Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting and Decommissioning. USFWS designated the Ventura Fish and Wildlife Office as the point of contact for the proposed project and indicated that informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a written request for formal consultation, if required.

A BA was developed to identify potential effects to ESA-listed and candidate species and critical habitat. The BA is included in Appendix E. Pursuant to correspondence from USFWS dated July 18, 2014, USFWS and NTIA concluded the Section 7 consultation process with USFWS concurrence with the determinations made in the BA. Copies of all consultation letters sent to USFWS and responses received are included in Appendix H-8.

5.5 Federal Aviation Administration

The Federal Aviation Administration (FAA) has purview over promotion of air safety and efficient use of navigable airspace in the United States. Part of FAA's mandate is to evaluate potential obstructions (including communication towers) using the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) process and determine whether a proposed construction or alteration would be a hazard to air navigation. After reviewing proposed antenna structures submitted for review, FAA provides determinations on sites that have no impact on air safety, and provides further review/public noticing requirements for sites that may impact air safety. FAA always requires that aeronautical studies be conducted when obstructions exceed 200 feet above ground level (AGL), but uses a glide-slope calculation for obstructions less than 200 feet to determine if notification to FAA is required. This glide-slope calculation is based on tower height and proximity to FAA-listed airports or heliports; generally the closer to these airport or heliport facilities, the greater the restrictions (including height and lighting restrictions). Because none of the antenna support structures proposed for use in the proposed LTE system would be higher than 85 feet AGL, the glide-slope calculation is used for evaluating all sites. FAA has requested that 1A level surveys be conducted at each of the four on-airport LTE sites and these surveys are being undertaken.

NTIA initiated coordination in March 2014 with the FAA on the notification requirements for the proposed LTE antenna structures under Part 77 of FAA regulations as well as the FAA's obstruction evaluation and public notification process. A total of 129 sites met FAA's obstruction evaluation criteria requiring notification under 14 CFR Part 77 and filing of FAA Form 7460-1, Notice of

Proposed Construction or Alteration. FAA has recommended that voluntary notification be made for all proposed LTE antenna structures as best practice, and therefore all 231 proposed LTE sites have been submitted to FAA for further review.

As part of the coordination process with FAA, NTIA contacted FAA senior management to facilitate fast-tracking of site reviews for each of the proposed LTE sites. Federal Communications Commission

NTIA coordinated with the Federal Communication Commission (FCC) in January 2014 to implement use of FCC's antenna structure registration (ASR) process by using FCC's Landing Slope Facility Calculator (TOWAIR tool) to determine whether proposed LTE antenna structures are close enough to an airport or heliport to require an aeronautical study by FAA and registration with FCC prior to construction or alteration.

As part of compliance with the ASR process, FCC uses the electronic Tower Construction Notification System (TCNS) to notify interested federally-recognized tribes and participating State Historic Preservation Officers (SHPOs) regarding the proposal. California's SHPO does not currently participate in the electronic system. In accordance with the Nationwide Programmatic Agreement (PA), compliance with Section 106 requires the use of FCC forms 620 (for non-collocated sites) and 621 (for collocated sites) to transmit information regarding any cultural resources identified in the area of potential effect (APE) for each site to SHPO.

5.6 Federal Communications Commission

NTIA coordinated with the Federal Communication Commission (FCC) in January 2014 to implement use of FCC's antenna structure registration (ASR) process by using FCC's Landing Slope Facility Calculator (TOWAIR tool) to determine whether proposed LTE antenna structures are close enough to an airport or heliport to require an aeronautical study by FAA and registration with FCC prior to construction or alteration.

As part of compliance with the ASR process, FCC uses the electronic Tower Construction Notification System (TCNS) to notify interested federally-recognized tribes and participating State Historic Preservation Officers (SHPOs) regarding the proposal. California's SHPO does not currently participate in the electronic system. In accordance with the Nationwide Programmatic Agreement (PA), compliance with Section 106 requires the use of FCC forms 620 (for non-collocated sites) and 621 (for collocated sites) to transmit information regarding any cultural resources identified in the area of potential effect (APE) for each site to SHPO.

5.7 National Park Service

NTIA initiated consultation with the NPS in August 2013 about permitting requirements for constructing eNodeB facilities at nine sites located within the Santa Monica Mountains National Recreation Area, which is overseen by the NPS. The nine proposed sites include Los Angeles County Fire Station 69 (LACF069), LACF071, LACF072, LACF088, LACF097, LACF099, Zuma Lifeguard Headquarters (LALG300), Lost Hills Malibu Sheriff's Station (LHS), and San Vicente Peak (SVP). NTIA sent maps, a description of activities proposed at those nine sites, site diagrams, and site

photographs to the NPS, along with a consultation letter introducing the project and seeking NPS's guidance in applying for required permits. Copies of these documents can be found in Appendix H−4.

NPS determined that none of the proposed nine sites are located on land administered by the NPS. Therefore, NPS only holds an advisory and review role for the EA, and project activities will not require an NPS-issued right-of-way permit. In the case that a LTE site be relocated or added to a site on NPS-owned land, an NPS issued right-of-way permit would be required.

5.8 California Coastal Commission

NTIA initiated consultation with the CCC in August 2013 about permitting requirements for constructing eNodeB facilities at 15 sites located within the boundaries of the California coastal zone. Those coastal zone sites include LACF053, LACF069, LACF071, LACF072, LACF088, LACF099, LAFD049, LALG100, LALG300, LALG-HQ, LBFD006, LBFD021, MBFD001, RDNBPD, and SMFD002. A project description with maps and descriptions of the 15 individual coastal zone sites were sent to the CCC along with a consultation letter introducing the project and seeking the Commission's guidance in applying for required permits. Copies of these documents can be found in Appendix H-3.

For the Proposed Action, a Federal Consistency Review pursuant to the requirements of the California's Coastal Management Program is required. Summaries of existing conditions and impacts of the proposed action associated with development on proposed sites located in the coastal zone are included in Appendix B. In a letter dated December 12, 2013, the Authority submitted a written request for consistency review to the CCC. A statement of jurisdiction and consistency finding was issued by CCC on April 24, 2014. Prior to construction of the Proposed Action on sites in the coastal zone, CDPs are required from CCC and local agencies authorized by the CCC. Consultation with the CCC is ongoing and the Authority will obtain all required CDPs for sites within the California coastal zone prior to construction.

5.9 California State Historic Preservation Office

Section 106 of the NHPA requires NTIA to take into account the effects of proposed undertakings on historic properties. The regulations that implement Section 106 (36 CFR Part 800) require NTIA to consult with the California SHPO. This Section 106 consultation takes place under the Nationwide PA. As part of the PA, applicants are required to prepare and transmit a submission packet to the SHPO consisting of FCC Forms 620 NT (for actions that are not exempt) or FCC Form 621 CT (for collocation exempted actions).

In August 2013, NTIA sent a letter to the California SHPO regarding consultation under Section 106. A project description with maps was sent to SHPO along with the consultation letter. A copy of the consultation letter can be found in Appendix H-5. Section 106 consultation for the proposed project is being undertaken according to the FCCPA. Consultation between NTIA and California SHPO resulted in an agreement that FCC forms 620 and 621 as provided for in the PA would be the most appropriate method for the project to fulfill Section 106 requirements. These forms are designed to

provide information on historic, prehistoric and Native American cultural resources needed by SHPO to reach a determination of potential effects of the Proposed Action on these resources.

Consultation with SHPO is ongoing and Authority staff is currently in the process of submitting FCC Forms 620 and 621 for each LTE site. Following submission of approximately 100 FCC 620forms in March and April 2014 and SHPO review of these initial Form 620 submittals, SHPO suspended review of 620 forms and requested additional archaeological surveys be conducted. This effort was initiated on May 8, 2014. Submission of FCC 620 and 621 forms for individual LTE sites resumed July 19, 2014 and will continue to obtain Section 106 compliance for project implementation.

NTIA has signed a Programmatic Agreement (PA) with SHPO on October 3, 2014, formalizing the phased Section 106 process. The PA stipulates that the Section 106 process be completed on each site prior to the onset of construction related activities. The Authority will complete Section 106 consultation with SHPO and obtain clearance prior to construction.

5.10 Native American Consultation

In August 2013, NTIA initiated notification of 12 federally recognized Native American tribes regarding the proposed project using TCNS. Responses were received from five federally recognized tribes: Soboba Band of Luiseño Indians, Morongo Band of Mission Indians, Cahuilla Band of Mission Indians, Twenty Nine Palms Band of Mission Indians, and Ramona Band of Cahuilla. The Soboba Band of Luiseño Indians responded, asking to review the LTE project sites in their area of interest. NTIA consulted with the Soboba Band, in order to maintain the government-to-government protocol required for tribal consultation. The Soboba Band determined that are 16 sites of interest to the tribe. LA-RICS provided the required map and site information for the 16 sites of interest directly to the Soboba Band. In letters dated September 3, 5, and 8, 2014, the Soboba Band concluded that they have no concern about the 16 LTE sites. However, the Soboba Band requested that a qualified archaeologist be present at Blue Rock and LA County Fire Stations 78 and 114 during initial ground disturbing activities, and that they be notified in the event that inadvertent discoveries are encountered during construction activities. Morongo Band of Mission Indians, Cahuilla Band of Mission Indians, Twenty Nine Palms Band of Mission Indians, and Ramona Band of Cahuilla indicated that they have no interest in the proposed LTE sites. Based on comments received during consultation with the federally recognized tribes, if any archaeological remains or resources are discovered during construction of the Proposed Action, construction would be stopped immediately and the appropriate federal agency and tribe would be notified. Copies of TCNS related correspondence with federally recognized tribes are included in Appendix H-6.

In July 2013 the Native American Heritage Commission, a California state agency, was contacted by Authority staff requesting a search of the Sacred Lands File for potential traditional sites and a list of Native American tribes with an interest in the project. A list of nineteen tribes and interested parties was provided, and all were notified by letter on July 30, 2013 of the Proposed Action with a request for comments.

6.0 APPLICABLE ENVIRONMENTAL PERMITS AND REGULATORY REQUIREMENTS

Table 6.0-1 summarizes applicable federal, state and local regulatory requirements and permits; the current status of project compliance; and project environmental commitments.

Table 6.0-1
Environmental Permits and Regulatory Requirements

Regulatory/Permit Requirements	Permitting/ Regulatory Agency	Timing	Status of Project Compliance	Other Commitments/Mitigation Measures
Federal				
Clean Water Act Section 402; General Permit for Storm Water Discharges Associated with Dewatering Activities (NPDES Permit)	Los Angeles, Santa Ana and Lahontan RWQCBs	Prior to construction if dewatering is required	NPDES permit to be obtained by the project proponent prior to dewatering activities	Best management practices, as adopted by RWQCBs, would be implemented to preclude impacts.
Executive Order 11988 (Flood Plain Management)	FEMA	Prior to construction	Not known at this time, as base flood data and specific project siting data are not currently available	Contractor to determine base flood elevation and regulatory requirements for the sites in 100-year flood hazard zones.
Endangered Species Act Section 7	USFWS	Prior to FONSI	Informal consultation with USFWS has concluded. USFWS issued a concurrence letter with the effects determination in the BA	The project design includes CMRs developed to prevent impacts to biological resources, including federally protected endangered species.
Federal CZMA consistency review	California Coastal Commission	Prior to FONSI	Completed. CCC issued a No-Effects Determination (NE 0004-14) for consistency with California Coastal Management Program	Coastal Development Permits would be obtained for 15 sites located within the coastal zone prior to construction or site disturbance.

Table 6.0-1 (continued)
Environmental Permits and Regulatory Requirements

Regulatory/Permit Requirements	Permitting/ Regulatory Agency	Timing	Status of Project Compliance	Other Commitments/Mitigation Measures
Federal				
Right-of-way grant for use of lands administered by BLM; Fieldwork authorization for archaeological Investigation	BLM	Prior to construction	Consultation with BLM is ongoing; Authorization for archeological investigation fieldwork at site BRK to compile information for Sec. 106 consultation has been obtained and survey has been completed."	A new or amended right-of-way grant would be obtained prior to construction for one site located on lands administered by the BLM.
Special Use Permit for use of lands administered by USFS; Permit for Archaeological Investigation	USFS	Prior to construction	Consultation with USFS is ongoing; Authorization for archeological investigation fieldwork at sites BUR and LACFCP09 to compile information for Sec. 106 consultation has been obtained and survey has been completed."	New or amended Special Use Permits would be obtained prior to construction for two sites located in the ANF on land administered by the USFS.
Outgrant for use of lands administered by USACE	USACE	Prior to construction	Consultation with USACE is ongoing	A new or amended outgrant would be obtained prior to construction for one site located on land administered by the USACE.
National Historic Preservation Act (NHPA) Section 106	California State Historic Preservation Office, State Historic Preservation Officer	Prior to construction	Consultation regarding FCC Forms 620 and 621 is ongoing with SHPO; the Authority is currently in the process of submitting Form 620 or Form 621 (as appropriate) for each LTE site.	CMRs provided in Appendix A would be implemented to eliminate adverse effects to cultural and historic resources. Consultation with SHPO would be completed and clearance obtained prior to construction or site disturbance.

Table 6.0-1 (continued)
Environmental Permits and Regulatory Requirements

Regulatory/ Permit Requirements	Permitting/ Regulatory Agency	Timing	Status of Project Compliance	Other Commitments/Mitigation Measures
Federal				
FAA Part 77 Notification	FAA	Screening prior to FONSI	Notification is filed, awaiting determination	Antenna support structures (e.g., monopole towers) would be constructed to the proposed height or lower per FAA's determination of "no hazard" to air navigation where notification to the Administration is required to ensure that the proposed structures do not represent a hazard to aeronautical navigation.
FCC Part 17 Antenna Structure Registration	FCC	Screening prior to FONSI	Initial screening completed Registration occurs after FAA determination	Proposed antenna structures that meet FCC registration requirements would be registered with the FCC. Antenna structures requiring notice of proposed construction to the FAA would also be registered with the FCC to ensure that the proposed structures do not pose a hazard to air navigation.
The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Federal Superfund Amendments and Reauthorization Act	Environmental Protection Agency	Prior to construction	Not initiated; post-NEPA	Contractor would develop a plan with guidelines to ensure protection of public health and safety, as related to discoveries of subsurface hazardous materials. If contaminated soil is encountered during construction, appropriate notifications and actions with the Local Enforcement Agency would take place.
State				
Porter-Cologne Water Quality Control Act	Los Angeles, Santa Ana and Lahontan RWQCBs	Prior to and during construction	Not initiated; post-NEPA	Best management practices, as adopted by RWQCBs, would be implemented to eliminate potential impacts and preclude permitting requirements.
California Environmental Quality Act (CEQA)	Authority	Prior to Authority's approval of the project	Complete. On February 20, 2014, the Authority Board of Directors approved the project and determined all approved sites were exempt from CEQA under Public Resources Code § 21080.25	None

Table 6.0-1 (continued)
Environmental Permits and Regulatory Requirements

Regulatory/ Permit Requirements	Permitting/ Regulatory Agency	Timing	Status of Project Compliance	Other Commitments/Mitigation Measures
State				
Coastal Development Permits	California Coastal Commission and authorized local agencies	Prior to Construction	Application for Coastal Development Permits would be submitted at a later stage of system design	Coastal Development Permits would be obtained from the California Coastal Commission for sites located within the coastal zone prior to construction or site disturbance.
Local				
South Coast Air Quality Management District Rule 403	South Coast Air Quality Management District	During Construction	Not initiated; during construction	Rule 403 imposes particulate matter reduction methods on all construction activities.
2012 Air Quality Management Plan for the South Coast Air Basin	South Coast Air Quality Management District	Prior to Finding of No Significant Impact	N/A	Basis for short-term (construction) emission thresholds to prevent violation of national ambient air quality standards.
2008 Antelope Valley Air Quality Management District Federal 8-Hour Ozone Attainment Plan	Antelope Valley Air Quality Management District	Prior to Finding of No Significant Impact	N/A	Basis for short-term (construction) emission thresholds to prevent violation of national ambient air quality standards.
MS4 NPDES Permit (Water Quality) during approval of building permit	City and County agencies	Prior to and during construction	Not initiated; post-NEPA	Project would satisfy requirements through compliance with federal Clean Water Act Section 402 NPDES permit. Separate permit not required. CMRs have been developed to eliminate impacts.

7.0 LIST OF AGENCIES AND PERSONS CONSULTED

In accordance with the requirements of NEPA, federal, state, local and tribal agencies and persons identified as having interest in the Proposed Action were contacted. Interested agencies and persons were provided with information about the Proposed Action and requested to send their comments on potential environmental impacts associated with implementation of the Proposed Action. Table 7.0-1 provides an overview of the coordination undertaken including names of agencies and persons contacted, reason for contact and input provided by the agencies and persons for the development of the EA. All project scoping letters sent to different federal and state resource agencies, cities and tribal organizations, and all responses received are included in Appendix H, Consultation Response.

Table 7.0-1
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Federal Agencies		
U.S. Department of Agriculture, Forest Service, Angeles National Forest	Two proposed LTE sites are located on lands administered by Angeles National Forest, and the Forest Service is serving as a cooperating agency under NEPA.	Special use permitting guidelines and requirements
U.S. Department of the Interior, Bureau of Land Management, Ridgecrest Field Office	One proposed LTE site is located on land administered by BLM	Review of biological and cultural resources at site BRK, and input regarding guidelines and requirements for a right of way grant. BLM to conduct independent NEPA review for proposed activities at site BRK.
U.S. Army Corps of Engineers, Los Angeles District	One proposed LTE site is located on land administered by USACE	Input regarding guidelines and requirements for an outgrant for use of land. USACE to conduct independent NEPA review for proposed activities at site LAFD088.
U.S. Department of the Interior, Fish and Wildlife Service, Ventura Fish and Wildlife Office	Endangered Species Act Section 7 Consultation	USFWS provided information on listed and candidate species that may occur in the vicinity of the proposed project along with the USFWS 2013 Revised Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting and Decommissioning. Informal consultation with USFWS has concluded with USFWS concurrence with the determinations made in the BA
U.S. Department of the Interior, Fish and Wildlife Service, Carlsbad Fish and Wildlife Office	Endangered Species Act Section 7 Consultation	

Table 7.0-1 (continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Federal Agencies		
U.S. Department of the Interior, National Park Service, Santa Monica Mountains National Recreation Area	Determine NPS responsibility for lands adjacent to SMMNRA	NPS does not administer the proposed LTE sites within the boundary of SMMNRA, and therefore, only holds an advisory and review role for the EA. No NPS-issued right-of-way permits are required
Federal Communications Commission	FCC Part 17 Antenna Structure Registration	Registration would occur post-NEPA
Federal Aviation Administration	FAA Part 77 Notification	Notification is in progress
State Agencies		
California State Historic Preservation Office, State Historic Preservation Officer	Consultation under Section 106 of the NHPA	Section 106 consultation underway with SHPO; SHPO reviewing completed FCC Forms 620 and 621
California Native American Heritage Commission	Request a search of Sacred Lands Files and a current Native American contact list to facilitate consultation under Section 106 of the NHPA	Information regarding the presence of Native American sacred places in the area of potential effect; contact list of Native American tribes, individuals and organizations
California Coastal Commission	Fifteen proposed LTE sites are located within the coastal zone	California Coastal Commission providing review and coastal consistency determination
California Department of Fish and Wildlife	Introduction and overview of the proposed LTE project	Because the Proposed Action would not result in take of any species listed under CESA, CDFW was determined to have no permitting role or review requirements for the EA
Federally-recognized Indian Tribes		
Cahuilla Band of Mission Indians	Consultation under Section 106 of the NHPA	Letter thanking the tribe's interest was provided by LA-RICS in July 2014. No response was received from the Tribe.
Ramona Band of Cahuilla	Consultation under Section 106 of the NHPA	No response was received from the Tribe.

Table 7.0-1 (continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Federally-recognized Indian Tribes		
Soboba Band of Luiseno Indians	Consultation under Section 106 of the NHPA	NTIA consulted with the tribe and the Soboba Band determined that they have an interest in 16 of the sites. The requested information for the 16 sites has been provided to the Soboba Band for review, and comments were received in September 2014. The Soboba Band concluded that they have no concern about the LTE sites. However, the Soboba Band requested that a qualified archaeologist be present at Blue Rock and LA County Fire Station 78 and 114 during initial ground disturbing activities, and that they be notified in the event that inadvertent discoveries are encountered during construction activities.
Twenty Nine Palms Band of Mission Indians	Consultation under Section 106 of the NHPA	Letter thanking the tribe's interest was provided by LA-RICS in July 2014 confirming that none of the proposed LTE sites are within a 50-mile radius of Palm Springs, CA.
Morongo Band of Mission Indians	Consultation under Section 106 of the NHPA	The tribe indicated that they have no interest in the sites, however, if any archaeological remains or resources are discovered during construction, construction should be stopped immediately and the appropriate federal agency and tribe should be notified
Local Agencies		
Los Angeles County	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Alhambra	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

Table 7.0-1 (continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Local Agencies		
City of Arcadia	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Azusa	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	List of sites designated as potential historic landmarks within the area of potential effect
City of Baldwin Park	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	The City does not have any cultural resources or properties identified as historic within the area of potential effect
City of Bell	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Bell Gardens	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Bellflower	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	List of sites identified as cultural or historic resources within the area of potential effect
City of Beverly Hills	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Burbank	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Calabasas	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Carson	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

Table 7.0-1 (continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Local Agencies		
City of Cerritos	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Claremont	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	Information about designated city contact for future consultation
City of Compton	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	There are no historic or cultural resources within 0.5 mile radius of the two LTE sites located in the City
City of Culver City	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Covina	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Diamond Bar	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Downey	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Duarte	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of El Monte	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of El Segundo	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

Table 7.0-1 (continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Local Agencies		
City of Gardena	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Glendale	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Glendora	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Hermosa Beach	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Hawthorne	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	The City does not have any known cultural or historic resources within the area of potential
City of Huntington Park	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Industry	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	List of historic properties within the area of potential effect provided
City of Inglewood	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Irwindale	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of La Habra	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

Table 7.0-1(continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Local Agencies		
City of La Mirada	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of La Verne	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Lakewood	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Lancaster	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Lawndale	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Long Beach	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Los Angeles	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Lynwood	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Malibu	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Manhattan Beach	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

Table 7.0-1(continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Local Agencies		
City of Monrovia	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Monterey Park	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Norwalk	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Palmdale	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Paramount	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Pasadena	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Pico Rivera	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	List of historic sites in the area of potential effect within the City and information forms of two pre-historic sites identified by UCLA institute of Archaeology
City of Pomona	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Redondo Beach	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Rolling Hills	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

Table 7.0-1(continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Local Agencies		
City of Rolling Hills Estates	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	The City does not have any known cultural or historic resources located within the area of potential
City of Rosemead	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of San Dimas	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Santa Clarita	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Santa Fe Springs	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Santa Monica	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of South El Monte	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of South Gate	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Temple City	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Torrance	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

Table 7.0-1(continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Local Agencies		
City of Vernon	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	Information about properties of cultural or historic significance located in the area of potential effect
City of West Covina	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of West Hollywood	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Westlake Village	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received
City of Whittier	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	Information about historic properties located in the area of potential effect
Other Persons and Entities		
Gabrielino – Tongva Nation	Solicit input to determine existence of archaeological sites and historic properties in the area of potential effect	Gabrielino Tongva Nation requested an archaeological and a Gabrielino native monitor to be present during all ground disturbing activities
Gabrielino – Tongva San Gabriel Band of Mission Indians	Solicit input to determine existence of archaeological sites and historic properties in the area of potential effect	Concurrence with the analysis for the effect of the proposed action on Native American resources
Barbareno/Venturen Band of Mission Indians	Solicit input to determine existence of archaeological sites and historic properties in the area of potential effect	Request for a Native American monitor to be present during all ground disturbing activities
Beverly Salazar Folkes	Solicit input to determine existence of archaeological sites and historic properties in the area of potential effect	Request for a Native American monitor to be present during all ground disturbing activities

Table 7.0-1(continued)
Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Other Persons and Entities		
Randy Guzman Folkes	Solicit input to determine existence of archaeological sites and historic properties in the area of potential effect	Concern regarding LTE sites located in less developed areas
Patrick Tumamait	Solicit input to determine existence of archaeological sites and historic properties in the area of potential effect	Request for Native American monitors to be present at known sensitive areas

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