



Broadband Technology Opportunities Program (BTOP)
Final Supplemental Environmental Assessment for
Nine New or Modified Long-Term Evolution (LTE) Sites

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

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Broadband Technology Opportunities Program
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July 9, 2015

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EXECUTIVE SUMMARY

Overview

This Supplemental Environmental Assessment (Supplemental EA) addresses nine sites. Four of these sites were not included among the original 231 sites analyzed in the *Broadband Technology Opportunities Program (BTOP), Final Environmental Assessment, Los Angeles Regional Interoperable Communications System (LA-RICS) Project* conducted for the LA-RICS Long Term Evolution project (Final LA-RICS LTE System EA) (Appendix A). Five of these sites were addressed in the Final LA-RICS LTE System EA, but the project plan for these sites has changed beyond the description in that document. The Final LA-RICS LTE System EA analyzed impacts of construction and operation of LTE facilities for wireless voice and data communications in the Los Angeles County area.

The NTIA issued a Finding of No Significant Impact (FONSI) on October 15, 2014 (see Appendix A). Since the October 2014 FONSI, the LTE project has continued through the permitting process for many of the 231 sites in the system and construction had begun at some sites. Community concerns, triggered in part by outreach activities initiated by the Los Angeles County Firefighters Union (Local 1014), resulted in the passage of a motion on March 24, 2015 by the Los Angeles County Board of Supervisors suspending LA-RICS LTE construction at Los Angeles County Fire Department sites. Following the Board of Supervisors action, the Los Angeles City Council voted on April 1, 2015, to suspend construction at all Los Angeles Fire Department (LAFD) and Los Angeles Police Department (LAPD) sites. As a result of these actions by the Board of Supervisors and Los Angeles City Council, and out of concern that the project was behind schedule and there was “substantial uncertainty regarding the timeframe created by the County Board and City Council Resolutions”, the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) acting on a notification by the National Telecommunications and Information Administration (NTIA), suspended the program on April 3, 2015. NTIA also directed the Los Angeles Regional Interoperability Communications System Joint Powers Authority (Authority) to develop a Corrective Action Plan (CAP) detailing the viability of a revised program.

The Authority’s proposed CAP was delivered to NTIA on April 13, 2015, and included a re-designed system with fewer LTE sites, most of which were previously analyzed in the Final LA-RICS LTE System EA as well as additional sites to supplement system coverage and capacity. This new plan, coupled with an outreach requirement, was approved by the Board of Supervisors on April 16, 2015. This was followed by a vote by the Los Angeles City Council, approving the inclusion of 19 LAPD sites into the LTE system. The CAP response was finalized on April 29, 2015, when the Authority’s third addendum to the CAP response was delivered to NTIA. NTIA notified the Authority that it had lifted its suspension on May 1, 2015.

The Final LA-RICS LTE System EA is incorporated by reference in this Supplemental EA in accordance with 40 Code of Federal Regulations (CFR) 1502.21.

The LA-RICS LTE project is being developed under an NTIA-administered BTOP grant funded by the American Recovery and Reinvestment Act (ARRA). This EA 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 40 CFR 1500-1508, and the *Environmental Assessment Guidance for BTOP Award Recipients* (United States Department of Commerce [USDOC] 2010). NTIA is the agency responsible for determining whether to issue grant funds and is lead agency for NEPA.

Proposed Action

Implementation of the Proposed Action would result in inclusion of four new and five modified sites into the overall LA-RICS LTE Public Safety Broadband Network (PSBN) system. The four new sites would supplement the 231 sites reviewed in the Final LA-RICS LTE System EA. No site evaluated in this Supplemental EA lies on federally administered lands, Tribal lands, or within the coastal zone under any applicable coastal plan.

Among the nine proposed LTE project sites, five of the sites would be located on the roof of existing structures, three of the sites would be collocated with existing antenna support structures, and one site would extend the original project boundary previously analyzed in the Final LA-RICS LTE System EA to accommodate a connection to utility power. Based on availability, existing infrastructure could be used at any of the sites evaluated in this Supplemental EA to minimize project costs and potential environmental impacts. Use of existing infrastructure could include expansion of existing infrastructure (i.e., equipment cabinets or an equipment shelter).

All of the proposed sites would be located within Los Angeles County. All project activities would occur at existing publicly owned or administered public safety or communications facilities. No permanent acquisition or change of ownership would be required at any site.

Alternatives

This Supplemental EA also evaluates the No Action Alternative. Under the No Action Alternative, none of the work identified under the Proposed Action in this EA would occur. Within local areas that would otherwise be served, first and second responders within Los Angeles County would receive diminished capacity and/or coverage compared to surrounding areas (i.e., where LTE sites within the LA-RICS LTE PSBN system are currently being constructed). The areas that might be served by expanded LTE technology 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 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.

The Final LA-RICS LTE System EA discussed three alternatives to the Proposed Action that were considered but not analyzed for development and implementation of the LA-RICS LTE PSBN system and

evaluated for their ability to meet the Purpose and Need of the project in a feasible manner. No additional alternatives have been considered for this Supplemental EA.

Impact Summary

Impact Summary Table

Environmental Topic	Evaluation Summary	
	Proposed Action	No Action
Noise	No significant direct and no indirect impacts would occur. No cumulative noise impacts are anticipated.	No direct or indirect impacts noise would occur. No cumulative noise impacts are anticipated.
Air Quality	Construction activities at these sites would be included in weekly forecasting for the overall LTE system site (for sites occurring within the South Coast Air Basin) in accordance with AIR mitigation measure (MM) 1. No significant direct and no indirect impacts to air quality would occur. No cumulative air quality impacts are anticipated.	No direct or indirect air quality impacts would occur. No cumulative air quality impacts are anticipated.
Geology & Soils	No direct or indirect impacts are anticipated. No cumulative impacts to geology and soils are anticipated.	No direct or indirect geology and soils impacts would occur. No cumulative geology and soils impacts are anticipated.
Water Resources	No onsite surface water resources. No offsite runoff anticipated. No significant direct and no indirect impacts would occur. No cumulative water resources impacts are anticipated.	No direct or indirect water resources impacts would occur. No cumulative water resources impacts are anticipated.
Biological Resources	All sites analyzed in this EA were reviewed by the U.S. Fish and Wildlife Service (USFWS), either during the initial consultation period that concluded in July 2014, and via telephone and email correspondence. On June 4 2015, USFWS agreed that the no effect determination was appropriate. After review of the data, USFWS concluded that no Endangered Species Act – listed, -candidate, or proposed for listing species or critical habitat was present at any of the proposed project sites. USFWS did not provide any comment to LA-RICS' No Effect determination for these sites. No significant direct or indirect impacts to species or habitat protected under the Federal Endangered Species Act are anticipated.	No direct or indirect biological resources impacts would occur. No cumulative biological resources impacts are anticipated.

Impact Summary Table

Environmental Topic	Evaluation Summary	
	Proposed Action	No Action
	<p>No direct or indirect impacts to wetlands are anticipated.</p> <p>No significant impacts to other biological resources are anticipated.</p> <p>No cumulative biological resources impacts are anticipated.</p>	
Historic & Cultural Resources	<p>A Historic District is identified but in the direct Area of Potential Effect (APE) at one site (Site PASDNPD) and in the indirect APE at three sites. Section 106 consultation with the State Historic Preservation Office (SHPO) is ongoing for three sites. The Section 106 process has been concluded for six sites.</p> <p>No adverse effects to historic and cultural resources are anticipated; therefore, no significant direct or indirect impacts are anticipated.</p> <p>No cumulative impacts to historic and cultural resources are anticipated.</p>	<p>No direct or indirect impacts to cultural resources would occur.</p> <p>No cumulative impacts to cultural resources are anticipated.</p>
Aesthetic and Visual Resources	<p>No significant direct and no indirect impacts to aesthetic and visual resources are anticipated.</p> <p>No cumulative impacts to aesthetic and visual resources are anticipated.</p>	<p>No direct or indirect aesthetic and visual resources impacts would occur.</p> <p>No cumulative impacts to aesthetic and visual resources are anticipated.</p>
Land Use	<p>No significant direct or indirect impacts to land use are anticipated.</p> <p>No cumulative impacts to land use are anticipated.</p>	<p>No direct or indirect land use resources impacts would occur.</p> <p>No cumulative impacts to land use are anticipated.</p>
Infrastructure	<p>No significant direct or indirect impacts to infrastructure are anticipated.</p> <p>No cumulative impacts to infrastructure are anticipated.</p> <p>Implementation of TRANS MM 1 is required at all sites evaluated under the Proposed Action.</p>	<p>No direct or indirect infrastructure resources impacts would occur.</p> <p>No cumulative impacts to infrastructure are anticipated.</p>
Socioeconomic Resources	<p>No significant direct and no indirect impacts to socioeconomic resources are anticipated.</p>	<p>No direct or indirect socioeconomic resources impacts would occur.</p> <p>No cumulative impacts to socioeconomic resources are anticipated.</p>

Impact Summary Table

Environmental Topic	Evaluation Summary	
	Proposed Action	No Action
	No cumulative impacts to socioeconomic resources are anticipated.	
Human Health & Safety	<p>Cortese List¹ sites occur near several LTE sites. No exposures to hazardous materials are anticipated.</p> <p>One LTE site located within a high fire hazard severity zone would require inclusion within the existing LTE fire management plan.</p> <p>All sites would be operated in compliance with FCC regulations regarding public and worker exposures to radio frequency emissions associated with LTE and microwave antennas installed at each site. No exceedance of the FCC’s maximum permissible exposures would occur.</p> <p>No direct or indirect impacts to human health and safety are anticipated.</p> <p>No cumulative impacts to human health and safety are anticipated.</p>	<p>No direct or indirect human health and safety impacts would occur.</p> <p>No cumulative impacts to human health and safety impacts are anticipated.</p>

¹ The Cortese list was developed in response to California Government Code Section 65962.5 enacted in 1985. The Cortese list data sources include the following data resources: List of hazardous waste and substance sites from the Department of Toxic Substances Control (DTSC) Envirostar database; list of Leaking Underground Storage Tank (LUST) sites by County and fiscal year from the Water Board GeoTracker database; list of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside of the waste management unit; list of “active” Cease and Desist Orders and Cleanup and Abatement Orders from the Water Board (note that many of the sites do not concern the discharge of wastes that are hazardous materials); and a list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
Overview.....	i
Proposed Action	ii
Alternatives	ii
Impact Summary	iv
LIST OF APPENDICES	xii
ACRONYMS AND ABBREVIATIONS	xiv
1.0 PURPOSE AND NEED	1
1.1 Need for Action.....	1
1.2 Purpose of the Action	2
2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES	4
2.1 Proposed Action.....	4
2.1.1 System Design.....	4
2.1.2 Site Design	9
2.1.3 Construction Activities.....	10
2.1.4 Operations Activities.....	10
2.2 No Action Alternative	11
2.3 Alternatives Considered but Eliminated from Further Discussion	11
3.0 AFFECTED ENVIRONMENT	13
3.1 Noise	13
3.1.1 Regulatory Setting	13
3.1.2 Methodology	13
3.1.3 Existing Ambient Noise Levels and Receptors	14
3.2 Air Quality and Greenhouse Gases	14
3.2.1 Regulatory Setting	14
3.2.2 Sensitive Receptors.....	15
3.3 Geology and Soils.....	15
3.3.1 Regulatory Setting	15
3.3.2 Existing Resources	16
3.4 Water Resources.....	17
3.4.1 Regulatory Setting	17
3.4.2 Existing Resource	17

3.5	Biological Resources	18
3.5.1	Regulatory Setting	18
3.5.2	Methodologies and Resource Overview.....	19
3.6	Historic and Cultural Resources.....	22
3.6.1	Regulatory Setting	22
3.6.2	Area of Potential Effects.....	23
3.6.3	Methodology	23
3.6.4	Resource Overview.....	25
3.7	Aesthetic and Visual Resources	26
3.7.1	Regulatory Setting	26
3.7.2	Existing Aesthetic and Visual Character	26
3.8	Land Use	26
3.9	Infrastructure.....	27
3.9.1	Utilities.....	27
3.9.2	Solid Waste Disposal.....	27
3.9.3	Domestic Water.....	27
3.9.4	Transportation	28
3.10	Socioeconomic Resources	28
3.10.1	Minority Populations	28
3.10.2	Low Income Population	28
3.11	Human Health and Safety.....	29
3.11.1	Regulatory Setting	29
3.11.2	Resource Overview	29
4.0	ENVIRONMENTAL CONSEQUENCES.....	34
4.1	Noise	34
4.1.1	Proposed Action	34
4.1.2	No Action Alternative	36
4.2	Air Quality and Greenhouse Gases.....	36
4.2.1	Proposed Action	37
4.2.2	No Action Alternative	40
4.3	Geology and Soils.....	40
4.3.1	Proposed Action	40
4.3.2	No Action Alternative	41
4.4	Water Resources.....	41
4.4.1	Proposed Action	41

Table of Contents

4.4.2	No Action Alternative	42
4.5	Biological Resources	42
4.5.1	Proposed Action	42
4.5.2	No Action Alternative	47
4.6	Historic and Cultural Resources.....	47
4.6.1	Proposed Action	47
4.6.2	No Action Alternative	49
4.7	Aesthetic and Visual Resources.....	49
4.7.1	Proposed Action	49
4.7.2	No Action Alternative	49
4.8	Land Use	50
4.8.1	Proposed Action	50
4.8.2	No-Action Alternative	50
4.9	Infrastructure.....	50
4.9.1	Proposed Action	50
4.9.2	No Action Alternative	52
4.10	Socioeconomic Resources	52
4.10.1	Proposed Action	52
4.10.2	No Action Alternative	52
4.11	Human Health and Safety.....	52
4.11.1	Proposed Action	52
4.11.2	No Action Alternative	57
4.12	Cumulative Impacts	57
4.12.1	Determination of Present and Reasonably Foreseeable Future Projects	58
4.12.2	Cumulative Impact Analysis.....	58
5.0	FEDERAL AND STATE AGENCY CONSULTATION	63
5.1	Federal Communications Commission	63
5.2	California State Historic Preservation Office	63
5.3	Native American Consultation.....	64
5.4	U.S. Fish and Wildlife Service.....	65
6.0	ENVIRONMENTAL PERMITS AND REGULATORY REQUIREMENTS	67
7.0	AGENCIES AND PERSONS CONSULTED	70
8.0	LIST OF PREPARERS	73

9.0 REFERENCES 76

LIST OF APPENDICES

Appendix A:	Final LA-RICS LTE System EA and Finding of No Significant Impact
Appendix A-1:	Construction Management Requirements (CMRs) for Biological and Cultural Resources
Appendix B:	Site Data Worksheets
Appendix C:	Agency Correspondence
Appendix D:	Programmatic Agreement between the NTIA and the California State Historic Preservation Officer, Regarding the LA-RICS Authority under the BTOP

LIST OF FIGURES

Figure 2-1:	Proposed LA-RICS LTE Site Location Map	5
Figure 3-1:	Proposed Sites with Very High Fire Hazard Severity Zones, Local Responsibility Area	31

LIST OF TABLES

Impact Summary Table	iv
Table 2-1: LTE Sites Included in the Proposed Action ¹	6
Table 3-1: USDA Soil Classifications for Supplemental LTE Sites	16
Table 3-2: LTE Site Distribution by Groundwater Basin	18
Table 3-3: Sites by City and County Jurisdiction and Zoning	27
Table 3-4: Site Summary for Hazardous Materials	30
Table 4-1: Total GHG Emissions through Life of Project	39
Table 4-2: Impact Analysis Summary for Hazardous Materials	53
Table 4-3: Summary of RF Modeling Results.	56
Table 4-4: Projects Located Within the Project Impact Zone of Sites Evaluated in the Proposed Action..	58
Table 6-1: Federal, State, and Local Regulatory Requirements and Permits	67
Table 7-1: Agencies and Persons Consulted	70

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Term
ALUP	airport land use plan
AMI	area median household income
APE	area of potential effect
ARI	Air-Conditioning and Refrigeration Institute
ARPA	Archaeological Resources Protection Act of 1979
ARRA	American Recovery and Reinvestment Act
ASR	antenna structure registration
Authority	Los Angeles Regional Interoperability Communications System Joint Powers Authority
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	best management practice
BTOP	Broadband Technology Opportunities Program
CalEEMod®	California Emissions Estimator Model
Cal/OSHA	California Office of Occupational Safety and Health Administration
CAP	Corrective Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFP	California Fully Protected
CFR	Code of Federal Regulations
CH ₄	Methane
CMR	construction management requirement
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂	carbon dioxide
County	Los Angeles County
CRM	cultural resource management
CWA	Clean Water Act
dBA	A-weighted frequency-dependent decibel scale
DHS	California Department of Health Services
DOGGR	Division of Oil, Gas, and Geothermal Resources

Acronyms and Abbreviations

Acronym/Abbreviation	Term
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
EFH	essential fish habitat
EPA	Environmental Protection Agency
EPC	evolved packed cores
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
Final LA-RICS LTE System EA	<i>Broadband Technology Opportunities Program (BTOP), Final Environmental Assessment, Los Angeles Regional Interoperable Communications System (LA-RICS) Project</i>
FMMP	Farmland Mapping and Monitoring Program
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
GHG	greenhouse gas
HCP	habitat conservation plan
HFC	hydrofluorocarbons
HVAC	heating, ventilating, and air conditioning
kW	Kilowatt
LADWP	City of Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LA-RICS	Los Angeles Regional Interoperable Communications System
Ldn	day-night average noise
Leq	equivalent noise level
LMR	Land Mobile Radio
LAPD	Los Angeles Police Department
LTE	Long-Term Evolution
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MM	mitigation measure
MMPA	Marine Mammal Protection Act
MPE	maximum permissible exposure
MSA	Magnuson-Stevens Fishery Conservation and Management Act
N ₂ O	nitrous oxide
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHMLAC	Natural History Museum of Los Angeles County

Acronyms and Abbreviations

Acronym/Abbreviation	Term
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	California Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTIA	National Telecommunications and Information Administration
O ₃	Ozone
OET	Office of Engineering and Technology
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PFC	perfluorocarbon
PIZ	project impact zone
PM	particulate matter
PPV	peak particle velocity
PSBN	Public Safety Broadband Network
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SOI	Secretary of the Interior
SOP	species occurrence potential
SRA	source receptor area
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCNS	Tower Construction Notification System
U.S.	United States
USDA	U.S. Department of Agriculture
USDOC	U.S. Department of Commerce
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VdB	vibration decibel

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1.0 PURPOSE AND NEED

This Supplemental Environmental Assessment (Supplemental EA) addresses the need for inclusion of new Long-Term Evolution (LTE) sites that were not analyzed in the Broadband Technology Opportunities Program (BTOP) for the Los Angeles Regional Interoperable Communications System (LA-RICS) Project Final Environmental Assessment (Final LA-RICS LTE System EA). The Final LA-RICS LTE System EA discussed construction of LTE facilities for wireless voice and data communications in the Los Angeles County area. The U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) issued a Finding of No Significant Impact (FONSI) on October 15, 2014. The LA-RICS LTE project is being developed under an NTIA-administered BTOP grant funded by the American Recovery and Reinvestment Act (ARRA). The approved Final LA-RICS LTE System EA is incorporated by reference in this Supplemental EA in accordance with Title 40 Code of Federal Regulations (CFR) Part 1502.21 (40 CFR 1502.21).

This Supplemental EA 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 40 CFR 1500-1508. The NTIA is the agency responsible for determining whether to issue grant funds and is lead agency for NEPA purposes for this Supplemental EA.

1.1 Need for Action

As the LA-RICS LTE Public Safety Broadband Network (PSBN) system design has progressed, new features, including design and geographic changes, have been identified to improve upon the original design. Among these changes, some sites in the original design have dropped from the system due to engineering or public policy decisions affecting these individual sites.

Since the October 2014 FONSI, the LTE project has continued through the permitting process for many of the 231 sites in the system and construction had begun at some sites. Community concerns, triggered in part by outreach activities initiated by the Los Angeles County Firefighters Union (Local 1014), resulted in the passage of a motion on March 24, 2015 by the Los Angeles County Board of Supervisors suspending LA-RICS LTE construction at Los Angeles County Fire Department sites. Following the Board of Supervisors action, the Los Angeles City Council voted on April 1, 2015, to suspend construction at all Los Angeles Fire Department (LAFD) and Los Angeles Police Department (LAPD) sites. As a result of these actions by the Board of Supervisors and Los Angeles City Council, and out of concern that the project was behind schedule and there was “substantial uncertainty regarding the timeframe created by the County Board and City Council Resolutions”, the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) acting on a notification by the National Telecommunications and Information Administration (NTIA), suspended the program on April 3, 2015.

NTIA also directed the Los Angeles Regional Interoperability Communications System Joint Powers Authority (Authority) to develop a Corrective Action Plan (CAP) detailing the viability of a revised program. The resultant re-designed system features a reduced number of sites, most of which were

previously analyzed in the Final LA-RICS LTE System EA as well as additional sites to supplement system coverage and capacity. This new plan, coupled with an outreach requirement, was approved by the Board of Supervisors on April 16, 2015. This was followed by a vote by the Los Angeles City Council, approving the inclusion of 19 LAPD sites into the LTE system. NTIA notified the Authority that it had lifted its suspension on May 1, 2015.

This Supplemental EA evaluates activities at nine sites. Four of these are new sites not previously analyzed in the Final LA-RICS LTE System EA that have been identified for inclusion in the system to provide additional geographic coverage and system voice- and data-carrying capacity. Five sites have been previously analyzed, but the project plan for these sites has changed from the description in the Final LA-RICS LTE System EA.

1.2 Purpose of the Action

The purpose of this action is to improve the design of the existing LA-RICS LTE PSBN system to better provide dedicated, interoperable broadband communication capability and capacity to enhance first and second responder public safety services throughout Los Angeles County.

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2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Two alternatives have been identified for evaluation in this Supplemental EA: the Proposed Action (described in Section 2.1) and the No Action Alternative (described in Section 2.2).

2.1 Proposed Action

If implemented, the Proposed Action would add four new sites to the larger LA-RICS LTE PSBN system already under construction (Figure 2-1), adjust the project design of five sites previously evaluated and approved, and extend the boundary of one site previously evaluated and approved so that proposed work can be accommodated. The locations of these nine sites are described in Table 2-1.

Four of the nine sites evaluated under the Proposed Action were not considered in the design of the LA-RICS project as approved by NTIA in the October 2014 FONSI (see Appendix A) and would supplement the sites approved in that decision document. Five sites have been redesigned: the planned antenna support structure has changed to building mounts rather than a new monopole or collocation to an existing tower, and the boundary of these sites has been adjusted to acquire power and/or fiber in the adjacent right of way. One site (Site AZPD001) requires a boundary adjustment in order to acquire power and/or fiber in the adjacent paved public right-of-way. Other than site-specific location and project design, the activities evaluated for all sites under the Proposed Action are largely similar to those described for the proposed project, which is described in more detail in Section 2.1 of the Final LA-RICS LTE System EA. No site evaluated in this Supplemental EA lies on federally administered lands, Tribal lands, or within the coastal zone under any applicable coastal plan.

2.1.1 System Design

The LA-RICS LTE PSBN system has been designed to include redundant communications paths to provide connectivity between LTE sites and the geographically redundant evolved packet cores (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. The sites included in this Supplemental EA analysis support the original system design concept.

Figure 2-1: Proposed LA-RICS LTE Site Location Map



Service Layer Credits: Esri, HERE, DeLorme, TomTom, Intermap, OpenStreetMap Contributors, and the GIS User Community.
 Base Layer Credits: County of Los Angeles 2015. LA-RICS 2015.

6/12/2015

- County Boundaries
- ▲ Proposed LTE Sites in EA

Table 2-1: LTE Sites Included in the Proposed Action¹

Site ID	Site Name	Address	City	Tower / Roof Mount	Analyzed in Final LA-RICS LTE System EA?	Max. Ground Disturbance (Acres)	Work Evaluated in This EA
AZPD001	Azusa Police Department	725 North Alameda Avenue	Azusa	Tower ²	Yes	<0.08	Trenching up to 500 linear feet into adjacent right(s) of way to accommodate electrical and/or fiber upgrades
BURPD01	Burbank Police Department	200 North 3 rd Street	Burbank	Roof Mount	Yes	<0.08	Install LTE and microwave antennas on the façade of the cupola of the police station; up to 500 linear feet of trenching into adjacent right(s) of way to accommodate electrical and/or fiber upgrades
LAPD077	Los Angeles Police Department 77 th Street Area Complex	7600 South Broadway Street	Los Angeles	Roof Mount	Yes	<0.08	Install LTE and microwave antennas on the roof of the communications room of the police station; up to 500 linear feet of trenching into adjacent right(s) of way to accommodate electrical and/or fiber upgrades
LAPDVNS	Los Angeles Police Department Van Nuys Area Station	6240 Sylmar Avenue	Van Nuys	Roof Mount	Yes	<0.08	Install LTE and microwave antennas, and up to four equipment cabinets on the roof of the police station; up to 500 linear feet of trenching into adjacent right(s) of way to accommodate electrical and/or fiber upgrades

Description of Proposed Action and Alternatives

Site ID	Site Name	Address	City	Tower / Roof Mount	Analyzed in Final LA-RICS LTE System EA?	Max. Ground Disturbance (Acres)	Work Evaluated in This EA
LBECOC	Long Beach Emergency Communication and Operations Center	2950 Redondo Avenue	Long Beach	Tower	No	<0.08	Collocate LTE and microwave antennas on an existing 90-foot lattice tower; install up to four new equipment cabinets and an up to 35-kilowatt (kW) generator located on new pads; up to 500 linear feet of trenching into adjacent right(s) of way to accommodate electrical and/or fiber upgrades
LBFD012(N)	Long Beach Fire Station 12(N)	1199 East Artesia Boulevard	Long Beach	Tower	No	<0.08	Collocate LTE and microwave antennas on an existing 100-foot monopole; install up to four new equipment cabinets and an up to 35kW generator located on new pads; up to 500 linear feet of trenching into adjacent right(s) of way to accommodate electrical and/or fiber upgrades
PASDNPD	Pasadena Police	240 Ramona Place	Pasadena	Roof Mount	No	<0.08	Install LTE and microwave antennas on the outer façade of the stairwell penthouse on the existing parking structure; install up to four new equipment cabinets and an up to 35kW generator located on new pads; up to 500 linear feet of trenching into adjacent right(s) of way to accommodate electrical and/or fiber upgrades

Description of Proposed Action and Alternatives

Site ID	Site Name	Address	City	Tower / Roof Mount	Analyzed in Final LA-RICS LTE System EA?	Max. Ground Disturbance (Acres)	Work Evaluated in This EA
RANCHO	LAC/Rancho Los Amigos National Rehab	7601 East Imperial Highway	Downey	Roof Mount	Yes	<0.08	Install LTE and microwave antennas on the roof of a stairwell enclosure on a parking structure; up to 700 linear feet of trenching into adjacent right(s) of way to accommodate electrical and/or fiber upgrades
VPC	Verdugo Peak	Verdugo Mountain Way	Glendale	Tower	No	<0.08 acres	Collocate LTE and microwave antennas on an existing 180-foot lattice tower; install up to four new equipment cabinets and an up to 35kW generator located on new pads; relocate and replace existing utility pole; up to 500 linear feet of trenching to adjacent right(s) of way to accommodate electrical and/or fiber upgrades

2.1.2 Site Design

Design of all of the proposed LTE sites is consistent in most aspects with that described in Section 2.1 of the Final LA-RICS LTE System EA, with the exception of the placement of antennas. Five of the sites (BURPD01, LAPD077, LAPDVNS, PASDNP, RANCHO) are proposed to include roof mounted antennas; three sites (LBECOC, LBFD012(N), VPC) would collocate antennas on existing communication structures; and one site (AZPD001) is still designed for a monopole, but requires trenching outside the boundary considered in the Final LA-RICS LTE System EA for electrical power. As described in Section 2.1 of the Final LA-RICS LTE System EA, the sites may each include equipment cabinets, emergency generators, and other appurtenances, as described below. Detailed information regarding the design features analyzed for each site can be found in Appendix B of this Supplemental EA.

Roof Mount Antennas

Five sites would attach antennas to existing rooftop structures. Individual site configurations include:

- BURPD01: Antennas would be façade mounted to the exterior of an existing penthouse or cupola structure. Other work at this site would be as described in the Final LA-RICS LTE System EA.
- LAPD077 and LAPDVNS: Antennas would be mounted to the roof of each police station. Other work at these sites would be as described in the Final LA-RICS LTE System EA.
- PASDNP: Antennas would be mounted to the exterior of an elevated portion of an existing elevator tower. Installation of equipment cabinets, emergency generators, and other appurtenances and infrastructure would be as described below.
- RANCHO Antennas would be mounted to the exterior of an elevated portion of an existing elevator tower. Other work at this site would be as described in the Final LA-RICS LTE System EA.

Collocation on Existing Structure

Three sites would collocate antennas onto existing communication structures at each site. Installation of equipment cabinets, emergency generators, and other appurtenances and infrastructure would be as described below. Individual structure configurations include:

- LBECOC: Antennas would be mounted to an existing 90-foot lattice tower
- LBFD012(N): Antennas would be mounted to an existing 100-foot lattice tower
- VPC: Antennas would be mounted to an existing 180-foot lattice tower

Equipment Cabinets

Up to four outdoor equipment cabinets would be included at each of four new LTE sites (LBECOC, LBFD012(N), PASDNP, and VPC). Standard cabinets would be approximately 3 feet wide by 3 feet deep by up to 7 feet high, generally configured to be mounted on an up to 162-square-foot concrete slab that

is up to 12 inches thick. Cabinets would be used to house broadband radio base stations (known as an eNodeB), backhaul equipment, and backup batteries as described in Section 2.1.2 of the Final LA-RICS LTE System EA. If space is available, the equipment cabinets could be collocated with emergency backup generators on a larger pad foundation to combine the two assets. Each cabinet would be equipped with a service light, designed to minimize light exposure to areas not immediately adjacent to each cabinet.

Emergency Generators

Generators would be installed at four new LTE sites (LBECOC, Lbfd012(N), PASDNPD, and VPC) to provide backup power for up to approximately two weeks in the event of outages. Generators are not expected to exceed 35 kilowatts (kW), 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) meeting or exceeding industry standards. Each generator would be sited on an approximately 72-square-foot by 12-inch-thick pad, (or collocated with equipment cabinets as described above).

Other Appurtenances and Infrastructure

Other site improvements at each site could include up to 500 linear feet of trenching for utility and fiber interconnection, security improvements (e.g., lighting, fencing, and alarms), and signage. Other than the design changes described above, and expanding the area of potential effect (APE) for Site AZPD001 to capture power interconnection immediately off site in an adjacent public right-of-way, these activities are as described in Section 2.1.2 of the Final LA-RICS LTE System EA.

2.1.3 Construction Activities

Construction activities at each site could include ground disturbance, creation of impervious surfaces, demolition activities, materials storage and staging, site access, and site cleanup; each activity requires the use of construction equipment. With the exception of the design changes described above, and expanding the APE to access power interconnection immediately adjacent in an adjacent public right-of-way, all construction activities and equipment usage would be consistent with those described in Section 2.1.3 of the Final LA-RICS LTE System EA.

2.1.4 Operations Activities

Full-time staff would not be required to operate any of the proposed LTE sites. Operations activities associated with the proposed sites include occasional maintenance, repairs, and emergency procedure testing. 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. These activities would be consistent with those described in Section 2.1.4 of the Final LA-RICS LTE System EA.

2.2 No Action Alternative

This Supplemental EA also evaluates the No Action Alternative. Under the No Action Alternative, no additional sites would be constructed. In the local areas that would be served by these sites, law enforcement and fire service agencies within Los Angeles County would receive little or no dedicated public safety data communications capacity and/or coverage compared to surrounding areas where LTE sites are currently being constructed. The areas that might be served by expanded LTE technology for the first and second responders 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 No Action Alternative is analyzed in this Supplemental 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

Section 2.3 of the Final LA-RICS LTE System EA discussed three alternatives to the Proposed Action that were considered for development and implementation of the LA-RICS LTE PSBN system and evaluated for their ability to meet the Purpose and Need of the project in a feasible manner. These alternatives included:

- a Collocation alternative, where PSBN and microwave antenna(s) at each LTE site would be collocated on existing towers
- a Buried Cable alternative, where all backhaul signal would be transported via buried cable
- an Aerial Cable alternative, where all backhaul signal would be transported via aerial cable

The discussion in Section 2.3 of the Final LA-RICS LTE System EA describes these alternatives and explains why, at the time, none of them sufficiently and feasibly meet the project's purpose and need and were therefore eliminated from further discussion in the EA.

No other new alternatives have been considered for this Supplemental EA.

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3.0 AFFECTED ENVIRONMENT

This chapter provides a description of the current conditions of environmental resources analyzed in this Supplemental 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. For consistency of analysis, resources presented in this Supplemental EA are the same as those that were analyzed in the Final LA-RICS LTE System EA and are addressed as applicable based on the resources that exist at the nine proposed sites evaluated in this analysis. 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 that area 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 in the study area. The characteristics of sound, noise metrics, noise attenuation, vibration, sensitive receivers, short-term and long-term noise, and land use compatibility are discussed in Section 3.1 of the Final LA-RICS LTE System EA.

3.1.1 Regulatory Setting

There are no applicable federal or state standards for short-term (i.e., construction) noise. Site-specific information for each site regarding local noise ordinances is provided in Appendix B. Long-term noise guidelines from The California Department of Health Services (DHS) were used in assessing long-term (i.e., operational) noise impacts on specific land uses. A detailed discussion of the DHS guidelines is included in Section 3.1.4 of the Final LA-RICS LTE System EA.

3.1.2 Methodology

The noise and vibration analysis conducted in this Supplemental EA is consistent with that contained in Section 3.1 of the Final LA-RICS LTE System EA. Rating scales used in this noise analysis include equivalent noise level (L_{eq}), the community noise equivalent level (CNEL), and the day-night average noise (L_{dn}). Typical vibration measurements are in peak particle velocity (PPV) in inches per second and are expressed as vibration decibels (VdB). Sensitive receivers were identified within 1,000 feet of the proposed sites evaluated in this Supplemental EA and included residential areas, recreational areas and parks, a library, and religious institutions. For purposes of analysis it was determined that the threshold of concern for sites with sensitive receptors within 1,000 feet was 55 A-weighted decibel (dBA).

3.1.3 Existing Ambient Noise Levels and Receptors

Ambient noise levels vary depending on a site's setting (e.g., urban, rural). Generally, urban areas such as those containing sites AZPD001, BURPD01, LAPD077, LAPDVNS, LBECOC, LBFD012(N), PASDNPD, and RANCHO are noisier than rural (e.g., Site VPC) areas. Ambient noise levels for urban sites typically range from 60 to 70 dBA due to vehicles, construction, public transportation, and other human activities to 50 to 60 dBA in quieter rural areas.

Some of the sites evaluated in this Supplemental EA are near sensitive receptors that include residences, libraries, churches, and parks. Where they occur, these nearby noise receptors are listed for each site in Appendix B.

3.2 Air Quality and Greenhouse Gases

This section presents information on air pollutants relevant to the Proposed Action. An in-depth discussion of the pollutants of concern, relevant regulations, existing air quality, and sensitive receptors is included in Section 3.2 of the Final LA-RICS LTE System EA.

3.2.1 Regulatory Setting

This evaluation is consistent with the Final LA-RICS LTE System EA in that it addresses criteria pollutants, hazardous air pollutants, and greenhouse gases (GHG). The criteria pollutants of concern to the project are nitrogen oxides (NO_x) including nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter (PM) less than 10 microns in aerodynamic diameter (PM₁₀) and 2.5 microns in aerodynamic diameter (PM_{2.5}), and ozone (O₃). Hydrocarbons, although not criteria pollutants *per se*, react with NO_x and sunlight to form criteria pollutant O₃. Hazardous air pollutants of concern, also known as toxic air contaminants (TAC), include those from combustion of diesel fuel in standby electrical generators and motor vehicle traffic. GHGs relevant to the project are defined as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) (a form of NO_x), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). An in-depth discussion of the above pollutants and their relevant National and California ambient air quality standards can be found in Section 3.2.3 of the Final LA-RICS LTE System EA. No additional regulations other than those addressed in the Final LA-RICS LTE System EA were identified as applicable to this supplemental analysis.

Air Quality Attainment Plans and Existing Ambient Air Quality

The sites evaluated in this Supplemental EA are all located within the South Coast Air Basin (SCAB), which is designated as either "nonattainment" or as "maintenance" for O₃, PM₁₀, PM_{2.5}, CO, NO₂, and SO₂. The proposed project is considered a federal action since it requires federal approval and would receive federal funding. It is therefore potentially subject to a general conformity analysis. Air quality attainment was examined in this assessment. For an in-depth discussion of the attainment plans and air quality monitoring sites within the SCAB, refer to Section 3.2.3 of the Final LA-RICS LTE System EA.

Off-Road Equipment Requirements

Applicable federal and California off-road equipment regulations will be followed, including the latest 2014 Tier 4 federal standards and the 2014 California Air Resources Board (CARB) standards. The off-road equipment requirements were examined in this analysis. For an in-depth discussion of these standards, refer to the Final LA-RICS LTE System EA.

Local Air Quality Regulations

All of the sites evaluated in this Supplemental EA are located within the South Coast Air Quality Management District (SCAQMD), which has published thresholds of significance for regional impacts for criteria pollutant emissions during construction and operation. The SCAQMD thresholds were examined in this analysis. An in-depth discussion of these thresholds is included in the Final LA-RICS LTE System EA.

Greenhouse Gas Emissions Control Strategies

Several federal and California control strategies are in place to reduce GHG emissions, including federal Executive Order 13514, California Executive Orders S-3-05 and S-01-07, and the California Global Warming Solutions Act of 2006. These regulations were included in this analysis. An in-depth discussion of these control strategies is included in the Final LA-RICS LTE System EA.

3.2.2 Sensitive Receptors

Sensitive receptors for air pollutants are defined 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. of the Final LA-RICS LTE System EA). Sensitive receptor locations within the study area include residential areas, religious institutions, and libraries. Other areas where persons can be situated for an hour or longer at a time may be sensitive receptors; these include parks, bus stops, and sidewalks but would not include the tops of buildings, roadways, or permanent bodies of water. Locations of sensitive receptors are provided in Appendix B, although not all sites are near sensitive receptors.

3.3 Geology and Soils

This section provides an overview of seismic hazards, soil erosion potential, and farmlands associated with the LTE sites addressed in this Supplemental EA.

3.3.1 Regulatory Setting

Regulations relevant to geology and soils for this analysis include the Alquist-Priolo Earthquake Fault Zoning Act; the Seismic Hazard Mapping Act of 1990; Section 402 of the Federal Water Pollution Control Act (Clean Water Act); Section 1541(b) of the federal Farmland Protection Policy Act (FPPA); and the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. No additional regulations other than those addressed in the Final LA-RICS LTE System EA were required for this supplemental analysis. Section 3.3.1 of the Final LA-RICS LTE System EA contains a detailed discussion of the above-mentioned regulations.

3.3.2 Existing Resources

Earthquake Fault Zones

None of the proposed sites are located within an Alquist-Priolo Earthquake Fault Zone.

Soil Erosion Potential

The U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS) describes soil according to particle makeup (e.g., silt, loam, etc.) and ability to drain water. Table 3-1 summarizes the USDA soil classifications for each of the proposed LTE sites and potential for soil erodibility.

Table 3-1: USDA Soil Classifications for Supplemental LTE Sites

Sites	USDA Soil Series Classification	Description	Erodibility
AZPD001	Zamora-Urban land-Ramona Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
BURPD01	Urban land-Sorrento-Hanford Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
LAPD077	Urban land-Sorrento-Hanford Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
LAPDVNS	Urban land-Sorrento-Hanford Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
LBECOC	Urban land-Sorrento-Hanford Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
LBFD012(N)	Urban land-Sorrento-Hanford Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
PASDNPD	Zamora-Urban land-Ramona Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
RANCHO	Urban land-Sorrento-Hanford Association	Alluvium-fine mixed loam to moderately coarse textured alluvium-coarse loam. Very deep well-drained.	Moderate
VPC	Urban land lithic-Xerorthents-Hambright-Castaic-Association	Shallow soils found on steep slopes on top of weather igneous rocks commonly associated with rock outcrops, moderate permeability	Moderate

Source: NRCS 2015.

Important Farmlands

No proposed sites are within areas identified by NRCS or the California Department of Conservation (CDOC) as prime farmland, unique farmland, farmland of statewide importance, and/or farmland of local importance (CDOC 2014).

3.4 Water Resources

This section discusses surface water and groundwater resources near each of the sites evaluated in this Supplemental EA. The study area for each site was chosen to include a 500-foot radius from the site boundaries to capture indirect effects associated with the potential for runoff from each site.

3.4.1 Regulatory Setting

The State Water Resources Control Board (SWRCB) and the Los Angeles Regional Water Quality Control Board (RWQCB) are the agencies that regulate water resources within the proposed project area. The following federal and state laws were determined applicable for the proposed project: Sections 303, 401, 402, and 404 of the Clean Water Act; Executive Order 11988 regarding floodplain management, and the state Porter-Cologne Water Quality Control Act. Each of these is addressed in Section 3.4.1 of the Final LA-RICS LTE System EA, and no new applicable regulations have been identified for this Supplemental EA.

3.4.2 Existing Resource

Surface Waters

Surface water throughout the study area is typically derived from precipitation and runoff and, to a lesser degree, groundwater. The sites range from relatively undeveloped, where precipitation absorption varies depending on soil moisture, soil type, and terrain; to highly urbanized sites with impervious surfaces where stormwater is directed to storm drains, resulting in very little infiltration to groundwater aquifers. An in-depth discussion of the average precipitation, climate, and geography of Los Angeles County is provided in Section 3.2-1 of the Final LA-RICS LTE System EA.

Site VPC has two U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI)-mapped wetlands within 500 feet of the site boundaries, classified as a temporarily flooded riverine feature (Cowardin et al. 1979), that during or immediately after rains may contain surface water. Several concrete-lined above ground reservoirs containing water are within 500 feet of Site LBECOC.

Groundwater

The proposed LTE sites and the groundwater basins in which they are located are listed in Table 3-2. A description of the groundwater basins is provided in Section 3.4.2 of the Final LA-RICS LTE System EA.

Table 3-2: LTE Site Distribution by Groundwater Basin

Sites	Groundwater Basin	Description
LAPD077 LBECOC LBFD012(N) RANCHO	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 nonproducing aquifers may occur at shallow depths of 20 feet or more.
AZPD001 PASDNPD	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.
BURPD01 LAPDVNS	San Fernando Valley	Aquifers in this basin are composed of unconsolidated alluvial sediments. Depth to groundwater typical ranges from 24 to 400 feet below ground surface.
VPC	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.

Floodplains

None of the sites evaluated in this Supplemental EA are located within a 100-year floodplain or other known flood-prone areas.

3.5 Biological Resources

Biological resources, including general wildlife and plants, vegetation, special status wildlife and plants, and sensitive habitats, were evaluated at each supplemental site. The potential for biological resources, specifically special status species, to occur was determined by literature and database review, and by examining a boundary established for field surveys encompassing a 500-foot buffer around each project site. For potentially impacted wildlife with larger ranges than those represented by a 500-foot buffer, a 0.5-mile buffer was analyzed. Each site was visited by Senior Botanist David Charlton either in the months of August or December 2014, or January 2015.

3.5.1 Regulatory Setting

Several federal and state regulations were considered for this analysis, including:

- Federal Endangered Species Act (ESA)
- Bald and Golden Eagle Protection Act (BGEPA)
- Migratory Bird Treaty Act (MBTA)
- Marine Mammal Protection Act (MMPA)
- Magnuson-Stevens Fishery Conservation and Management Act (MSA)
- Federal Water Pollution Control Act (also known as the Clean Water Act or CWA)

- Section 10 of Rivers and Harbors Act of 1899
- Federal Executive Order 13112
- California Endangered Species Act (CESA)
- California Fish and Game Code Sections 3511, 4700, 5050, and 5515 (California Fully Protected [CFP] Species)
- California Native Plant Protection Act (NPPA)

These are consistent with those addressed in the Final LA-RICS LTE System EA, which contains a synopsis of each regulation.

3.5.2 Methodologies and Resource Overview

Resources considered for this Supplemental EA include vegetation, wildlife, special status species, and sensitive habitats.

Vegetation

All of the proposed LTE sites are located within the Southern California/Northern Baja Coast Ecoregion III, which is made up of coastal and alluvial plains. The ecoregion is described as historically dominated by coastal sage scrub and chaparral vegetation communities, with oak and walnut woodlands dispersed throughout (USEPA 2014). Land cover types were identified using the classification system in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). This differs from the Final LA-RICS LTE System EA, which used the older, less specific, Holland classification system. Regardless, the predominant land cover types within the sites are not dominated by naturalized vegetation and are typically not identified in Sawyer et al. or in the Holland classification system, including urban or built-up land, ruderal, and ornamental. The following land cover types, in order of dominance, were identified within the sites: urban or built-up land, ruderal, ornamental, and minimal amounts of Chaparral/Laurel Sumac Scrub – (*Malosma laurina*) Shrubland Alliance.

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). This cover type occurs on or near five sites: BURPD01, LBECOC, LBFD012(N), PASDNP, and RANCHO.

Ruderal

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 2011). 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 no

intentional substitution of vegetation follows 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 “Ruderal Habitat” as a vegetation cover type if natural or anthropogenic disturbance is extreme (generally greater than 70 percent) in an area. This cover type occurs near Site VPC.

Ornamental

Ornamental areas are portions of land adjacent to urban structures that are landscaped, maintained, and irrigated or that 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 nonnative species that 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 or near seven sites: AZPD001, BURPD01, LAPD077, LAPDVNS, LBECOC, PASDNP, and RANCHO.

Chaparral/Laurel Sumac Scrub – *Malosma laurina* Shrubland Alliance

Specifically, the *Malosma laurina*-*Eriogonum fasciculatum* alliance is on north-facing slopes dominated by mountain mahogany (*Cercocarpus montanus*), chamise (*Adenostoma fasciculatum*), scrub oak (*Quercus berberidifolius*), toyon (*Heteromeles arbutifolia*), and laurel sumac. The herbaceous layer is made up primarily of non-native grasses wild oats (*Avena fatua*) and red brome (*Bromus madritensis* ssp. *rubens*). This cover type occurs within 500 feet of Site VPC.

Wildlife

A detailed discussion of wildlife common to Los Angeles County is available in Section 3.5.2 of the Final LA-RICS LTE System EA.

Special Status Species

Special status species reviewed in this EA include:

- Species listed as endangered, threatened, proposed for listing, or having candidate status under the federal ESA. USFWS provided a list of such species with potential to occur in the Action Area², as part of the informal consultation process under Section 7 of the federal ESA, which was initially concluded in 2014 but re-initiated in 2015 to address new sites analyzed in this Supplemental EA. USFWS-designated and proposed critical habitat is discussed separately in Section 3.5.2 D, Sensitive Habitats, of the Final LA-RICS LTE System EA.

² For purposes of the federal 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 for the overall LTE project, USFWS has identified an “action area” that covers all of Los Angeles County and parts of San Bernardino and Orange counties.

- Bald and golden eagles, due to their inclusion in the BGEPA
- Species protected under the MBTA
- Species identified under the CESA as threatened, endangered, or rare
- Species identified in the California Fish and Game Code as CFP species
- Species identified under the California NPPA

Species designated as Bureau of Land Management (BLM) Sensitive and U.S. Forest Service (USFS) Sensitive were not reviewed for this EA as none of the sites analyzed lies within BLM or USFS jurisdiction. Species identified under the purview of the MMPA and MSA were not reviewed due to lack of riverine or marine environments necessary to support species protected under these acts.

The original methodology analyzed the entire County of Los Angeles when developing the special status species list with potential to occur within 500 feet of any LTE site. The proposed LTE sites are all within Los Angeles County, and no additional species were identified for analysis. Refer to Section 4.5 of the Final LA-RICS LTE System EA for the detailed table of special status species with potential to occur in Los Angeles County.

Federal ESA-Listed Species

Only Site VPC retains sufficient natural character to have potential to provide any type of habitat for special status plant or wildlife species. No special status species were identified during the literature review or field visit at sites.

Bald and Golden Eagles

Bald and golden eagles are protected under the BGEPA, and under California State law. The vicinity of Site VPC was identified as having low potential to support nesting habitat for the golden eagle.

At Site VPC, eagles may pass by the site while foraging. The site is located in open space in the City of Glendale between the City of Burbank and the unincorporated area of La Crescenta-Montrose. The Interstate-210 freeway is located north of the site, and the Interstate-5 freeway is south of the site.

Migratory Bird Treaty Act

Migratory birds are protected under the MBTA, which makes it unlawful to pursue, take, kill, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The vast majority of native birds are protected under the MBTA. Under Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy their nests or eggs. Section 3513 of the California Fish and Game Code provides for adoption of the MBTA's provisions such that it is unlawful

under state regulations to take or possess any migratory non-game as designated in the MBTA. Migratory birds have the potential to occur at any site.

Sensitive Habitats

Sensitive habitats reviewed included critical habitat designated under the federal ESA, wetlands, essential fish habitat (EFH), and habitat conservation plans (HCPs). No EFH, ESA Critical Habitat, or lands administered under HCPs were identified within 500 feet of any of the sites evaluated in this Supplemental EA. Wetlands were identified within 500 feet of Site VPC, and manmade reservoirs are within 500 feet of Site LBECOC, but wetlands are not present at any site.

3.6 Historic and Cultural Resources

Historic and cultural resources relate to historical human activities and may include physical remains or natural features deemed significant to certain communities or peoples. Section 3.6 of the Final LA-RICS LTE System EA contains a detailed description of existing historic and cultural resources including paleontological resources and the history of human habitation within Los Angeles County.

3.6.1 Regulatory Setting

Several federal and state regulations were complied with and are listed below:

- National Historic Preservation Act (NHPA) (Section 106)
- *Nationwide Programmatic Agreement [PA] for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (FCC) (FCC 2004, referenced as the Nationwide PA).*
- *Nationwide Programmatic Agreement for the Collocation of Wireless Antennas (FCC 2001, referenced as the Collocation PA).*
- *Programmatic Agreement Between the National Telecommunications and Information Administration and the California State Historic Preservation Officer, Regarding the Los Angeles Regional Interoperable Communications System Authority Under the Broadband Technology Opportunities Program (Appendix D)*
- *Program Comment for the Rural Utilities Service, the National Telecommunications and Information Administration, and the Federal Emergency Management Agency to Avoid Duplicative Section 106 Reviews for Wireless Communication Facilities Construction and Modification (FR 2009)*
- Archaeological Resources Protection Act of 1979 (ARPA)
- Native American Graves Protection and Repatriation Act (NAGPRA)
- Executive Orders 11593, 13007 and 13175

- American Antiquities Act of 1906

Section 3.6.1 of the Final LA-RICS LTE System EA contains a synopsis on each regulation and a discussion of compliance requirements. To comply with the above-mentioned PAs, activities under the Proposed Action were evaluated for specific sites by completing a New Tower Submission packet (FCC Form 620) or a Collocation Submission packet (FCC Form 621), which will be submitted to the State Historic Preservation Officer (SHPO). Several sites analyzed in this EA were determined exempted from this process under the terms of the Collocation PA.

3.6.2 Area of Potential Effects

Pursuant to FCC PA (FCC 2004) Section VI.C.2 and correspondence from SHPO for this project dated October 13, 2014 (contained in Appendix C of this Supplemental EA), the direct APE is the area of potential ground disturbance at each proposed LTE project site. For the sites evaluated in this Supplemental EA, this includes the area needed for the antenna installation or collocation, equipment cabinet, and generator installation; utility trenching (on and adjacent to the LTE site); and any needed construction staging areas. Pursuant to the FCC PA Section VI.C.4.a., the indirect APE for archaeological and architectural resources is 0.5 mile from the proposed construction location because the facilities are less than 200 feet in height.

3.6.3 Methodology

Methods used to identify archaeological, architectural, and paleontological resources are described below. While personnel have changed and additional data were gathered for purposes of this EA and for the larger Section 106 compliance effort, the methods used to identify and evaluate cultural resources were equivalent to those described in Section 3.6.3 of the Final LA-RICS LTE System EA.

Archaeological Resources

Archaeological resources data for sites AZPD001, BURPD01, LAPD077, LAPDVNS, and RANCHO were gathered from existing records obtained from the Authority. Documentation regarding how these data were acquired is provided in Section 3.6 of the Final LA-RICS LTE System EA.

For the four sites not previously examined in the Final LA-RICS LTE Systems EA, LBECOC, LBFD012(N), PASDNPD, and VPC, records searches were conducted at the South Central Coastal Information Center (SCCIC) at California State University Fullerton and the National Register of Historic Places (NRHP) website to identify previously recorded archaeological resources within 0.5 mile of each proposed site. To complement the records search, field surveys were conducted at each proposed LTE site that included inspection of the entire site plus a minimum 50-foot buffer around each site, where these buffer areas were accessible. Areas visible within adjacent public rights-of-way were also inspected.

Public outreach efforts have been and will be undertaken to fulfill Section 106 requirements. These outreach efforts include completing research and posting information regarding new LTE sites onto the Tower Construction Notification System (TCNS) in order that federally recognized Native American Tribes have an opportunity to evaluate the proposed project. The TCNS process for sites AZPD001,

BURPD01, LAPD077, LAPDVNS, and RANCHO is documented in Section 3.6.3 of the Final LA-RICS LTE System EA. The TCNS was updated in February 2015, to include sites LBECOC, LBFD012(N), and PASDNPD.

Outreach was also conducted in 2014 and updated in 2015 through the State of California Native American Heritage Commission (NAHC) to identify non-federally recognized Tribes, groups, and other stakeholders potentially interested in the proposed LTE sites. The local jurisdictions (the cities of Azusa, Burbank, Downey, Glendale, Long Beach, Los Angeles, and Pasadena) in which the LTE sites considered in this EA occur have also been contacted as part of local government outreach.

The outreach effort made through TCNS, federally recognized Tribes, the NAHC, local agencies, and local organizations and individuals is documented in Appendix C of this Supplemental EA.

Architectural Resources

Architectural resources data for sites AZPD001, BURPD01, LAPD077, LAPDVNS, and RANCHO were gathered from existing records obtained from the Authority. Documentation regarding how these data were acquired is provided in Section 3.6 of the Final LA-RICS LTE System EA.

For the four sites not previously examined in the Final LA-RICS LTE Systems EA, LBECOC, LBFD012(N), PASDNPD, and VPC, a records search was conducted at the SCCIC at California State University Fullerton. Additional records were obtained through the NRHP database and through the City of Los Angeles (using data from their Survey L.A. effort) to identify all previously recorded architectural resources – defined as buildings, structures, or landscapes more than 45 years old – within 0.5 mile of each proposed LTE site. A “virtual desktop survey” by a Secretary of the Interior (SOI) qualified architectural historian was performed to identify previously unidentified historic resources located within view of, or a reasonable distance from, the LTE tower sites. Site visits were made to these newly identified resources, plus those noted during the records search. Using FCC Form 620 or FCC Form 621, as appropriate, qualified architectural historians documented the potential effect of LTE construction on those resources. Cultural resources not previously determined eligible for listing on the NRHP are considered in the analysis of project effects, though no attempt is made to evaluate these resources for inclusion in the NRHP.

Paleontological Resources

Data for sites AZPD001, BURPD01, LAPD077, LAPDVNS, and RANCHO were gathered from existing records obtained from the Authority. Documentation regarding how these data were acquired is provided in Section 3.6 of the Final LA-RICS LTE System EA.

For the four sites not previously examined in the Final LA-RICS LTE Systems EA, LBECOC, LBFD012(N), PASDNPD, and VPC, a records search for paleontological resources was conducted by the Natural History Museum of Los Angeles County (NHMLAC) in November 2014 and February 2015 to identify the rock units and the potential for paleontological specimens in the rock units associated with each of the LTE sites evaluated in this Supplemental EA.

3.6.4 Resource Overview

This section discusses the archaeological, architectural, and paleontological resources identified at each of the proposed LTE sites evaluated in this Supplemental EA. After review of site data and in accordance with the terms and conditions of the Collocation PA, three sites included in the Final LA-RICS LTE System EA were exempted from SHPO review by NTIA by letter dated February 19, 2015. These include sites BURPD01, LAPD077, and RANCHO. NTIA reviewed data for two additional new sites, LBFD012(N) and VPC and determined that no historic properties were identified in the direct or indirect APE for these sites, and therefore exempted these sites from further SHPO review. One additional site included in the Final LA-RICS LTE System EA, AZPD001, was previously evaluated by SHPO and concurrence with a No Effect determination was made. The Section 106 process has been completed for these six sites, and none of the six sites are discussed further for archaeological or architectural resources. An overview of cultural resources identified at all nine sites is provided in Appendix B.

The three sites currently remaining under Section 106 evaluation (i.e., for archaeological and architectural resources) in this EA include sites LAPDVNS, LBECOC and PASDNPD and these are discussed below. Native American resources and paleontological resources are discussed below for all nine sites considered in this Supplemental EA.

3.6.4.1 *Archaeological Resources*

Based on the records search and field surveys, no archaeological resources were identified in the direct or indirect APE at sites LAPDVNS, LBECOC and PASDNPD. The Section 106 process has been completed for sites AZPD001, BURPD01, LAPD077, LBFD012(N), RANCHO, and VPC.

3.6.4.2 *Architectural Resources*

Architectural resources were identified within the direct APE at only one site, PASDNPD. Architectural resources were identified in the indirect APE at all three sites: LAPDVNS, LBECOC and PASDNPD. The Section 106 process has been completed for sites AZPD001, BURPD01, LAPD077, LBFD012(N), RANCHO, and VPC.

3.6.4.3 *Native American Resources*

No Sacred Lands File sites were identified near any of the nine sites evaluated in this EA as a result of the NAHC outreach. Outreach efforts continue with the tribes and individuals identified by NAHC as having interest regarding Native American resources in Los Angeles County.

3.6.4.4 *Paleontological Resources*

No recorded paleontological resources were identified at any of the nine proposed sites, and no paleontologically sensitive strata were identified within five feet of the surface at any of the nine proposed sites.

3.7 Aesthetic and Visual Resources

This section addresses existing aesthetic and visual resources in the Los Angeles County region. Refer to the Final LA-RICS LTE System EA for a detailed discussion on the importance and classification of aesthetic and visual resources.

3.7.1 Regulatory Setting

None of the sites evaluated in this Supplemental EA is on federally administered lands or within specially designated areas (i.e., the coastal zone); therefore, no specific regulations are applicable to this analysis.

3.7.2 Existing Aesthetic and Visual Character

Detailed descriptions of the visual character associated with each site can be found in Appendix B. In general, the visual character of each site was categorized based on its location. Eight sites (AZPD001, BURPD01, LAPD077, LAPDVNS, LBECOC, Lbfd012(N), PASDNPD, and RANCHO) were classified as Urban, and one site (VPC) as Rural. Section 3.7.2 of the Final LA-RICS LTE System EA contains a general description of these classifications and of the region.

3.8 Land Use

This section presents an overview of the physical and regulatory environment related to land use and planning resources. None of the sites evaluated in this Supplemental EA falls within federally administered lands, on Tribal lands, or in the coastal zone. Site LBECOC is across the street from the Long Beach Airport, about 0.23 miles from a runway and about 400 feet from the ANG hangar; however the existing tower has FCC Tower Registration No. 123336, and was part of Federal Aviation Administration (FAA) Study No. 01-awp-2947-oe³. Through the study and registration, FCC and FAA requirements for the tower have been met, resulting in a ‘no hazard’ determination. Local community jurisdictions are discussed below, and local land use policies are discussed in Section 3.8.4 of the Final LA-RICS LTE System EA.

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 Supplemental EA considers local land use plans, policies, and regulations to identify if relevant policies may apply to the Proposed Action. The jurisdictions and zoning underlying each of the sites are shown in Table 3-3.

³ Notification to the FAA is required for any tower construction or alteration of an antenna structure that is registered with the Commission. Towers that meet certain height and location criteria (generally towers more than 60.96 meters (200 feet) in height or located near an airport) will require notice to the FAA and registration with the FCC. Prior to completing registration with the Commission, an antenna structure owner must have notified the FAA (via FAA Form 7460-1) and received a final determination of ‘no hazard’ from the FAA.

Table 3-3: Sites by City and County Jurisdiction and Zoning

Sites	Local Jurisdiction	Zoning
AZPD001	City of Azusa	Downtown – Civic Center
BURPD01	City of Burbank	Burbank Center Commercial
LAPD077	City of Los Angeles	Commercial
LAPDVNS	City of Los Angeles	Public Facilities
LBECOC	City of Long Beach	Planned Development 18 – Kilroy Airport Center
LBFD012(N)	City of Long Beach	Institutional
PASDNPD	City of Pasadena	Central District - 2
RANCHO	City of Downey	Single-Family Residential
VPC	City of Glendale	Residential Open Space

No additional jurisdictions not already covered by the Final LA-RICS LTE System EA were introduced as a result of this analysis. Section 3.8.4 of the Final LA-RICS LTE System EA contains a detailed discussion of local land use plans, policies, and regulations found within the jurisdictions outlined in Table 3-3.

3.9 Infrastructure

This section describes infrastructure needed to support construction and operation of the Proposed Action. A discussion of regional public safety telecommunications is provided in Section 3.9 of the Final LA-RICS LTE System EA.

3.9.1 Utilities

Three of the proposed sites (LBECOC, LBFD012(N), and RANCHO) receive electrical service from Southern California Edison. Two sites (LAPD077 and LAPDVNS) receive electrical service from Los Angeles Department of Water and Power (LADWP). Site BURPD01 receives electrical service from Burbank Water and Power, Site AZPD001 is served by Azusa Light and Power, Site VPC is served by Glendale Water and Power, and Site PASDNPD is served by Pasadena Water and Power.

3.9.2 Solid Waste Disposal

Solid waste disposal at the proposed sites is provided by permitted waste haulers that include the departments of sanitation for the cities of Burbank, Glendale, Long Beach, Los Angeles, and Pasadena, along with CalMet Services. A combination of Class III and unclassified public and private facilities is available to serve all sites.

3.9.3 Domestic Water

Domestic water supplies are served by the cities of Azusa and Downey, Burbank Water and Power, Glendale Water and Power, Long Beach Water Department, LADWP, and Pasadena Water and Power. All LTE sites evaluated in this Supplemental EA are served by a domestic water system.

3.9.4 Transportation

An extensive network of freeways, highways, roadways, and surface streets provides access to every portion of the service area. All supplemental proposed sites have adequate direct vehicular access from existing paved or dirt roadways.

3.10 Socioeconomic Resources

This section contains a demographic profile of Los Angeles County, where all of the proposed LTE sites are located. The presence of low-income and minority populations is identified within each of the proposed 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 APE is defined as an area within a one-mile radius around each site. Due to the urban nature of Los Angeles 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 Supplemental 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. Data used to determine population demographic and socioeconomic conditions were derived from the American Community Survey 2009-2013 data from the Bureau of the Census. These data included income and race information. The data compiled included any census block group that was touched or encompassed by a 1-mile radius surrounding each proposed LTE site. The compiled data was then compared against applicable Los Angeles County data to determine the relative income and race percentages for population within the APE.

3.10.1 Minority Populations

NEPA guidance 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. Minority populations exceeding these metrics are identified at sites LAPD077, LBFD012(N), and AZPD001. The remaining sites did not have minority populations that exceeded these metrics.

3.10.2 Low Income Population

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 less than 80 percent of the Area Median Household Income (AMI). The reference county's 2012 median household income is used as the AMI.

For Los Angeles County, 80 percent of the AMI is approximately \$41,709; and the threshold for percentage of families below poverty level is 22.6 percent.

Low income populations exceeding these metrics are identified at Site LAPD077. The remaining sites did not have low income populations that exceeded these metrics.

3.11 Human Health and Safety

This section describes aspects of human health and safety at the proposed LTE sites including presence of existing hazardous waste sites, airport runway zones, fire hazard safety zones, methane hazard potential, and radiofrequency emissions.

3.11.1 Regulatory Setting

Several regulations and oversight agencies are in effect to address human health and safety. The project, as described, is in compliance with the regulations listed below. For a detailed description of each, refer to Section 3.11 of the Final LA-RICS LTE System EA.

- Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Occupational Health and Safety Administration (OSHA) Standard 1910.120
- FAA Advisory Circular for Obstruction Marking and Lighting [AC 70/74600 1]
- California Public Resources Code Sections 4201-4204
- Government Code Sections 51175-51189
- State Division of Oil, Gas, and Geothermal Resources' (DOGGR) state Public Resources Code, Division 3, Chapters 1-4
- City of Los Angeles Municipal Code Section 91.106.4.1

3.11.2 Resource Overview

Existing Hazardous Waste Sites

None of the proposed sites are within 0.5 mile of a National Priorities List (NPL) site. Sites within 0.25 mile from a Cortese List site are presented in Table 3-4.

Table 4-4: Site Summary for Hazardous Materials

Site	Hazardous Waste Site
AZPD001	5 permitted UST sites, 12 open LUST clean-up sites, and 5 closed LUST clean-up sites are located with 0.25 mile of the LTE site
BURPD01	3 open LUST sites, 6 closed LUST clean-up sites, and 4 permitted UST sites
LAPD077	None identified
LAPDVNS	None identified
LBECOC	2 open clean-up programs, 2 closed LUST clean-up sites, and 2 permitted UST sites.
LBFD012(N)	Clean up program site, under assessment and interim remedial action.
PASDNPD	2 open LUST sites, 8 permitted UST sites.
RANCHO	1 open LUST site (recommended for closure), 1 closed LUST cleanup site, and 3 permitted UST sites.
VPC	None identified

Airspace and Airport Runway Zones

The FAA regulates obstructions in navigable airspace, administers notice requirements that apply to certain construction activities, and provides for aeronautical studies to determine a potential project’s effect of proposed construction or alteration. A notice of proposed construction activity or alteration 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 titled “Obstruction Marking and Lighting.”

Under 47 CFR 17, any proposed or existing antenna structure that requires submittal of a notice of proposed construction to the FAA must also be registered with the FCC 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. Site LBECOC is located close to the Long Beach Airport, and the antennas will be collocated on an existing structure, without any modification to the existing structure. This structure has FCC registration No. 123336 and was a part of FAA Study No. 01-awp-2947-oe, which resulted in a ‘no hazard’ determination.

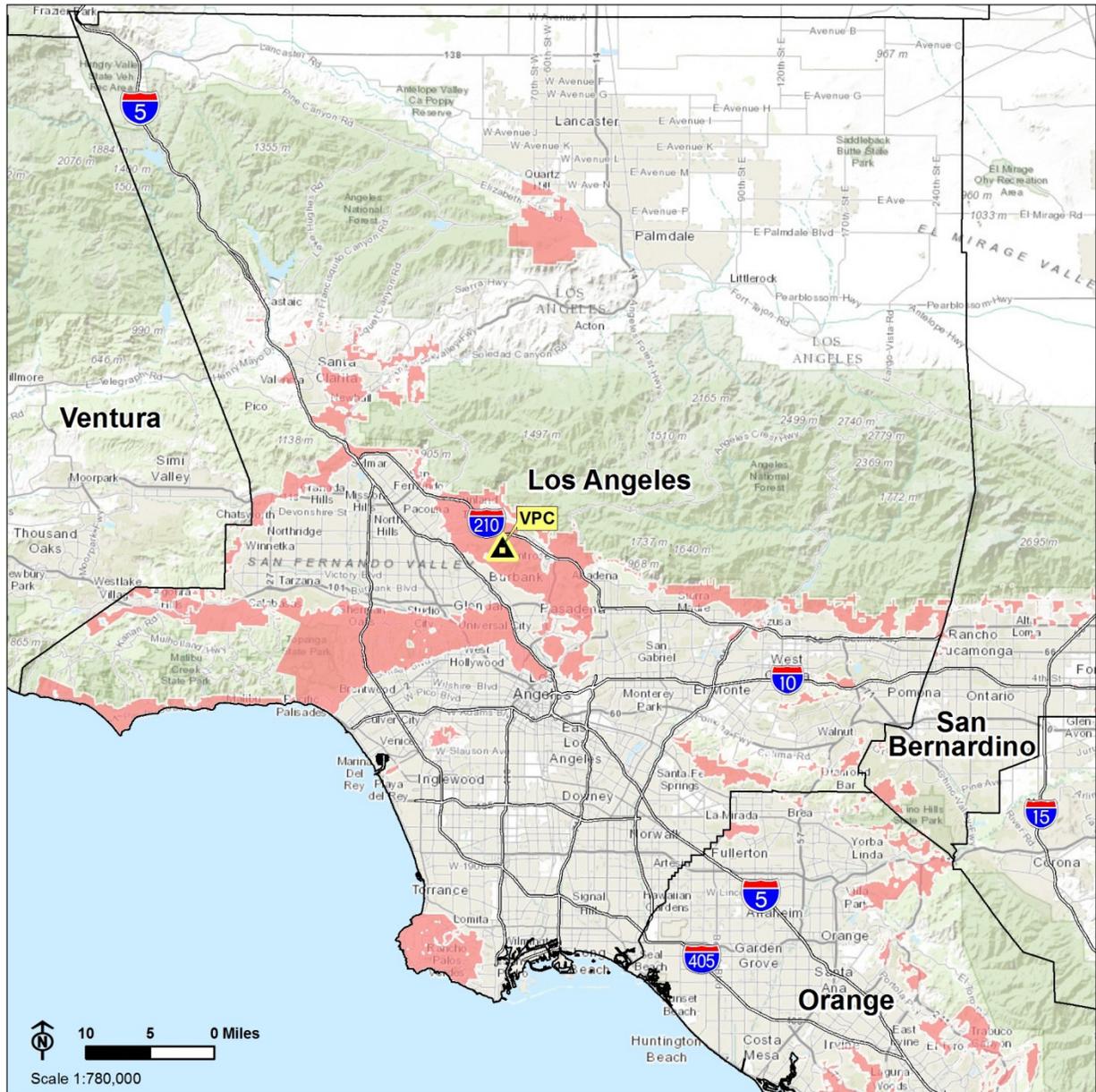
Fire Hazard Severity Zones

Of the nine sites evaluated in this Supplemental EA, only Site VPC is located within a local or state high fire hazard severity fire zone (Figure 3-1). The site is designated as high fire danger within the local responsibility area.

Methane Hazards

None of the sites evaluated in this Supplemental EA are located within a Los Angeles City or County designated Methane Hazard Zone, within 200 feet of an oil well or within 1,000 feet of a landfill.

Figure 3-1: Proposed Sites with Very High Fire Hazard Severity Zones, Local Responsibility Area



Service Layer Credits: Esri, HERE, DeLorme, TomTom, Intermap, OpenStreetMap Contributors, and the GIS User Community.
 Base Layer Credits: County of Los Angeles 2015. LA-RICS 2015. California Department of Forestry and Fire Protection 2015.

5/1/2015

- County Boundaries
- Very High Fire Hazard Severity Zones - Local Responsibility
- ▲ Proposed LTE Site on Very High Fire Hazard Severity Zones - Local Responsibility

Radio Frequency Exposure

The FCC is responsible for evaluating the effect of exposure from FCC-regulated transmitters on the quality of the human environment. Safe exposure limits are specified by the FCC in terms of maximum permissible exposure (MPE) limits that vary with frequency. The requirements for radio frequency exposure compliance are contained in FCC Office of Engineering and Technology (OET) Bulletin 65, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields* (FCC 1997). FCC OET Bulletin 65 also contains guidance on the methodology and calculations that need to be performed to evaluate the radiofrequency electromagnetic (RF-EME) energy fields for radio frequency transmitters. Notably, FCC requires only that installation of tower-mounted antennas be evaluated initially and routinely for compliance with FCC radio frequency exposure guidelines if the antennas would be mounted less than 10 meters above ground and the total power of all channels being used is over 2,000 watts effective radiated power. Tower-mounted antennas not meeting these criteria have been determined to have ground-level power densities that are typically hundreds to thousands of times below MPE limits (FCC 1997).

Occupational/controlled exposure limits apply in situations in which persons are exposed during employment or are otherwise temporarily in a location where these limits apply. Application of this limit can be used only when individuals are fully aware of the potential for exposure and can therefore exercise control over that exposure. General population/uncontrolled exposure limits apply in situations where persons may not be fully aware of the potential for exposure and therefore do not exercise control over exposure. The FCC further requires that antenna sites be placarded, workers be trained to preclude any potential occupational exposures at sites, and that other control measures such as fencing out unauthorized persons and/or shielding of antenna are put into place, where warranted.

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4.0 ENVIRONMENTAL CONSEQUENCES

This chapter describes the potential short-term (construction) and long-term (operational) impacts of the Proposed Action and the No Action Alternative.

4.1 Noise

Noise impacts associated with the Proposed Action and the No Action Alternative are discussed in this section.

4.1.1 Proposed Action

Short-Term (Construction) Impact

Direct Impacts

The main noise sources during construction are associated with the operation of demolition and construction equipment. Noise is produced by engines, exhaust fumes exiting from tailpipes, friction with the ground as the equipment moves, and vehicle safety equipment such as beeping backup signals. At many sites, occasional equipment use, such as jackhammers and pile drivers, contribute noise and vibration. Noise from construction workers' commuting vehicles, material delivery trucks, and waste disposal trucks also contribute to the noise.

Mounting or collocating antennas to existing buildings and communication towers would generate noise that is substantially less than the amount of noise generated by the construction activities discussed for each site in the Final LA-RICS LTE System EA in Section 4.1. Demolition of existing pavement may be required at some sites for trenching requirements, and this activity was determined in Section 4.1.1 of the Final LA-RICS LTE System EA to result in the highest one-hour average noise exposure; however, demolition would be brief where it does occur.

All sites except sites BURPD01, LBECOC, and VPC have at least one sensitive receptor within 1,000 feet of the proposed LTE site. Exposure to noise would be reduced by several factors:

- Construction contractors would be required to follow applicable noise ordinances, 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 occur only during daylight hours.
- Field investigation has determined that the urban site LBFD012(N) is at least partially surrounded by walls that can help to serve as noise barriers. These walls can reduce noise transmission by about 10 dBA.

- Buildings at or near each of the sites 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.

It is anticipated that all construction activities would adhere to local construction noise regulations. No significant direct noise impacts from construction activities are anticipated.

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 ground borne 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). No significant direct or indirect vibration impacts are anticipated to occur.

Indirect Impacts

No significant indirect noise impacts would result from construction of LTE sites.

Long-Term (Operational) Impact

Direct Impacts

The main potential noise sources associated with operations at each site would be the noise, best described as a “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. 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, below any standards identified at any proposed LTE site. It also should be noted that generators at the proposed sites are only used in an emergency situation, and

would not be continuously running at other times. 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 of the Final LA-RICS LTE System EA. The air conditioning requirement for each of the four cabinets was estimated to be about 1.5 tons. Typical noise ratings for refrigeration units with 1.5-ton capacity are 63 to 67 dBA. 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 (ARI's) "Application of Sound Rating Levels of Outdoor Unitary Equipment," which is described in Appendix C of the Final LA-RICS LTE System EA.

The following assumptions were used in applying the ARI Standard 275 to the case of the air-conditioning units:

- A reference sound level of 67 dBA
- Air conditioners would be on the ground, within 10 feet of a noise 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. Based on the metric, it is estimated that noise exposures at unshielded distances greater than 15 feet from the source would be less than 60 dBA, which is considered acceptable for outdoor residential exposure.

No significant direct impacts from noise would occur as a result of project activities.

Indirect Impacts

No significant indirect noise impacts were identified that would result from operation of LTE sites.

In conclusion, no significant long-term direct impacts from noise would occur as a result of project activities; and no significant indirect impacts have been identified.

4.1.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect noise impacts are anticipated.

4.2 Air Quality and Greenhouse Gases

This section evaluates air pollutants and GHG emissions that would result from implementing the Proposed Action and the No Action Alternative. Specific topics include emissions from construction, a localized construction impact analysis, and emissions from the LA-RICS LTE PSBN system operation.

4.2.1 Proposed Action

Short-Term (Construction) Impact

Direct Impacts

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
- Preparation of the area where the equipment shelters and emergency generator would be installed
- Construction of the concrete pad
- Installation of cabinets, emergency generator, and other ground-based equipment

Methods for estimating emissions from construction at a generic site are described in Appendix D.1 of the Final LA-RICS LTE System EA. 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) that is applicable statewide (EIC 2013a, 2013b). As stated in Section 4.2.1 of the Final LA-RICS LTE System EA, the project, including the construction of new towers would not exceed the SCAQMD daily NO_x thresholds. Mounting or collocating antennas to existing buildings and communication towers would generate substantially fewer air pollutant emissions than constructing new towers, a type of construction activity discussed for many sites in the Final LA-RICS LTE System EA. Thus, the construction of the LTE sites covered in this Supplemental EA would not exceed the SCAQMD daily thresholds.

Examination of a large number of simulated construction scenarios concluded that all nine sites could be started on a single day and be under construction simultaneously. This examination is described in Appendix D of the Final LA-RICS LTE System EA. Construction emissions currently associated with construction of the entire LA-RICS LTE system are forecast and reported weekly. Implementation of AIR mitigation measure (MM) 1 requires that these nine sites be added into the weekly construction emission forecasting and reporting effort. The mitigation measure would preclude impacts by either curtailing activity to allowable levels or require the contractor to use Tier 4 equipment in the event that thresholds may be exceeded.

Finally, the issue of exposure of sensitive receptors in the SCAQMD to construction emissions was addressed in Section 4.2.1 of the Final LA-RICS LTE System EA. The nearest sensitive receptors to each of the LTE sites are identified in the site data sheets in Appendix B. Emissions would not exceed the District's Source Receptor Area (SRA)-specific thresholds at any of the proposed sites evaluated in this EA.

No significant short-term, direct impacts to regional air quality are expected.

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.

Long-Term (Operational) Impact

Direct Impacts

Vehicles used for transporting personnel for routine maintenance of the LTE equipment would emit criteria pollutants and greenhouse gases. EMFAC2011-LDV (Light Duty Vehicles), a CARB-developed motor vehicle emission model, was used to estimate emissions from motor vehicle traffic for site maintenance. The same method for estimating emissions from these vehicles was used in the Final LA-RICS LTE System EA, as described in Appendix D.3.1 of the Final LA-RICS LTE System EA. It was conservatively assumed that maintenance would be required twice a year, such that maintenance for all proposed 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 among the proposed LTE sites, no more than one would be tested on any given day. The method for estimating diesel emergency generator emissions is presented in Appendix D of the Final LA-RICS LTE System EA.

Annual emissions would be below the thresholds for a federal general conformity determination. Therefore, a general conformity determination is not required for this project.

Finally, annual average diesel particulate matter exposure over the 70-year lifetime assumed for air toxics health risk assessments would be negligible, and no significant health impact from diesel generator operation are expected.

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.

Greenhouse Gas Emissions

Methods for estimating greenhouse gas emissions from the proposed project are presented in Appendix D.4 of the Final LA-RICS LTE System EA. 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). 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 4-1 shows the combined annual GHG emissions from the nine sites throughout the life of the project (assumed to be 30 years). The values in Table 4-1 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.

Table 4-1: Total GHG Emissions through Life of Project

GHG Emission Source	Annual Emissions (metric tons)
Construction (amortized over 30 years)	300.8
Routine maintenance	0.4
Generator testing	1.5
Indirect (electricity generation)	548.9
Total	851.6

Source: CalEEMod Version 2013 2.1 and LA-RICS Authority, 2014. Relevant pollutants include CO₂, CH₄, and N₂O.

Total annual GHG emissions from the proposed project are estimated to be 851.6 metric tons per year. As discussed in Section 3.2.2 of the Final LA-RICS LTE System EA, NTIA’s *Environmental Assessment Guidance for BTOP Award Recipients* (U.S. Department of Commerce [USDOC] 2010) acknowledges CEQ’s “presumptive effects threshold of 25,000 metric tons of CO₂ equivalent emissions” for when federal agencies should consider GHG emissions and climate change in NEPA. Because construction of these sites would result in GHG emissions significantly below the 25,000-metric-ton threshold, no further analysis of GHG emissions and climate change is required.

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 of the 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 of the 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 off-road equipment to which Environmental Protection Agency (EPA) regulations apply, or otherwise limit construction activity to the extent necessary to reduce daily basin-wide NO_x emissions to 100 pounds. This mitigation measure applies to all sites within the LA-RICS LTE system, including those examined in the Final LA-RICS LTE System EA and those included in this Supplemental EA. The contractor will add these nine sites to the analysis and

reporting in the existing weekly air monitoring report currently in use to monitor construction emissions associated with the entire LA-RICS LTE system.

4.2.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect air quality and greenhouse gas impacts are anticipated.

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

Seismic Hazards

All of the sites evaluated in this Supplemental EA have a risk for impacts from seismic activities that may include structural damage to equipment, buildings, and antennas and disruption of LTE function. For each site, structural analysis of the supporting existing tower or building would be conducted; and construction activities would be performed in accordance with applicable federal, state, and Los Angeles County requirements, codes, and permit conditions to avoid or minimize impacts associated with seismic activity.

Compliance with Los Angeles County building code standards and permit requirements⁴ would ensure that these LTE facilities are constructed to avoid hazards from surface rupture. For these reasons, no significant impacts (direct or indirect) due to seismic hazards are anticipated.

Soil Erosion

Implementation of the Proposed Action would result in short-term disturbance to soils within LTE sites. The primary disturbance to soils would be for construction of pad sites for equipment and trenching for power and/or fiber, where necessary. 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 best management practices (BMPs) identified in BIO CMR 17 and BIO CMR 18, which would be applicable at all sites. 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.

⁴ Title 26, Los Angeles County Building Code, <http://library.municode.com/index.aspx?clientId=16274>. Accessed June 2015

4.3.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect impacts to geology and soils are anticipated.

4.4 Water Resources

This section evaluates direct and indirect impacts to surface and ground water resources associated with implementation of the Proposed Action and the No Action Alternative.

4.4.1 Proposed Action

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 stormwater runoff
- Damage to existing underground pipelines and storage tanks during trenching
- Contamination of stormwater runoff from leaks or spills of commonly used lubricants, coolant, and similar fluids found in construction equipment and around construction sites

Site VPC has wetlands within 500 feet of the site, which may have water present during and after rain events. Other sites have concrete channels adjacent to the site which may also have intermittent water present. However, all construction activities would be limited to the project site, and no impacts are anticipated to adjacent wetlands or concrete channels.

No significant impacts (direct or indirect) from stormwater and non-stormwater 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 acre⁵ at any single site
- Excavated earth would be used as backfill or exported to sites that require import of earth

⁵ Disturbance at any single site would include up to 162 square feet for equipment cabinets (if needed); up to 72 square feet for a generator (if needed); up to 1,000 square feet for trenching (if needed); and 64 square feet for the monopole (Site AZPD001 only) plus additional areas for site access and laydown, resulting in up to 3,600 square feet (0.08 acre) anticipated total disturbance.

- 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 identified in construction management requirements (CMRs) BIO CMR 17 and BIO CMR 18 would be implemented to control sediment and pollutants in stormwater and non-stormwater runoff associated with construction. These practices were developed based on protocols established by the California Stormwater Quality Association (CASQA) and are contained in Appendix A-1

No significant impacts would occur to surface water bodies by dredge and fill operations because these operations are not needed to construct or operate LTE sites.

Operation

Potential mechanisms for surface water discharges and contamination during project operation under the Proposed Action include contamination of stormwater runoff by leaking fuel storage tanks of the emergency generator. No significant impacts (direct or indirect) from stormwater and non-stormwater discharges from LTE sites during operation would occur because the tank design would meet or exceed industry standards for leakage prevention for aboveground tanks for flammable and combustible liquids.

Groundwater

No direct or indirect impacts to local groundwater resources are likely to occur from construction or operations associated with the Proposed Action.

4.4.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect water resources impacts are anticipated.

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 or adjacent to each of the proposed LTE sites.

4.5.1 Proposed Action

Direct and Indirect Impacts

No significant impacts (direct or indirect) to biological resources would occur at any of the proposed LTE sites as a result of implementation of the Proposed Action. No significant direct or indirect impacts to species or habitat protected under the Federal Endangered Species Act are anticipated. Thus, a

biological assessment (BA) is not required. The informal consultation process with USFWS under Section 7 of the federal ESA was initially concluded in 2014 but re-initiated in 2015 to address new sites analyzed in this Supplemental EA, but has been completed. 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 California Environmental Quality Act (CEQA) statutory exemption. These criteria preclude substantial adverse impacts on wetlands, riparian areas, or habitat of significant value. Additionally, the exemption requires that project implementation not harm any species protected by the federal ESA, the NPPA, or 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:

- The site selection process resulted in avoidance of placement of 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, are incorporated into the detailed project design, and are enforceable by the Authority through the contract provisions. The full text of the CMRs is included in Appendix A-1.

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 during 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 at each of the proposed LTE sites. The project CMRs designed to prevent impacts to vegetation are listed below. The full text of the CMRs is included in Appendix A-1.

- BIO CMR 6: Construction Monitoring
- BIO CMR 9: Establish Habitat Protection Zones
- BIO CMR 10: Protect Native Vegetation
- BIO CMR 11: Limit the Spread of Invasive Plants
- BIO CMR 12: Post construction Noxious Weed Survey
- BIO CMR 18: Hazardous Substance Management

Total ground disturbance at each site associated with the proposed Action is anticipated to be less than 0.08 acre of previously disturbed or developed lands. No impacts to native habitat areas are expected.

Operations activities associated with the Proposed Action would require use only of existing developed areas for occasional repair and maintenance activities. No impacts to vegetation would result from these activities.

Noxious Species (Weeds)

Currently, invasive plant species exist within and adjacent to work areas within the proposed 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, weed infestations have the potential to establish or increase 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.

Implementation of BIO CMR 11 and BIO CMR 12 would preclude the advancement of noxious species. These CMRs call for inspection of vehicles prior to entering project sites, for post construction surveys to occur, and for replacement landscaping to be free of weeds. As a result, no direct or indirect impacts from introduction or spread of noxious species would occur.

Operations associated with the Proposed Action would require occasional repair and maintenance activities only in existing developed areas. No direct or indirect weed-related impacts from these activities would occur.

Common Wildlife

This section discusses effects to common wildlife, which includes invertebrates, fish, amphibians and reptiles, birds, and mammals.

No significant direct effects to common wildlife would be expected with project implementation. Any 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, these effects have the potential 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 high density in these highly altered areas.

In an effort to further reduce or preclude these effects, specific CMRs were designed and incorporated into the proposed project design to preclude potentially significant impacts to wildlife. These CMRs require contractors to take specific avoidance measures if the construction occurs during nesting or other seasons of wildlife sensitivity. These requirements are designed to avoid impacts to and maximize protection of the species with preconstruction surveys, delineated no-work zones, and a biological monitor who may stop work if necessary. The CMRs also require the contractor to schedule construction at times outside nesting or other seasons sensitive to wildlife to the extent feasible. CMRs applicable for general wildlife include those identified under Vegetation, plus the following measures:

- BIO CMR 1: Preconstruction Survey for Nesting Birds
- BIO CMR 7: Nonlisted Amphibians, Reptiles, and Small Mammals
- BIO CMR 8: Open Trenches and Ditches

No significant direct or indirect impacts to wildlife are anticipated with implementation of the Proposed Action.

Special Status Species

This section discusses potential impacts to sensitive species that are protected under the federal ESA, BGEPA, MBTA, and state regulation.

Federal Endangered Species Act

No federal ESA-listed species or critical habitat were found to have any potential to occur in the vicinity of any of the proposed sites, thus a biological assessment (BA) is not required for the sites analyzed in this EA. All sites analyzed in this EA were reviewed by the USFWS. Early consultation occurred in 2014 for sites AZPD001, BURP01, LAPD077, LAPDVNS, and RANCHO culminating in a concurrence letter dated August 2014 (see Appendix C). Four new sites (LBECOC, LBFD012(N), PASDNPD, and VPC) were not analyzed previously but were reviewed by USFWS in late May and early June 2015. That review process occurred between LA-RICS and USFWS via teleconference and email (see Appendix C). USFWS has concluded that no Endangered Species Act – listed, -candidate, or proposed for listing species or critical habitat were present at any of the proposed project sites. USFWS did not provide any comment to LA-RICS' No Effect determination for these sites. No significant direct or indirect impacts to species or habitat protected under the Federal Endangered Species Act are anticipated.

Under the Proposed Action, no significant impacts to species or designated critical habitat protected under the federal ESA would occur. Temporary human activity adjacent to habitat areas would result in temporary minor increases in dust and noise.

Bald and Golden Eagles

The area surrounding Site VPC was determined to have low nesting potential for the golden eagle. The project site does not offer suitable habitat for nesting. The site does offer some foraging opportunity. Eagles are sensitive to activities associated with human disturbance, and it is expected that eagles would pass these sites only while foraging. As a result, no significant direct impacts to BGEPA-listed species

would be expected to occur. No loss of habitat would occur under the Proposed Action, as the CMRs discussed in Section 4.5.1 would be implemented. Implementation of BIO CMR 2, related to bald and golden eagles, would ensure that no significant indirect impacts would occur to the species. The full text of this CMR is included in Appendix A-1.

Migratory Bird Treaty Act

Various species of migratory birds protected under the MBTA, including raptors, may nest in close proximity to proposed project construction sites. The MBTA protects birds and their nests and young (16 USC 703- 711). California Fish and Game Code section 3503.5 prohibits destruction of bird nests or eggs of Falconiforme and Strigiforme species (birds-of-prey), and section 3513 prohibits take or possession of migratory birds except as provided for under rules and regulations implementing the MBTA. California Fish and Game Code section 3503 prohibits needless destruction of nests or eggs of any bird. Protected birds may nest in a wide variety of locations, including trees, shrubs, on the ground, and on human-made structures (e.g., buildings, bridges, water tanks, antenna towers). Nesting birds may be found in pristine native habitats, in highly degraded habitat remnants, within landscape and ornamental plantings, and in ruderal settings.

Project construction activities at some sites may include vegetation removal, which could result in the direct loss of nests, eggs, and/or young. The noise and human presence associated with construction during the breeding season has the potential to disturb nesting birds throughout the project vicinity, which could result in a loss of productivity (i.e., reduced number of young raised) due to disruption of foraging activities and care of nestlings by the parent birds, or otherwise lead to the abandonment of nests. The degree of sensitivity to disturbances varies greatly species by species, pair by pair within a species, and is influenced by the stage of the nesting cycle (e.g., nest building, egg laying, age of young). Generally, raptors are the most sensitive to human presence in the vicinity of their nests. In accordance with project mitigation requirements for the protection of nesting migratory birds (BIO CMR 1), no vegetation removal would occur during the breeding season (determined by California Department of Fish and Wildlife [CDFW] to be February 15 to August 31 for non-raptors and February 1 to August 31 for raptors), and surveys for bird nests would be conducted prior to initiation of work-related activities undertaken during the breeding season. If active nests are detected, work activities would be precluded within 250 feet of non-raptor nests, 500 feet for non-state or federally listed raptors, and 0.5 mile for listed raptors and fully protected species until the young birds have fledged and left the nest. Appendix A-1 contains the complete text of BIO CMR 1.

CESA, CFP, and NPPA Species

None of the nine sites have habitat to support state-listed species. Some potential exists 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. No significant impacts to these state-regulated species are expected.

Sensitive Habitats

Wetlands

Wetlands were identified adjacent to Site VPC. At Site VPC, there are two features mapped as wetlands (according to the USFWS NWI definition), a Riverine feature approximately 180 feet from the boundary, and a National Hydrography Dataset identified intermittent stream approximately 400 feet from the boundary. Manmade reservoirs are within 500 feet of Site LBECOC. No dredge or fill activities in or near wetlands would occur, and project disturbance near wetlands would be limited to less than 0.08 acre per site. With implementation of the following CMRs, the full texts of which are included in Appendix A-1, no significant impacts to wetlands would occur.

- BIO CMR 17: Wetlands and Other Waters
- BIO CMR 18: Hazardous Substance Management

4.5.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect biological resources impacts are anticipated.

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 the October 13, 2014 correspondence between SHPO and NTIA (see Appendix C), the APE for direct effects is defined as those areas subject to ground disturbance within each proposed LTE site. In accordance with the Collocation PA (FCC 2001), the indirect APE encompasses an area within a 0.5-mile radius of each proposed LTE site.

4.6.1 Proposed Action

Project construction could impact historic buildings and nearby archaeological, Native American, and paleontological resources at any of the proposed LTE sites. The potential for impact to each of these resources is discussed below. No significant impacts are anticipated to historic or cultural resources.

Prior to any ground disturbance at any site, the terms and conditions of the NTIA-SHPO PA, implemented October 3, 2014 (Appendix D of this EA), would be completed. This includes completion of Section 106 consultation for each applicable site and adherence to the cultural resources management (CRM) CMRs described in Appendix A-1 of this EA.

4.6.1.1 Archaeological Resources

No archaeological resources were identified in the direct APE at sites LAPDVNS, LBECOC or PASDNPD. An FCC Form 621 for each of these sites has been submitted or is being developed for SHPO review. A finding of no effect associated with archaeological resources in the direct APE is anticipated for the

Proposed Action. It is possible that buried archaeological resources could be encountered during construction in the direct APE.

No effects on archaeological resources are foreseen during operations because no ground-disturbing activity would occur.

No impacts to archaeological resources in the indirect APE are expected at any of the LTE project sites. A finding of no effect associated with archaeological resources in the indirect APE is anticipated for all sites evaluated under the Proposed Action.

The CRM CMRs identified below would help to prevent impacts in the unlikely event archaeological resources are encountered during construction. The full text of the CMRs is included in Appendix A-1.

- CRM CMR 3: Archaeological Materials Encountered
- CRM CMR 4: Human Remains

4.6.1.2 Architectural Resources

The analysis of the sites shows that one architectural resource, a Historic District, occurs within the boundary of only one proposed LTE site, PASDNPD. While the parking structure is not included in the District (the structure is a non-contributing element within the District), it is visible from and activities therefore could affect the integrity of the District. It is anticipated that application of screening materials to reduce impacts to a non-adverse level are possible. For this site, it is anticipated that a finding of No Adverse Effect associated with architectural resources will be presented to SHPO in the FCC Form 620 submission, along with design features developed to achieve that finding. A finding of No Effect is expected for the remaining sites, based on a lack of identified architectural resources in the direct APE of these sites.

Based on the records search and field surveys, architectural resources were recorded within the indirect APE at the three LTE project sites remaining in the Section 106 consultation process: LAPDVNS, LBECOC, and PASDNPD. Potential indirect (i.e., visual) effects could occur to these architectural resources as a result of altering and compromising the views from or to these resources.

Based on the analysis conducted in completing FCC Forms 620/621 for these sites, a No Effect finding was made for all of the resources identified in the indirect APEs for the proposed sites. SHPO review of these findings is currently underway. Work at each site could not commence until SHPO concurrence has been received for each site.

No adverse direct or indirect effects on architectural resources are foreseen during construction or operations; and, therefore, no significant direct or indirect impacts are expected.

4.6.1.3 Native American Resources

No Native American resources have been identified to date in the direct APE at any of the proposed LTE sites. For this reason, a finding of no effect associated with Native American resources in the direct APE is appropriate for the Proposed Action.

Implementation of CRM CMRs 1, 2, 3, and 4 at all sites would preclude impacts to previously unidentified Native American resources at all sites.

No direct or indirect effects to Native American resources would occur during operation of the Proposed Action.

4.6.1.4 Paleontological Resources

No paleontological resources were identified at any of the proposed sites, and the surface strata (i.e., less than 5 feet below ground level) at each site was identified as not being sensitive for paleontological resources. No direct or indirect impacts to paleontological resources are anticipated.

4.6.2 No Action Alternative

Under the No Action Alternative, no construction or operations would occur. Therefore, no direct or indirect impacts to archaeological, architectural, Native American, or paleontological resources would occur.

4.7 Aesthetic and Visual Resources

4.7.1 Proposed Action

During the construction phase, equipment, work crews, and materials would be visible in the vicinity of all proposed LTE sites. At certain locations, views associated with construction (e.g., grading and trenching activities, temporary fencing) may also be temporarily visible. These minor impacts would be short term in nature and local to the area immediately surrounding each proposed project site. No significant impacts would occur.

Once construction is completed, the primary impact on visual resources would be the roof-mounted or collocated antennas at each site. The sites that are roof mounted would be placed on existing buildings, either attached to penthouse structures, or the tops of building or elevator towers. In the case of the collocated sites, the antennas would be attached to existing communication towers. Because the antennas would be attached to existing structures, no long-term visual impacts would occur. No long-term visual impact would occur for the trenching activities analyzed for Site AZPD001. No significant direct or indirect impacts to aesthetics and visual resources are anticipated.

4.7.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect impacts associated with aesthetics and visual resources are anticipated.

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.

4.8.1 Proposed Action

Construction and operation under the Proposed Action would not conflict with applicable land use plans. None of the proposed sites lies on federally administered land, within the coastal zone, or within the boundary of an existing airport land use plan (ALUP) so these types of land use plans are not applicable to the analysis.

The proposed LTE equipment would be installed at sites that have been previously developed and are currently occupied by a police station or other public facilities that transmit and receive public safety radio signals.

No new towers are under review in this EA, and no inconsistencies were identified with applicable general plans.

As development of each of the sites would be consistent with local agency plans under the Proposed Action, no significant direct or indirect impacts are anticipated.

4.8.2 No-Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect impacts associated with land use are anticipated.

4.9 Infrastructure

4.9.1 Proposed Action

Utilities

Potential disruption of utilities was analyzed in Section 4.9.1 of the LA-RICS LTE System EA. With the exception of the geography involved (which would not drive impact), the activities evaluated in this Supplemental EA are captured in that analysis and are not likely to cause a significant impact, as design would include evaluation of all utility systems at these sites.

Potential impacts to electricity, solid waste, and water were analyzed under the Proposed Action. The analysis reflects that each of the proposed sites is served by public or large commercial utility providers.

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 proposed sites would create an estimated peak demand of less than 0.1 percent of existing total annual generation capacity of the electrical utilities serving the area of the Proposed Action. No significant direct impacts to electrical supply are anticipated, 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 project lifespan. Solid waste generated as a result of construction of the Proposed Action would be less than 0.1 percent of current remaining landfill capacity.

No significant impact (direct or indirect) to solid waste management would occur.

Water

Limited amounts of non-potable water would be required during construction to suppress dust, stabilize stockpiled soils, and enable 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 (i.e., up to 3,600 square feet), the demand for water during construction at an individual LTE site would be limited; existing water connections located at the majority of the proposed LTE sites would be sufficient to meet construction demand. It is assumed that water would be transported to one LTE site (VPC) where existing plumbing connections might not be available. During the operations phase, no demand for water (potable or non-potable) is anticipated. Total water supply for a single dry year in the greater Los Angeles region is estimated at approximately 2.55 million acre-feet per year. Water use at proposed LTE sites would be negligible in comparison to the 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

Construction-related traffic impacts would be short term and localized and could include temporary impairment of access to adjacent roadways, potentially creating traffic hazards and limiting emergency access. With the implementation of TRANS MM 1, temporary impacts 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.

Construction and operation of the Proposed Action would result in no significant impacts (direct or indirect) to transportation.

Implementation of the following mitigation measure would minimize 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

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect impacts associated with infrastructure are anticipated.

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

The Proposed Action includes sites dispersed over a wide geographic area within Los Angeles County. While environmental justice populations were identified at three sites (LAPD077, LBFD012(N), AZPD001), no significant direct or indirect impacts were identified in the analysis for any resource affecting local communities. It is anticipated that 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. As a result, no significant direct or indirect impacts are anticipated.

4.10.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect impacts associated with socioeconomics are anticipated.

4.11 Human Health and Safety

4.11.1 Proposed Action

Direct and Indirect Impacts

Hazardous Materials

No nexus between existing hazardous waste sites and proposed LTE sites has been identified. All management of hazardous materials during construction and operation would be conducted in accordance with applicable federal and state regulations. Table 4-2 provides an impact analysis

summary for hazardous materials. No significant indirect impacts associated with the Proposed Action would be expected.

Table 4-2: Impact Analysis Summary for Hazardous Materials

Site	Hazardous Waste Issue	Impact Analysis
AZPD001	5 permitted UST sites, 12 open LUST clean-up sites, and 5 closed LUST clean-up sites are located with 0.25 mile of the LTE site	Project construction activities would not encounter the reported LUST sites. They are geographically distant from the LTE site and the depth of proposed construction (i.e., trenching to 36 inches) would not result in contact with groundwater.
BURPD01	3 open LUST sites, 6 closed LUST clean-up sites, and 4 permitted UST sites	Project construction activities would not encounter the reported LUST sites. They are geographically distant from the LTE site and the depth of proposed construction (i.e., trenching to 36 inches) would not result in contact with groundwater.
LAPD077	None identified	N/A
LAPDVNS	None identified	N/A
LBECOC	2 open clean-up programs, 2 closed LUST clean-up sites, and 2 permitted UST sites.	The 2 open clean-up programs are located approximately 1/4 mile to the east of the LTE site. Both sites are under investigation, media impacted is groundwater. Depth of proposed excavation for the project (36 inches), would not encounter groundwater.
LBFD012 (N)	Clean up program site, under assessment and interim remedial action.	Project construction activities would not encounter the reported site. It is geographically distant from the LTE site and the depth of proposed construction (i.e., trenching to 36 inches) would not result in contact with groundwater.
PASDNPD	2 open LUST sites, 8 permitted UST sites.	Project construction activities would not encounter the reported LUST sites. They are geographically distant from the LTE site and the depth of proposed construction (i.e., trenching to 36 inches) would not result in contact with groundwater.
RANCHO	1 open LUST site (recommended for closure), 1 closed LUST cleanup site, and 3 permitted UST sites.	The single open LUST is approximately 1,200 feet west of the proposed work area. Ground disturbance (i.e., trenching to 36 inches) would not result in contact with affected area or groundwater.
VPC	None identified	N/A
KEY: LTE = Long Term Evolution N/A = Not applicable LUST = Leaking underground storage tank UST = Underground storage tank		

Worker Safety

All trenching and utility connections would be conducted in compliance with California Office of Occupational Safety and Health Administration (Cal/OSHA) regulations for safety, including those outlined in CCR, 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 existing structure at Site LBECOC has FCC registration No. 123336 and was a part of FAA Study No. 01-awp-2947-oe, which resulted in a 'no hazard' determination. Because the Proposed Action does not include the construction of new antenna support structures, no significant direct or indirect impacts to air navigation are anticipated.

Wildland Fires

Activities at Site VPC would be governed by the existing approved LA-RICS LTE fire management plan. No significant direct or indirect impacts are anticipated.

Methane Gas

None of the sites evaluated in this Supplemental EA is located within 200 feet of an oil well or within 1,000 feet of a landfill. No significant direct or indirect impacts would be expected to occur.

Radio Frequency Exposure

The FCC has established MPE limits for human exposure to RF-EME energy fields. The MPE limits do not represent levels where a health risk exists, as they are designed to provide a substantial margin of safety. The FCC guidelines incorporate two separate tiers of exposure limits. The first tier is based upon occupational / controlled exposure limits (for workers). The second tier is for the general population / uncontrolled exposure limits, for the general population.

General population/ uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related.

Occupational/ controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/ controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/ uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

The FCC has established an occupational/ controlled MPE of 5 milliwatts per square centimeter (mW/cm^2) and an uncontrolled MPE of 1 (mW/cm^2) for equipment that operates above the 1500 MHz frequency range. For equipment operating at 700 MHz, the occupational MPE is 2.83 (mW/cm^2) and uncontrolled MPE is 0.57 (mW/cm^2). Occupational MPE limits are based on six minute of continuous exposure, and uncontrolled MPE limits are based on 30 minutes of continuous exposure.

Modeling was conducted at each of the nine proposed sites using RoofView® software, a widely used predictive modeling program, to predict both near field and far field radio frequency power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas. The models utilize operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that are expressed as a percentage of the FCC's exposure limits. The assumptions used in radiofrequency modeling included:

- Inputs assumed that all transmitters would operate continuously at 100 percent power. In normal operation, LTE transmitters would be expected to operate at an average of 10 to 25 percent of that power, meaning that actual radio frequency fields should be reduced by 75 to 90 percent of modeled results
- Shielding by buildings was not taken into account. Shielding by buildings would reduce RF field strength by a factor of 6 to 30 times.

Modeling took into account the nearest walking/working surfaces to determine maximum potential exposures, and then distance to publically accessible areas (typically the ground below the antennas). The predicted power densities were then compared against the FCC's MPE limits for allowable public and workplace exposures. Modeling also took into account power densities generated by other antennas located at the site (to provide an aggregate estimation of power densities generated). The results generally showed that sites with rooftop/building mounted antennas had higher potential for exposure than sites with tower mounted antennas, by virtue of these rooftop / building mounted antennas being in closer proximity to walking surfaces (i.e., a roof or a catwalk). Maximum rooftop site exposures were modeled based on a one-foot distance to the front of the antenna. Table 4-4 provides the results of modeling for the nine sites.

Table 4-3: Summary of RF Modeling Results.

LA-RICS Site Name	Antenna height above ground level	General Population / Uncontrolled MPE (mW/cm ²) ¹	General Population / Uncontrolled Modeled Result ¹				Occupational / Controlled MPE (mW/cm ²) ¹	Occupational / Controlled Modeled Result ¹			
			Roof Exposure (mW/cm ²)	Roof % MPE	Ground Exposure (mW/cm ²)	Ground % MPE		Roof Exposure (mW/cm ²)	Roof % MPE	Ground Exposure (mW/cm ²)	Ground % MPE
AZPD001	64 feet	0.505	N/A	N/A	0.006	1.23%	2.525	N/A	N/A	0.006	0.25%
BURPD01	67 feet	0.505	0.028	5.459%	0.006	1.2295%	2.525	0.028	1.09%	0.006	0.25%
LAPD077	48 feet	0.505	0.277	54.9%	0.021	4.2%	2.525	0.277	10.98%	0.021	0.84%
LAPDVNS	62 feet	0.505	3.105	614.8%	0.013	2.6%	2.525	3.105	122.96%	0.013	0.52%
LBECOC	70 feet	0.505	0.013	2.6%	0.008	1.5%	2.525	0.013	0.52%	0.008	0.3%
LBFD012(N)	64 feet	0.505	0.019	3.7%	0.009	1.8%	2.525	0.019	0.74%	0.009	0.36%
PASDNPD	54 feet	0.505	0.266	52.7%	0.007	1.3%	2.525	0.266	10.54%	0.007	0.26%
RANCHO	157 feet	0.505	0.028	5.5%	0.014	2.7%	2.525	0.028	1.1%	0.014	0.54%
VPC	70 feet	0.505	0.007	1.4%	0.007	1.31%	2.525	0.007	0.28%	0.007	0.262%

Source: EBI Consulting 2014 and 2015

¹ RF emission as percentages of FCC MPE

Using the methods discussed above, the LAPDVNS site was predicted to exceed the General Population / Uncontrolled and Occupational / Controlled MPEs at the roof. No other LA-RICS project sites would exceed General Population / Uncontrolled or Occupational / Controlled MPEs at the roof or nearby ground surfaces (EBI Consulting, 2014-2015).

At the LAPDVNS site, modeled exposures were 614.8 percent of MPE for uncontrolled exposures and 122.96 percent of MPE for occupational exposures at a one-foot distance from the antenna (EBI Consulting 2015). Site LAPDVNS is a secure police facility with limited roof access therefore rooftop exposure to the general population would not be expected to occur at the site. In addition, a secondary fence with a locked gate surrounds the roof access and encloses the roof-mounted building equipment including heating ventilation and air conditioning (HVAC) units, and the proposed antennas would be mounted on the outside of that enclosure, facing outward. The existing fence would serve as a physical barrier, precluding access by maintenance or repair workers to areas outside the fence with elevated RF fields. RF fields generated at the back of the antennas (i.e. where a worker inside the fence could potentially pass in transit or work on building equipment) are 30 dB less than those at the front of the antenna. This reduction in the RF field equates to a greater than 1,000 times reduction in field strength versus that generated from the front of the antenna. Emissions from the back of the antennas would not result in any exceedance of MPE. Thus it is highly unlikely that any untrained or unaware worker would have access to areas where exposures could occur at Site LAPDVNS. Following FCC OET Bulletin 65 guidance, prudent measures for this site would include application of HAZ MM5, which identifies use of warning labels or signs on the roof access door and the gate of the secondary fence. The system contractor is also required under the contract to conduct follow-on field measurements at each site and implement radio frequency exposure controlling measures in FCC OET Bulletin 65 where warranted to demonstrate compliance with FCC MPE guidelines. Therefore, no significant direct or indirect impacts due to radio frequency exposure are anticipated.

HAZ MM 5: Access restrictions including locked doors and gates, signage, and other measures identified in FCC OET Bulletin 65 shall be implemented based on the calculated and measured RF-EME such that the RF exposure level is in compliance with FCC MPE guidelines to prevent exceeding MPE limits to workers and the public.

4.11.2 No Action Alternative

No activities have been proposed under the No Action Alternative; therefore, no direct or indirect impacts associated with human health and safety are anticipated.

4.12 Cumulative Impacts

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).

This section addresses the potential cumulative impacts associated with implementation of the Proposed Action. No cumulative impacts were identified under the No Action Alternative.

4.12.1 Determination of Present and Reasonably Foreseeable Future Projects

Projects included in this analysis represent those that might result in incremental additional impacts when considered with other projects. Guidance used in developing this list included the CEQ’s guidance found at CEQ’s *Considering Cumulative Effects Under the National Environmental Policy Act* (CEQ 1997) and the U.S. EPA found in *Consideration of Cumulative Impacts in EPA Review of NEPA Documents* (USEPA 1999).

A project impact zone (PIZ) was developed based on the potential geographic extent of impact expected at individual sites. This cumulative PIZ was 2 miles at site VPC because this site had a potential for impacts to large bird species to that distance (i.e., impacts to eagles were evaluated over an area extending up to 2 miles from this site). The cumulative PIZ was 0.5 mile at AZPD001, BURPD01, LAPD077, LAPDVNS, LBECOC, PASDNP, and RANCHO as the furthest distance of impact to any resource was 0.5 mile (i.e., indirect impacts to cultural resources). At Site Lbfd012(N), the cumulative PIZ was only 0.25 mile, reflecting the furthest distance of impact to visual resources. Only projects identified within this cumulative PIZ established for each site were evaluated in terms of cumulative impact.

A search was conducted for present and reasonably foreseeable future planned or pending but yet to be constructed communication towers, commercial cellular antennas and other structures similar to the Proposed Action identified within the cumulative PIZ for each of the proposed sites. Included in this search was the FCC Antenna Structure Registration (ASR) website (for proposed or in-construction telecommunications tower projects). As shown in Table 4-4, Site VPC was identified as having a nearby project that could result in cumulative impacts.

Table 4-4: Projects Located Within the Project Impact Zone of Sites Evaluated in the Proposed Action.

Site	Cumulative PIZ	Nearby Proposed Project(s)	Distance to Site (closest point)	Discussion
VPC	2 mi.	Recently constructed tower at a proposed LA-RICS LMR collocation site. Existing 180-foot lattice tower, with proposed equipment shelters, and up to 45-kW generator	Immediately adjacent	Telecommunications tower/pole at same site

4.12.2 Cumulative Impact Analysis

This analysis focuses on Site VPC, which was identified as having a similar proposed project within the PIZ that could potentially result in cumulative impacts to the resources analyzed in this Supplemental

EA. Because no additional proposed projects or projects currently in construction were identified in the PIZ at sites AZPD001, BURPD01, LAPD077, LAPDVNS, LBECOC, LBFD012(N), PASDNPD, and RANCHO, no further cumulative impact analysis is provided for those sites.

Noise

Construction activities associated with LTE development at Site VPC could overlap with construction activities associated with the Land Mobile Radio (LMR) system project, a separate project that is also proposed by the LA-RICS Authority. However, construction activities for both projects would be contained within 1,000 feet of both sites, and no sensitive receptors have been identified at or near either site. Operational noise would be similar under both projects at these sites and would not be significant. No significant cumulative noise impacts are expected.

Air Quality

The Proposed Action is not growth-inducing and would not result in an economic activity that would exceed the assumptions used in forecasting district-wide emissions, which take into account all proposed activities identified in the jurisdiction of the SCAQMD. Therefore, the project would have no significant cumulative impacts to air quality.

Geology and Soils

Development at all proposed sites would comply with federal, state, and Los Angeles County requirements, codes, permit conditions, and BMPs and CMRs applicable at each site. Construction impacts, if any, would be temporary and contained at each LTE site, eliminating the potential for overlap in space and time with the other projects identified. No long term (operational) impacts were identified. No significant cumulative impacts to soils and geology are anticipated.

Water Resources

Development at all proposed sites would comply with federal, state, and Los Angeles County requirements, codes, permit conditions, and BMPs and CMRs applicable at each site. Construction impacts, if any, would be temporary and contained at each LTE site, eliminating the potential for overlap in space and time with the other projects identified. No long-term (operational) impacts were identified. No significant cumulative impacts to water resources are anticipated.

Biological Resources

The Proposed Action has been designed to avoid significant impact on wetlands, riparian areas, and habitats of significant value. Construction under the Proposed Action would not harm any species protected by the federal ESA, the NPPA, or the CESA or habitat of species protected by these laws. Construction impacts, if any, would be short term and localized, eliminating the potential for overlap in space and time with the other projects identified. No significant impacts on biological resources were identified. Given the above, no significant cumulative impacts (direct or indirect) would occur to biological resources.

Historic and Cultural Resources

Additional approvals are still needed before construction of LMR infrastructure at this site can begin, including environmental review by the Federal Emergency Management Agency (FEMA) under NEPA. Development of both LMR and LTE infrastructure at this site could have cumulative effect to historic and cultural resources within the indirect APE at these sites. Any potential adverse impacts to cultural resources would be determined in the Section 106 process, and concurrence from SHPO would be required prior to development of either the LMR or LTE infrastructure. As a result, no cumulative impacts are anticipated.

Aesthetic and Visual Resources

The PIZ for aesthetic and visual resources is 0.25 mile; and Site VPC has been identified as containing proposed projects or projects in construction within that PIZ. The proposed LTE development at this site would have no impacts to aesthetic and visual resources, therefore no significant cumulative visual impacts on the local viewshed is anticipated as a result of the Proposed Action.

Land Use

At all sites, the Proposed Action would not directly involve conflicts with existing land uses and would be substantially consistent with local general plans. No significant cumulative impacts to land use are anticipated.

Infrastructure

Adequate capacities of electrical power, solid waste disposal, and potable water have been identified to manage development at each of the sites evaluated under the Proposed Action. Any incremental increase in demand for electrical power, solid waste, and potable water created by operation of the Proposed Action is expected to be minor when compared to current system capacity and demand. Therefore, no significant cumulative impacts would be associated with the Proposed Action.

Construction activity on an LTE site would not involve changes to current or future traffic. No significant cumulative traffic impacts would result from the Proposed Action.

Socioeconomic Resources

No disproportionate direct or indirect impacts were identified in the analysis of implementation of the Proposed Action. Therefore, no significant cumulative impact to socioeconomic resources would be expected.

Human Health and 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. All sites would be operated in compliance with FCC regulations regarding public and worker exposures to radio frequency emissions associated with LTE and microwave antennas installed at each site. Confirmatory sampling done at the time the site

becomes operational would be completed to ensure that no exceedance of the FCC's maximum permissible exposures would occur at any site. No significant cumulative impact is anticipated.

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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 for this Supplemental EA 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 Supplemental EA.

5.1 Federal Communications Commission

As part of compliance with the ASR process, FCC uses the electronic TCNS to notify interested federally recognized tribes and participating SHPOs regarding the proposal. NTIA has initiated TCNS for all of the sites evaluated in this Supplemental EA. In accordance with the Nationwide PAs (FCC 2001, 2004), and the 2009 Program Comment (FR 2009), 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 APE for each site to SHPO. Based on its use of the Program Comment, the lead agency for purposes of NHPA is NTIA.

5.2 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 FCC PAs (FCC 2001, 2004), applicants are required to prepare and transmit a submission packet to the SHPO consisting of FCC Form 620 NT (for actions that are not exempt) or FCC Form 621 CT (for collocation exempted actions).

Section 106 consultation for the proposed project is being undertaken according to the Collocation PA (FCC 2001), the Nationwide PA for Review under the National Historic Preservation Act (2005), the Program Comment (2009), and the PA entered into by SHPO and NTIA for the LA-RICS LTE PSBN system project in October 2014 (see Appendix D). The SHPO also agreed to specific definition of the direct APE for this project to be limited to areas where ground disturbance would occur (see Appendix C). In accordance with the Nationwide PA, FCC Forms 620 and 621 provide information on historic, prehistoric, and Native American cultural resources needed by SHPO to reach a determination of potential effects at the sites evaluated under the Proposed Action on these resources. An FCC Form 620 or 621 has been prepared and reviewed by SHPO for AZPD001; has been prepared and submitted to SHPO for LAPDVNS and LBECOC; and is being prepared for submission to SHPO for PASDNP. Sites BURPD01, LAPD077, and RANCHO, were exempted from SHPO review on February 19, 2015. Sites LBFD012(N) and VPC were exempted from SHPO review on May 15, 2015.

NTIA signed a PA with SHPO on October 3, 2014 (see Appendix D), formalizing a 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 and allowed for NEPA compliance to conclude in lieu of SHPO concurrence for all sites. It also provided that FCC Form 620s could be submitted in individual batches in order to facilitate schedule. Working through NTIA, the Authority will complete FCC Forms 620 or 621 to allow NTIA to complete Section 106 consultation with SHPO and obtain necessary clearance prior to construction.

5.3 Native American Consultation

Public outreach efforts were undertaken to fulfill NHPA Section 106 requirements with the federally recognized Native American Tribes. These included completing research and posting information regarding the proposed LTE sites onto the TCNS in order that federally recognized Native American Tribes have an opportunity to evaluate the proposed project. Native American Tribes potentially impacted by the Proposed Action were identified, and consultation was initiated in February 2015. Tribal consultation was completed during 2014 for sites AZPD001, BURPD01, LAPD077, LAPDVNS, and RANCHO, and the proposed collocation work at these sites does not create new impacts that would require additional consultation. In February 2015 TCNS updates were conducted to include sites LBECOC and LBFD012(N). Site LBFD012(N) was later determined to be exempt under the terms and conditions of the collocation PA. TCNS was updated again in May 2015 to include Site PASDNPD. Data for Site VPC was not uploaded into the TCNS, as the site was determined to be exempt under the terms and conditions of the collocation PA. The Authority provided information packages for the Tribes that expressed interest in the sites evaluated in this EA. Follow on consultation continues with the Soboba Band of Luiseno Indians for sites LBECOC and PASDNPD, and with the Eastern Shoshone Tribe for Site PASDNPD

Outreach was also conducted through the State of California NAHC to identify non-federally recognized Tribes, groups, and other stakeholders potentially interested in the addition of the proposed LTE sites. Additionally, the local cities that have supplemental LTE sites in their jurisdictions were contacted. These included the seven jurisdictions (the cities of Azusa, Burbank, Downey, Glendale, Long Beach, Los Angeles, and Pasadena) in which the LTE sites evaluated in this Supplemental EA would be built.

The NAHC was contacted in February 2015, and no resources of concern were identified. The NAHC also provided a list of tribes with interest regarding Native American resources in Los Angeles County. Contacts were made with the tribes identified in the NAHC letter that may have interest in the area, and no concerns were raised by any of these tribal entities.

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 C of this Supplemental EA.

5.4 U.S. Fish and Wildlife Service

In its concurrence letter dated July 18, 2014, USFWS concurred with the findings of a BA prepared for the overall LA-RICS LTE project that included consideration of five sites (analyzed in the LA-RICS LTE System Final EA). These four sites were AZPD001, BURPD01, LAPD077, LAPDVNS, and RANCHO. LA-RICS conducted correspondence via telephone and email regarding the four new proposed sites: LBECOC, Lbfd012(N), PASDNPD, and VPC in order to discuss potential impact to species and critical habitat protected under the federal ESA. Mr. Bruce Palmer, representing the Authority, discussed and/or emailed information regarding these four new sites with Ms. Colleen Draguesku and Mr. Jesse Bennett. The correspondence culminated on June 4, 2015, where USFWS agreed that a no effect determination was appropriate (see Appendix C). USFWS has concluded that no Endangered Species Act – listed, - candidate, or proposed for listing species or critical habitat were present at any of the proposed project sites. USFWS did not provide any comment to LA-RICS' No Effect determination for these sites.

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6.0 ENVIRONMENTAL PERMITS AND REGULATORY REQUIREMENTS

Table 6-1 summarizes applicable federal, state, and local regulatory requirements and permits; the current status of project compliance; and project environmental commitments.

Table 6-1: Federal, State, and Local Regulatory Requirements and Permits

Regulatory/ Permit Requirements	Permitting/ Regulatory Agency	Timing	Status of Project Compliance	Other Commitments/Mitigation Measures
Federal				
NHPA Section 106	California State Historic Preservation Office, State Historic Preservation Officer	Prior to construction	Consultation regarding FCC Forms 620 and 621 has been completed with SHPO.	CRM CMRs provided in Appendix A-1 would be implemented to eliminate adverse effects to cultural and historic resources.
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 RWQCB	Prior to and during construction	Not initiated; post- NEPA	Best management practices, as adopted by RWQCB, 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	The Authority's Board of Directors will review the project and, if appropriate, determine sites to be exempt from CEQA under Public Resources Code § 21080.25	None
Local				
South Coast Air Quality Management District Rule 403	South Coast Air Quality Management District	During Construction	Not initiated; post- NEPA, during construction, if required	Rule 403 imposes particulate matter reduction methods on all construction activities.

Table 6-1: Federal, State, and Local Regulatory Requirements and Permits

Regulatory/ Permit Requirements	Permitting/ Regulatory Agency	Timing	Status of Project Compliance	Other Commitments/Mitigation Measures
2012 Air Quality Management Plan for the South Coast Air Basin	South Coast Air Quality Management District	Prior to FONSI	Completed as part of AIR MM 1, applicable to entire LTE project	Basis for short-term (construction) emission thresholds to prevent exceedance 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, if required	Project would satisfy requirements through compliance with federal Clean Water Act Section 402 NPDES permit. Separate permitting may be required for dewatering activities. CMRs have been developed to eliminate impacts (See Appendix A-1).

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7.0 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 7-1 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 Supplemental 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 C, Agency Correspondence.

Table 7-1: Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
Federal Agencies		
Federal Communications Commission	Section 106 compliance (TCNS)	Tribal contact information
U.S. Fish and Wildlife Service	Section 7 compliance under federal ESA	Corresponded regarding potential impacts to species and / or critical habitat protected under federal ESA. The USFWS concluded no ESA-listed, -candidate, or proposed for listing species or critical habitat were present at any of the proposed project sites. USFWS provided no comment to the No Effect determination made for these sites.
State Agencies		
California State Historic Preservation Office, State Historic Preservation Officer	Consultation under Section 106 of the NHPA	Section 106 consultation via FCC Form 620 or 621 has been completed with SHPO for sites AZPD001, LBECOC, PASDNPD, and LAPDVNS; SHPO concurrence with a No Effect or No Adverse Effect finding has been made at each site per concurrence letter received on June 2, 2015; for Site PASDNPD, SHPO concurrence was stated in a concurrence letter received on June 4, 2015. Sites BURPD01, LAPD077, RANCHO were exempted from SHPO review by NTIA by letter dated February 19, 2015. Sites Lbfd012(N) and VPC were exempted from SHPO review by NTIA by letter dated May 15, 2015. All exempted sites were evaluated by NTIA for exemption under the criteria set forth by the FCC Collocation Nationwide Programmatic Agreement.

Table 7-1: Agencies and Persons Consulted

Agency/Person Name	Reason for Contact	Information Provided for EA Analysis
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 APE; contact list of Native American tribes, individuals and organizations
Federally Recognized Indian Tribes		
Santa Ynez Band of Chumash Indians	Consultation under Section 106 of the NHPA via TCNS	By reply through TCNS dated February 19, 2015, the Tribe has deferred to local tribes for comment.
Soboba Band of Luiseño Indians	Consultation under Section 106 of the NHPA via TCNS	Tribe requires a \$200 per site tribal review processing fee. The Authority has provided an information package to the Soboba Band of Luiseño Indians, for sites LBECOC and PASDNPD, along with a check for \$400 to support review of this data. Consultation with the Tribe is ongoing.
Eastern Shoshone Tribe	Consultation under Section 106 of the NHPA via TCNS	By reply through TCNS dated June 2, 2015, the tribe has requested to be consulted on the project. Tribe has established a fee of \$400 per consultation. The Authority has provided an informational package to the Eastern Shoshone Tribe. Consultation with the Tribe is ongoing.
Local Agencies		
City of Azusa	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 Downey	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 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 Pasadena	Solicit input to determine existence of historic properties within city limits to facilitate Section 106 compliance	No response received

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