4.9 Hydrology and Water Quality

This section describes the environmental and regulatory settings and discusses potential impacts associated with the construction and operation of the proposed Valley-Ivyglen 115-kilovolt (kV) Subtransmission Line Project (proposed Valley–Ivyglen Project) and the proposed Alberhill System Project (proposed Alberhill Project) with respect to hydrology and water quality. During scoping for the proposed Valley–Ivyglen Project, comments regarding the need for a hydrological analysis and the potential for flooding along State Route 74 were received. During scoping for the proposed projects, the Riverside County Flood Control and Water Conservation District commented that components of the proposed Alberhill Project would traverse several of the District's Master Drainage Plan (MDP) areas. These comments informed the analysis in this section.

As part of the proposed Alberhill Project, microwave dish antennas would be installed on existing structures at the Santiago Peak Communications Site on land managed by the United States Forest Service within the Cleveland National Forest in unincorporated Orange County and Southern California Edison's (SCE, or the applicant) Serrano Substation in the City of Orange (see Section 2.4.7, "Telecommunications Installations"). The installations would have no impact on hydrology or water quality because they would be installed on existing structures in an area containing extensive telecommunications equipment; the installations would not require any ground disturbance. Therefore, these components of the proposed Alberhill Project are not discussed further in this section.

4.9.1 Environmental Setting

4.9.1.1 Regional Setting

The proposed projects would be located in the Santa Ana River watershed (hydrologic unit code [HUC] 18070203) and San Jacinto River watershed (HUC 18070202) in the Santa Ana Basin in Riverside County. Figure 4.9-1 shows the boundaries of the watersheds. The interconnected system formed by the San Jacinto River, Canyon Lake, Lake Elsinore, and Temescal Creek (Temescal Wash; refer to Figure 4.9-2) is the main hydrological feature in the region. The system flows northwest into the Santa Ana River, which eventually drains to the Pacific Ocean.

Climatic conditions for Riverside County, including the cities of Lake Elsinore and Perris, are typical of inland areas of Southern California. The region receives an annual average rainfall of 10 to 12 inches (DWR 2006a). Light winter snow can occur in the area at higher elevations, but snow is uncommon (Western Regional Climate Center 2015). According to the California Department of Water Resources (DWR), precipitation in water years 2012 and 2013 was less than normal, and the 2014 water year was one of the driest on record (DWR 2014).

4.9.1.2 Surface Water Bodies

Lakes and Reservoirs

The closest lake to both proposed projects is Lake Elsinore, a 6,000-acre-foot natural lake located approximately 1 mile south of 115-kV Segments ASP2 and VIG4. Lake Elsinore is fed by direct precipitation, surface runoff, and downstream flow from local tributaries such as the San Jacinto River. Canyon Lake (or Railroad Canyon Reservoir) is a 12,000-acre-foot reservoir located approximately 2 miles northeast of 115-kV Segment ASP4 and 3 miles east of 115-kV Segment VIG2. Corona Lake (formerly Lee Lake) is a 3,000-acre-foot man-made impoundment located adjacent to 115-kV Segment VIG7. Reservoirs and lakes in the proposed project region are shown in Figure 4.9-2.

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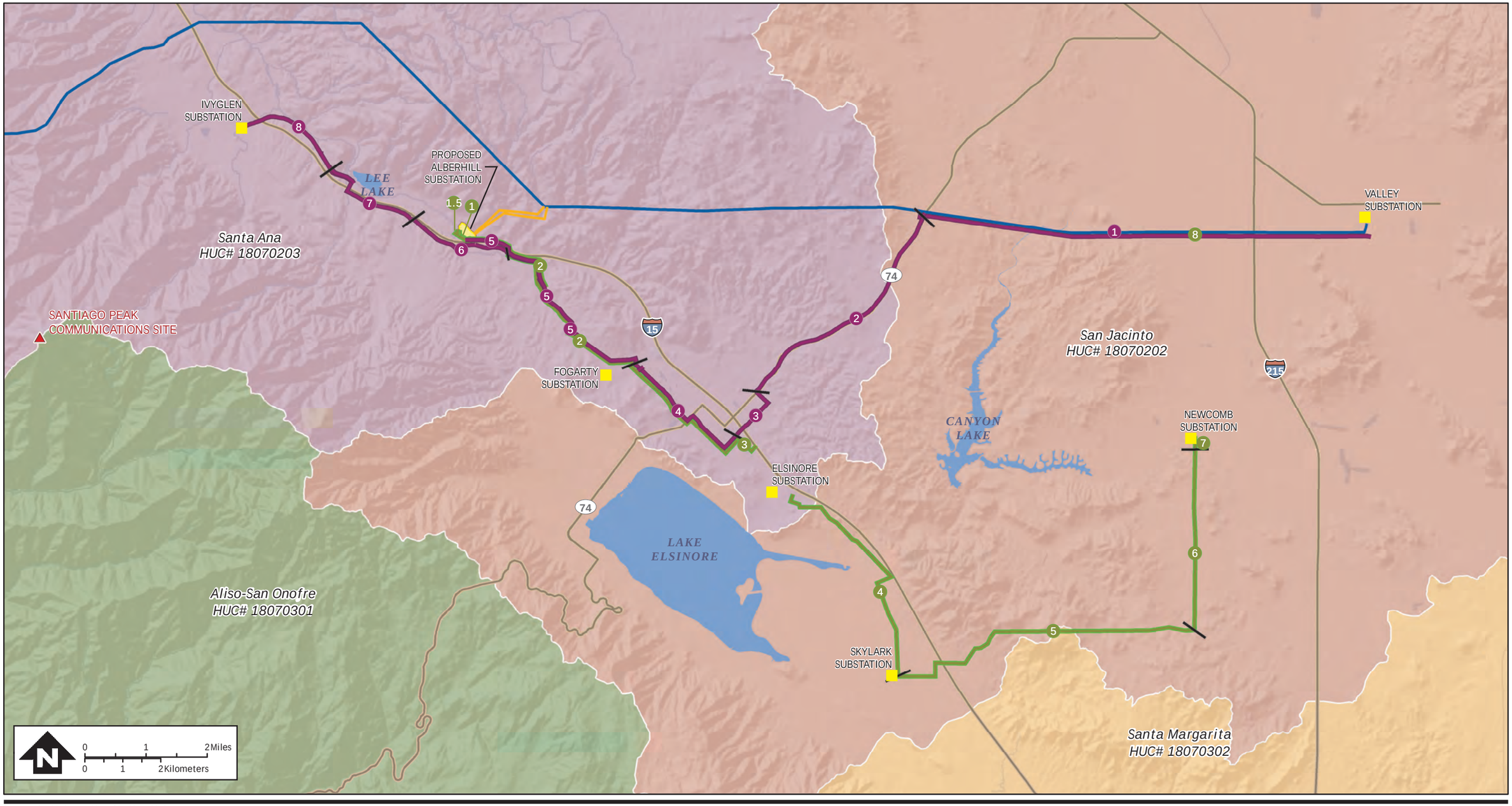

Source: ESRI 2010, NHD 2014, SCE 2011, 2013

- 1 VIG1
- 2 VIG2
- 3 VIG3
- 4 VIG4
- 5 VIG5
- 6 VIG6
- 7 VIG7
- 8 VIG8

- 1 ASP1
- 1.5 ASP1.5
- 2 ASP2
- 3 ASP3
- 4 ASP4
- 5 ASP5
- 6 ASP6
- 7 ASP7
- 8 ASP8

- Existing Substations
- Proposed Alberhill Substation
- Proposed 500-kV transmission lines
- 500-kV Serrano Valley Transmission Line
- Segment begin / end

Watershed
- Aliso-San Onofre
- San Jacinto
- Santa Ana
- Santa Margarita

Figure 4.9-1

Proposed Project Area within the Santa Ana River Basin

Alberhill and Valley–Ivyglen Projects

Riverside County, California

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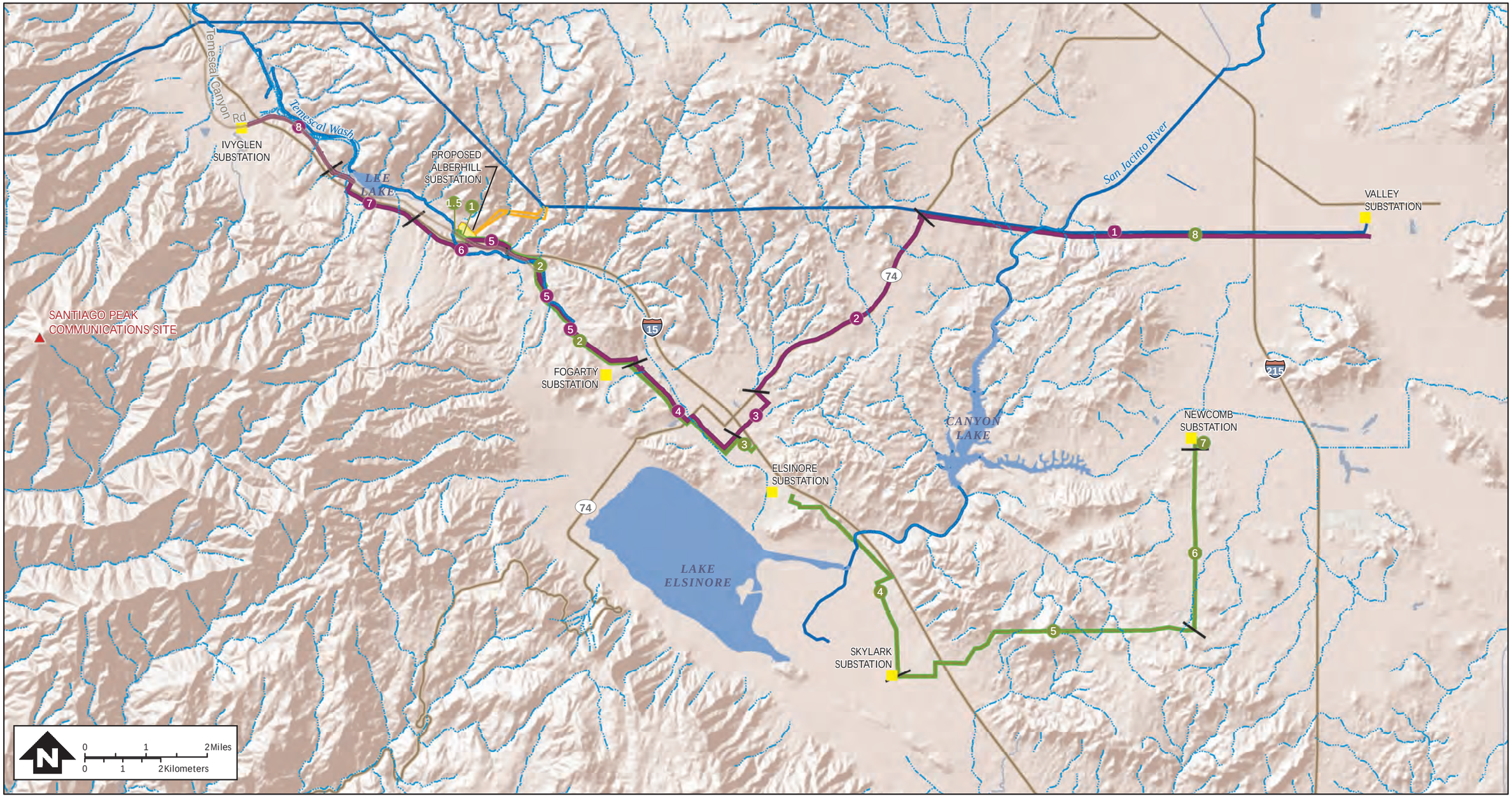

Source: ESRI 2010, NHD 2014, SCE 2011, 2013

- 1 VIG1
- 2 VIG2
- 3 VIG3
- 4 VIG4
- 5 VIG5
- 6 VIG6
- 7 VIG7
- 8 VIG8

- 1 ASP1
- 1.5 ASP1.5
- 2 ASP2
- 3 ASP3
- 4 ASP4
- 5 ASP5
- 6 ASP6
- 7 ASP7
- 8 ASP8

- Existing Substations
- Proposed Alberhill Substation
- Proposed 500-kV transmission lines
- 500-kV Serrano Valley Transmission Line
- Segment begin / end

- Perennial
- Ephemeral / Intermittent
- San Jacinto River; Temescal Wash
- Water Body

Figure 4.9-2

Surface Water in the Proposed Project Area

Alberhill and Valley–Ivyglen Projects

Riverside County, California

Rivers, Drainages, Creeks, and Streams

The San Jacinto River is the largest tributary to Lake Elsinore. It flows southwest across proposed 115-kV Segment VIG1 (approximately 5 miles west of the Valley Substation) and then into Canyon Lake. It flows out of the Canyon Lake reservoir southwest across proposed 115-kV Segment ASP4 and then into Lake Elsinore. Temescal Wash serves as the natural drainage course for outflow from Lake Elsinore and the major drainage feature for the Temescal Valley. Several components of the proposed projects would be adjacent, near, or across the Temescal Wash and its tributaries, as shown in Figure 4.9-2. Temescal Wash joins the Santa Ana River near the City of Corona. The Santa Ana River eventually flows to the Pacific Ocean.

Jurisdictional Waters

Temescal Wash, which is subject to federal and state jurisdiction, is the main surface water feature near the proposed Alberhill Substation site. It is located in close proximity to the proposed 115-kV components of both proposed projects. 115-kV components of the proposed projects would also traverse the San Jacinto River, which is subject to federal and state jurisdiction. Other drainages that are potentially waters of the United States or waters of the state are located along the proposed 500-kV and 115-kV line routes and near the proposed staging areas. Jurisdictional delineation field surveys were conducted in April 2010 and July 2011 to delineate potential jurisdictional wetlands, waters of the United States, and waters of the state within the proposed project area (Read 2010; AECOM 2011). The delineations identified drainages, streams, and wetlands that the proposed projects would cross, span, or avoid. Jurisdictional and potentially jurisdictional waters are listed and described in Appendix G, Tables 3 and 4. Jurisdictional waters and regulatory requirements are further discussed under the "Clean Water Act" heading in Section 4.9.2.1.

4.9.1.3 Groundwater

The proposed project areas would be located in the Elsinore Groundwater Basin and San Jacinto Groundwater Basin (Figure 4.9-3). The Elsinore Groundwater Basin is bounded on the southwest by the Santa Ana and Elsinore Mountains and non-water-bearing rocks of the Peninsular Ranges on the northeast. The proposed project would utilize water from the Elsinore Groundwater Basin via the Elsinore Valley Municipal Water District (EVMWD) and from the San Jacinto Groundwater Basin via the Eastern Municipal Water District (EMWD). It is estimated that about 20 percent of EVMWD's water supply is from groundwater, which is from the Elsinore Groundwater Basin (EVMWD 2015). By 2020, it is estimated that up to about 6 percent of EMWD's water supply would be from groundwater, which includes water from the San Jacinto Groundwater Basin (EMWD 2011).

The Elsinore Groundwater Basin is supplied primarily by infiltration of stream flow (DWR 2006a). The depth to groundwater varies from 250 feet below ground surface (bgs) in the northwest to 600 feet bgs in the southeast (MWDSC 2007). Municipal pumping is the only major outflow from the Elsinore Groundwater Basin (City of Lake Elsinore 2011). In the Elsinore Basin, groundwater occurs in two primary alluvial aquifers: the Upper aquifer, which is characterized by recent alluvium, and the Lower aquifer, which includes the Fernando Group and the Bedford Canyon Formation, separated by semi-continuous confining clay. The southeastern Elsinore Basin contains perched groundwater at depths as shallow as 25 feet bgs (MWDSC 2007).

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Source: California Department of Water Resources 2009,ESRI 2010, SCE 2011, 2013

- 1 VIG1
- 2 VIG2
- 3 VIG3
- 4 VIG4
- 5 VIG5
- 6 VIG6
- 7 VIG7
- 8 VIG8

- 1 ASP1
- 1.5 ASP1.5
- 2 ASP2
- 3 ASP3
- 4 ASP4
- 5 ASP5
- 6 ASP6
- 7 ASP7
- 8 ASP8

- Existing Substations
- Proposed Alberhill Substation
- Proposed 500-kV transmission lines
- 500-kV Serrano Valley Transmission Line
- Segment begin / end
- Elsinore Groundwater Basins
- San Jacinto Groundwater Basins

Figure 4.9-3

Groundwater Basins in the Proposed Project Area

Alberhill and Valley–Ivyglen Projects

Riverside County, California

Groundwater pumping data for the 2013/2014 business year indicate that EVMWD pumped approximately 6,000 acre-feet of groundwater from 18 groundwater production wells from the Elsinore Basin Groundwater Aquifer (EVMWD 2015). The safe yield[1] of the aquifer has been estimated to be about 5,000 acre-feet per year (EVMWD 2005). Groundwater depth measurements and modeling indicate that the Elsinore Basin aquifer is in a state of overdraft. Overdraft is expected to continue in the basin through 2020 and reach 6,500 acre-feet per year if there are no efforts to curtail groundwater pumping (EVMWD 2005).

The San Jacinto Groundwater Basin is bounded by the San Jacinto Mountains on the east, the San Timoteo Badlands on the northeast, the Box Mountains on the north, the Santa Rosa Hills and Bell Mountains on the south, and unnamed hills on the west. Natural recharge to the basin is primarily from percolation of flow in the San Jacinto River and its tributary streams (DWR 2006b). The depth to groundwater in the western basins varies from 10 to 346 feet bgs. Water supply data for 2010 indicate that EMWD obtained about 15,800 acre-feet from the basin in 2010. The San Jacinto Groundwater Basin has experienced historical overdrafts, but a recent agreement requires ameliorating overdraft conditions in the basin (Soboba Band of Luiseno Indians 2008).

4.9.1.4 Water Quality

Surface Water

Lake Elsinore and Canyon Lake are included in the California list of impaired waterways pursuant to Clean Water Act (CWA) Section 303(d). Lake Elsinore is impaired due to the presence of nutrients, toxins, and organic compound pollutants, including polychlorinated biphenyls. Nutrients and pathogens from nonpoint sources have also polluted and impaired Canyon Lake. Temescal Wash is listed as impaired from fecal coliform along a section of the wash that extends 5.4 miles northwest from Lake Elsinore to the Elsinore Groundwater subbasin boundary. A downstream portion of Temescal Wash in the City of Corona, where it joins the Santa Ana River, is also listed as impaired for pH (Santa Ana RWQCB 2010).

Groundwater

Water quality in the Elsinore Groundwater Basin is fair to good. The primary constituents of concern in the Elsinore Basin are total dissolved solids, nitrate, and arsenic. Historical agricultural practices have resulted in nitrate sources within the basin. Arsenic has also been recorded at high concentration, likely due to the naturally occurring arsenic in the region (MWDSC 2007).

The water quality in the San Jacinto Basin is fair to poor. The primary constituents of concern in the San Jacinto Basin are total dissolved solids, nitrate, volatile organic compounds, perchlorate, iron, and manganese. Agricultural practices have resulted in nitrate sources within the San Jacinto Basin. Iron and manganese have also been recorded at high concentrations, likely due to the natural occurrence of the elements in the region (MWDSC 2007).

4.9.1.5 Flood and Dam Failure Inundation Areas

Dams and levees located within the proposed project area include the Railroad Canyon Dam on Canyon Lake and the Lake Elsinore Levee. Flooding susceptibility in Riverside County is primarily associated with several major stream drainages, including but not limited to, the Santa Ana and San Jacinto Rivers, as well as smaller scale flash flood events on many of the alluvial fans that flank the County's hillsides.

[1] Safe yield is generally considered equal to the average replenishment rate of an aquifer from natural and artificial recharge.

The Federal Emergency Management Agency (FEMA) defines an area of land that has a 1 percent chance of being inundated by a flood during any year as a 100-year flood hazard area. Sections of proposed 115-kV Segments ASP1, ASP1.5, ASP 2, ASP3, ASP4, VIG1, VIG3, VIG4, VIG5, and VIG6, and Staging Areas ASP4, ASP7, ASP8, VIG1, VIG5, VIG6, VIG13, and VIG14, would be located within a 100-year flood hazard area and/or dam failure inundation hazard area (Figure 4.9-4). The Alberhill Substation site is not in a 100-year flood hazard area but is located in a dam failure inundation hazard area.

The Riverside County Flood Control and Water Conservation District (RCFCWCD) constructs and maintains flood control facilities within the county and has established 46 MDPs to address current and future drainage needs. MDP boundaries usually follow regional watershed limits. The MDPs provide a guide for development of the County and cost estimate for resolving flood issues. The plan includes the following facilities, among others: channels, storm drains, levees, basins, dams, and wetlands capable of relieving flood problems within MDP areas. Components of the proposed projects would traverse areas within the Romoland, Sedco, and San Jacinto MDPs (County of Riverside 2001, 2003; Riverside County Flood Control and Water Conservation District 2013, 2014).

4.9.2 Regulatory Setting

4.9.2.1 Federal

The Clean Water Act of 1972, as amended in 2002

The CWA regulates water quality in the United States. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. These waters include all navigable waters, tributaries, and adjacent wetlands. Wetlands, drainages, creeks, and streams are generally subject to the jurisdiction of the United States Army Corps of Engineers (USACE) under Section 404 of the CWA. By USACE definition, all aquatic or riverine habitats between the "ordinary high water mark" of rivers, creeks, and streams are potentially considered "waters of the United States" and may fall under USACE jurisdiction. Any deposit of fill into waters of the United States, including wetlands, requires the acquisition of a permit from the USACE pursuant to Section 404 of the CWA.

Section 401 of the CWA requires that every applicant for a federal permit or license for any activity that may result in discharge to a water body must obtain Water Quality Certification that the proposed activity will comply with state water quality standards. In California, 401 certification is granted by the Regional Water Quality Control Board (RWQCB) for projects that are located in a single region, or by the State Water Resources Control Board (SWRCB) for multi-regional projects. Portions of the projects would be located within the RWQCB's Central Region (Region 3) and within the Los Angeles Region (Region 4). Therefore, the SWRCB would be responsible for issuance of a 401 Water Quality Certification. Conditions placed on the issuance of a Section 401 certification by the SWRCB become part of the Section 404 permit issued by the USACE, and a Section 404 permit cannot be issued if Section 401 certification is denied.

Section 303(d) of the CWA (CWA, 33 United States Code 1250 et seq., at 1313(d)) requires states to identify "impaired" water bodies as those that do not meet water quality standards. States are required to compile this information and submit it as a list to the United States Environmental Protection Agency for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of total maximum daily load (TMDL) requirements. The SWRCB and RWQCBs are engaged in ongoing efforts to monitor and assess water quality, prepare the Section 303(d) list, and develop TMDL requirements.

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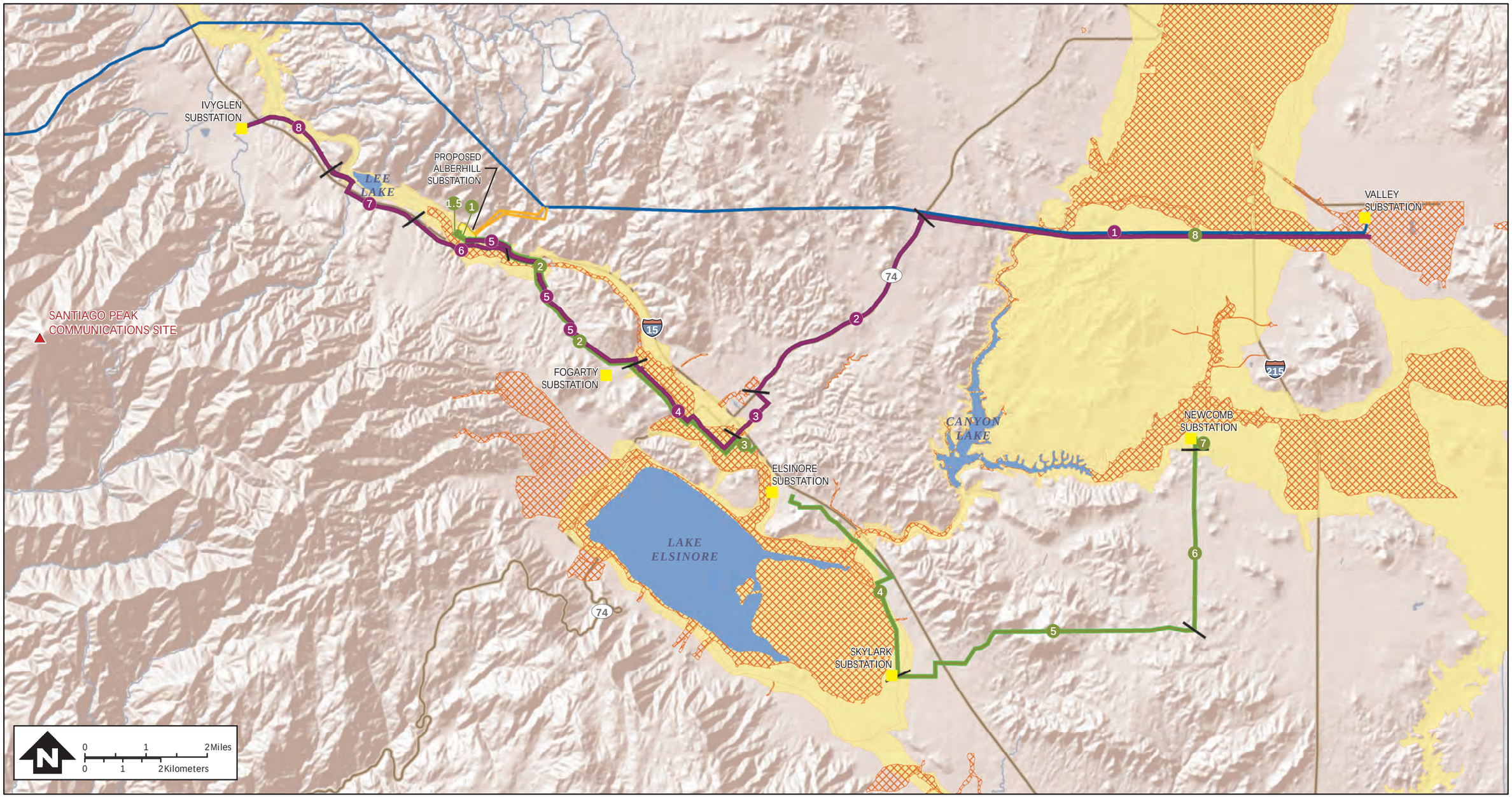

Source: ESRI 2010, FEMA 2014, SCE 2011, 2013

- VIG1
- VIG2
- VIG3
- VIG4
- VIG5
- VIG6
- VIG7
- VIG8
- ASP1
- ASP1.5
- ASP2
- ASP3
- ASP4
- ASP5
- ASP6
- ASP7
- ASP8
- Existing Substations
- Proposed Alberhill Substation
- Proposed 500-kV transmission lines
- 500-kV Serrano Valley Transmission Line
- Segment begin / end
- FEMA 100-Year Flood Zone
- Dam Failure Inundation Hazard Area

Figure 4.9-4

Flood and Dam Inundation Areas in the Proposed Project Area

Alberhill and Valley–Ivyglen Projects

Riverside County, California

As authorized by Section 402 of the CWA, the SWRCB administers the statewide National Pollutant Discharge Elimination System (NPDES) Construction Storm Water General Permit (NPDES Permit, 2009-0009-DWQ as amended by 2010-0014-DWQ), which covers a variety of construction activities that could result in wastewater discharges. Under this system, the State issues project-level Construction General Permits for projects that disturb more than 1 acre of land. The SWRCB Construction General Permit process requires developers to notify the SWRCB of the construction activity by providing a Notice of Intent, developing a Storm Water Pollution Prevention Plan (SWPPP), and implementing water quality monitoring activities as required. The purpose of a SWPPP is to:

- Identify all pollutant sources that may affect the quality of discharges of stormwater associated with construction activity from the construction site;
- Identify non–storm-water discharges;
- Identify, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the site during construction;
- Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed;
- Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity that discharge directly to a water body listed for impairment due to sedimentation, in accordance with Section 303(d) of the CWA; and
- Identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

4.9.2.2 State

California Fish and Game Code Section 1602

California Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the California Department of Fish and Wildlife (CDFW) before beginning any activity that would substantially divert, obstruct, or change the natural flow of the bed, channel, or bank (including associated riparian vegetation) of a river, stream, or lake and/or use material from, or deposit material into, a streambed prior to commencement of the activity. Streams covered under this code include, but are not limited to, intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams, and watercourses with subsurface flow. If the CDFW determines that the action could have an adverse effect on existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required.

Porter–Cologne Water Quality Control Act (Porter-Cologne Act)

The Porter–Cologne Act (California Water Code, Division 7), passed in 1969, regulates surface water and groundwater quality in the state and also assigns to the SWRCB responsibility for implementing CWA Sections 401 (Water Quality Certification), 402 (NPDES), 303(d) (List of Impaired Water Bodies), and 305(b) (Report on the Quality of Waters in California), and the SWRCB has delegated the authority to the nine RWQCBs. The SWRCB and RWQCBs are responsible for issuing permits for certain point source discharges and for regulating construction and stormwater runoff.

The RWQCBs regulate discharges to waters within their respective jurisdictions through administration of NPDES permits, waste discharge requirements, and CWA Section 401 Water Quality Certifications.

RWQCBs administer Section 401 water quality certifications to ensure that projects with federal 404 permits do not violate State water quality standards. The SWRCB has jurisdiction over depositing fill or dredging in "State Only Waters" and issues Waste Discharge Requirements for these projects. Construction projects may require RWQCB approval of a 401 Water Quality Certification, as well as Waste Discharge Requirements and/or a Low Threat Discharge Permit covering construction activities related to discharges from hydrostatic pipeline testing and construction dewatering.

The SWRCB and RWQCBs are responsible for developing and implementing regional basin plans to regulate all pollutants or nuisance discharges that may affect either surface water or groundwater. Basin plans are prepared by the RWQCBs to establish water quality standards for both surface and groundwater bodies within their respective jurisdictions. Basin plans designate beneficial uses for surface and groundwater, set narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses, and describe implementation programs to protect all waters in the region. Under Section 303(d) of the CWA, the RWQCB develops a list of impaired water bodies in which water quality is impeding the attainment of beneficial uses.

Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs.

4.9.2.3 Regional and Local

Riverside County General Plan

The following policies established in the Safety Element of the County of Riverside General Plan are applicable to the proposed projects (County of Riverside 2008):

- ***Policy S 3.6:*** *Require grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, in order to assure the adequate demonstration of a project's ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.*
- ***Policy S 4.1:*** *For new construction and proposals for substantial improvements to residential and nonresidential development within 100-year floodplains as mapped by FEMA or as determined by site specific hydrologic studies for areas not mapped by FEMA, the County shall apply a minimum level of acceptable risk; and disapprove projects that cannot mitigate the hazard to the satisfaction of the Building Official or other responsible agency.*
- ***Policy S 4.2:*** *Enforce provisions of the Building Code in conjunction with guidelines such as, all residential, commercial and industrial structures shall be flood-proofed from the 100-year storm flow, and the finished floor elevation shall be constructed at such a height as to meet this requirement. Critical facilities[2] should be constructed above grade to the satisfaction of the Building Official, based on federal, state, or other reliable hydrologic studies.*
- ***Policy S 4.8:*** *Allow development within the floodway fringe, if the proposed structures can be adequately flood-proofed and will not contribute to property damage or risks to public safety.*
- ***Policy S 4.9:*** *Within the floodway fringe of a floodplain as mapped by FEMA or as determined by site specific hydrologic studies for areas not mapped by FEMA, require development to be capable of withstanding flooding and to minimize use of fill.*

[2] Critical facilities include electricity, water, gas, and other utilities (County of Riverside 2008).

Riverside County Building Codes

Riverside County has adopted by ordinance the California Building Standards Code with minor modifications for local conditions including those for erosion control (e.g., erosion-control landscaping), drainage design, grading and slope height, and flooding (Ordinance 457; County of Riverside 2012).

City of Lake Elsinore General Plan

The following policies established in the Lake Elsinore General Plan are applicable to the proposed projects (City of Lake Elsinore 2011):

- ***Public Safety and Welfare Policy 5.1:*** *Continue to ensure that new construction in floodways and floodplains conforms to all applicable provisions of the National Flood Insurance Program in order to protect buildings and property from flooding.*
- ***Resource Protection Policy 4.3:*** *Require Best Management Practices through project conditions of approval for development to meet the Federal NPDES permit requirements.*

City of Lake Elsinore Building Codes

The City of Lake Elsinore has adopted the California Building Standards Code with modifications for local conditions including those associated with flood and erosion control (Ordinance 2010-1287).

City of Menifee

The City of Menifee General Plan Open Space Conservation Element establishes the following goals and policies applicable to hydrology and water quality (City of Menifee 2013):

- ***Goal OSC-7:*** *A reliable and safe water supply that effectively meets current and future user demands.*
- ***Policy OSC-7.4:*** *Encourage the use of reclaimed water for the irrigation of parks, golf courses, public landscaped areas, and other feasible applications as service becomes available from the Eastern Municipal Water District.*
- ***Policy OCS-7.9:*** *Ensure that high quality potable water resources continue to be available by managing stormwater runoff, wellhead protection, and other sources of pollutants.*
- ***Policy OCS-7.10:*** *Preserve natural floodplains, including Salt Creek, Ethanac Wash, Paloma Wash, and Warm Springs Creek, to facilitate water percolation, replenishment of the natural aquifer, proper drainage, and prevention of flood damage.*

City of Perris

The following policies established in the City of Perris General Plan (City of Perris 2005) are applicable to the Valley–Ivyglen Project:

- ***Safety Element Policy I.B:*** *The City of Perris shall restrict future development in areas of high flood hazard until it can be shown that risk is or can be mitigated.*
- ***Conservation Element Policy VI.A:*** *Comply with requirements of the National Pollutant Discharge Elimination System (NPDES).*

City of Wildomar

At the time of preparation of this document, the City of Wildomar had not adopted a general plan. Wildomar was incorporated in 2008 and adopted all County of Riverside ordinances at that time. County ordinances remain in effect until the City enacts ordinances that supersede them. Policies listed above under the Riverside County General Plan as applicable to the proposed Alberhill Project also apply to the City of Wildomar. No components of the proposed Valley-Ivyglen Project would be located within the City of Wildomar.

4.9.3 Methodology and Significance Criteria

Potential impacts on hydrology and water quality were evaluated according to the following significance criteria. The criteria were defined based on the checklist items presented in Appendix G of the CEQA Guidelines. The proposed projects would cause a significant impact on hydrology and water quality if they would:

a) Violate any water quality standards or waste discharge requirements;

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

e) Create or contribute to runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;

f) Otherwise substantially degrade water quality;

g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

h) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or

i) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Appendix G of the CEQA Guidelines also includes the following checklist item:

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

No housing construction would occur as part of the proposed projects. Therefore, this item is not applied as a criterion in the analysis of environmental impacts presented in the following section.

4.9.4 Environmental Impacts and Mitigation Measures (Valley–Ivyglen Project)

4.9.4.1 Project Commitments (Valley–Ivyglen Project)

The applicant has committed to the following as part of the design of the proposed Valley–Ivyglen Project. See Section 2.6, "Project Commitments," for a complete description of each project commitment.

- **Project Commitment B: Worker Environmental Awareness Plan.** Prior to construction of the proposed projects, a Worker Environmental Awareness Plan would be developed based on final engineering designs, the results of preconstruction surveys, project commitments, and mitigation measures imposed by the California Public Utilities Commission. A presentation would be prepared by the applicant and shown to all site workers prior to their start of work. A record of all trained personnel would be kept with the construction foreman. In addition to the instruction for compliance with any site-specific biological or cultural resource protective measures and project mitigation measures, all construction personnel would also receive the following:

  - A list of phone numbers of the applicant's personnel with the (archeologist, biologist, environmental compliance coordinator, and regional spill response coordinator);
  - Instruction on the South Coast Air Quality Management District Rule 403 for control of dust;
  - Instruction on what typical cultural resources look like, and if discovered during construction, to suspend work in the vicinity of any find and contact the site foreman and archeologist or environmental compliance coordinator;
  - Instruction on individual responsibilities under the Clean Water Act, the Storm Water Pollution Prevention Plan for the projects, site-specific Best Management Practices, and the location of Material Safety Data Sheets for the projects;
  - Instructions to notify the foreman and regional spill response coordinator in case of hazardous materials spills and leaks from equipment or upon the discovery of soil or groundwater contamination;
  - A copy of the truck routes to be used for material delivery; and
  - Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the projects.

- **Project Commitment D: Habitat Restoration and Revegetation Plan.** With input from the appropriate resource agencies, the applicant would develop and implement a Habitat Restoration and Revegetation Plan to restore temporarily impacted areas where construction of the projects would be unable to avoid impacts on native vegetation and sensitive resources, such as wetlands, wetland buffer areas, riparian habitat, and other sensitive natural communities. The applicant would restore all temporarily impacted areas disturbed during construction of the projects, including staging areas and pull, tension, and splicing sites, to as close to pre-construction conditions as possible, or to the conditions agreed upon between the applicant and landowner. Replanting and reseeding would be conducted under the direction of the applicant or contract biologists. If revegetation would occur on private property, revegetation conditions would be part of the agreement between the applicant and the landowner.

- **Project Commitment E: Grading Plan.** SCE shall consult with Riverside County regarding the grading plans for construction and operation of the proposed projects. Storm water improvements shall be designed to maintain a discharge of storm water runoff consistent with the characteristics of storm water runoff presently discharged from project areas including the Alberhill Substation site. Measures included in the plans shall minimize adverse effects on existing or planned storm water drainage systems. Ground surface improvements installed at the site pursuant to the plans shall be designed to minimize discharge of materials that would contribute to a violation of water quality standards or waste discharge requirements. The final grading design shall include features that would minimize erosion and siltation both onsite and offsite. In addition, the final grading (and drainage) design shall be based on the results of the geotechnical study and soil evaluation for the substation site (Project Commitment F).

- **Project Commitment F: Geotechnical Study, Soil Testing, and Seismic Design Standards.** Prior to the start of construction, the applicant shall conduct geotechnical and hydrologic studies and field investigations of the Alberhill Substation site, 500-kV transmission line routes, all 115-kV subtransmission line routes, and all telecommunications line routes. The studies shall include an evaluation of the depth to the water table, liquefaction potential, physical properties of subsurface soils, soil resistivity, and slope stability (landslide susceptibility). The studies shall include soil boring and laboratory testing to determine the engineering properties of soils, characterize soils and underlying bedrock units, characterize groundwater conditions, and evaluate faulting and seismicity risk. Soil samples shall be collected and analyzed for common contaminants and the presence of hazardous materials. If chemicals are detected in the soil samples at concentrations above acceptable threshold levels, the applicant shall avoid the above threshold soil or work with the property owner to remove the above threshold soil. The results of this study shall be applied to final engineering designs for the projects. The information collected shall be used to determine final tubular steel pole foundation designs. In addition, the applicant shall design Alberhill Substation consistent with the applicable federal, state, and local codes, including the Institute of Electrical and Electronic Engineers 693 Standard, Recommended Practices for Seismic Design of Substations.

4.9.4.2 Impacts Analysis (Valley–Ivyglen Project)

Impact WQ-1 (VIG): Violate any water quality standards or waste discharge requirements.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Valley–Ivyglen project components would cross several drainages as well as some rivers, as shown in Figure 4.9-2. Stormwater generally flows into ephemeral drainages and storm drain channels in the western area of the project, eventually discharging into Temescal Wash and on to the Santa Ana River. Temescal Wash and the Santa Ana River are listed as impaired under Section 303(d) of the CWA. In the eastern portion of the project area, the project would cross many drainages, as well as the San Jacinto River, as shown in Figure 4.9-2.

Construction activities associated with the Valley-Ivyglen Project would include activities that could result in release of hazardous materials or sediment to waterbodies and drainages. Activities associated with the proposed project include:

- Grading access roads, stringing and pulling sites, and around poles,
- Trenching for underground 115-kV subtransmission lines,

- Installing underground vaults,
- Removing wood poles,
- Excavating for pole installation,
- Staging area preparation,
- Access road construction and use, and
- Blasting for pole installation.

These activities have the potential to adversely affect water quality because they would use equipment that could release hazardous substances and that would also require ground disturbance that can mobilize sediment. Acreages of soil disturbance are provided in Table 2-5. Temporary impacts would occur on up to 633.7 acres. Though these areas would be spread across the entire project alignment, this amount of ground disturbance would in the aggregate result in substantial soil erosion and could increase sedimentation. Precipitation or water flow during or soon after ground disturbing activities would exacerbate soil erosion and sedimentation impacts. The resulting sedimentation could adversely affect water quality and violate water quality standards. In addition to sedimentation, ground-disturbing activities could initiate the release of existing contaminants into waters or drainage systems. Spills of hazardous materials used during construction could also result in a discharge that could adversely impact water quality. This would be a significant impact.

Furthermore, blasting and fracturing that may occur would have the potential to degrade water quality through the accidental release of hazardous materials during any of the following situations: incomplete reaction of the blasting or expansive agent within the drilled hole (borehole); release of substances if the borehole intersects with a fracture network in the bedrock; poor storage, transfer, or handling procedures; or leaching of residual agent when a stockpile of blasted or fractured waste rock stored at worksites comes in contact with precipitation or runoff. Blasting has been shown to temporarily affect the turbidity and quality of water hundreds of feet beyond a blasted zone (Rudenko, Love, and Novotny 2002). Fine rock particles such as silt and clay can remain in suspension in groundwater in the vicinity of blast areas for days or weeks. This would be a significant impact.

SCE has proposed several Project Commitments that would reduce water quality impacts. Project Commitment B would require that workers be trained in hazardous materials spill notification procedures. Project Commitment D requires restoration of temporarily disturbed areas to pre-construction conditions, which would reduce the long-term sedimentation impacts of grading and ground disturbance. Permanent impacts would occur on up to 141.5 acres after implementation of Project Commitment D. Project Commitment E would require preparation of a grading plan with measures to reduce erosion and siltation. Impacts would still be significant, however, because there is no measure to reduce the potential for hazardous materials spills, no measure to clean up spills, no specific measures related to avoiding situations that would result in sedimentation and erosion, no specific measures related to water quality effects of blasting, and no specific measures that reduce sedimentation and erosion caused by ground disturbance. Mitigation Measure (MM) HZ-1 would be implemented and would require preparation of a hazardous materials management, handling, transport, disposal, and emergency response plan, which would reduce the likelihood of spills and would outline cleanup procedures. MM BR-15 outlines BMPs to be included in the SWPPP to minimize erosion and sedimentation. MM WQ-1 would require preparation of a Blasting Plan that contains measures to prevent adverse impacts on water quality from blasting that may be required at certain locations in the project area. MM WQ-2 outlines procedures that would be implemented for drainage crossings. MM WQ-3 requires implementation of methods for access road construction that reduce erosion. MM BR-7 requires attainment of success criteria when implementing the restoration plan required

under Project Commitment D. With implementation of these mitigation measures, water quality impacts during construction would be less than significant.

The proposed project would require construction near potentially jurisdictional waters, and about 0.44 acres of waters the United States and waters of the state would be permanently impacted (Appendix G). Dewatering may also be required if the applicant encounters shallow groundwater during excavation. Blasting activities may result in unintentional placement of debris in waters of the United States and waters of the state. To comply with Sections 404 and 401 of the CWA and the Porter-Cologne Water Quality Control Act, prior to discharging water, fill, or other materials in waters of the United States or waters of the state, the applicant would be required to apply for permits from the USACE and RWQCB. SCE would be required to submit a preconstruction notification to the USACE, obtain 401 Water Quality Certification from the RWQCB, and adhere to all conditions and mitigation included in the permits. MM WQ-2 would require implementing measures at drainage crossings that would reduce the potential for impacts on water quality. MM WQ-1 would require implementing measures to prevent blast debris from entering waters. MM WQ-4 would require that any discharged water be removed from the site or discharged away from waters of the United States and/or waters of the state. Construction-related impacts on water quality would be less than significant with implementation of this mitigation.

Operation and Maintenance

Project operation and maintenance would not involve new ground disturbance that could result in substantial erosion or sedimentation or could adversely affect water quality. Occasional use of access roads constructed for the proposed project would not result in discharge of fill materials to waters of the state because such use would be infrequent and of limited intensity. Impacts related to waste discharge requirements and water quality would be less than significant.

Mitigation Measures

MM HZ-1: Hazardous Materials Management.

MM BR-7: Habitat Restoration and Revegetation Plan Requirements.

MM BR-15: Stormwater Pollution Prevention Plan (SWPPP) Best Management Practices (BMPs).

MM WQ-1: Blasting Plan and Best Management Practices. The applicant or its contractors shall prepare and implement a detailed Blasting Plan for the Valley–Ivyglen Project. This plan shall identify the scope of blasting, all blasting locations, the proximity of facilities to each blasting location, and the types and estimated amounts of blasting agent required for each blasting location. The plan shall be submitted to and approved by the CPUC prior to start of construction and the plan shall be resubmitted for approval if changes are required. The intent of the plan is to:

- Reduce the potential for increased turbidity in groundwater and surface water;
- Prevent debris from entering drainages, waters of the state, and waters of the United States; and
- Avoid mishandling of hazardous materials associated with blasting.

BMPs shall include, but are not limited to:

- Monitor the entire blasting process by licensed blasting personnel and the use of licensed blasters with qualifications that meet all federal, state, and local requirements;

- Conduct pre-blast surveys and inspections and conduct post-blast surveys and inspections for blast performance and fire hazards (e.g., undetonated explosive agent or smoldering materials);
- Remove and manage muck piles (blast debris) to prevent water contamination;
- Place matting or padding to contain flyrock and add an appropriate blasting agent to reduce flyrock;
- Select an explosive with appropriate water resistance for the blast site to reduce impacts on groundwater;
- Clean loading equipment in an area where waste can be contained and kept away from drainages and other surface water;
- Manage muck piles to avoid contact with stormwater and remove them from the project area as soon as reasonably feasible; and

- Handle hazardous materials located during blasting in accordance with MM HZ-2.

MM WQ-2: Drainage crossing procedures and practices. Crossing of drainages shall be conducted when the drainage is dry. A qualified aquatic monitor shall inspect the drainage crossing after precipitation and before use to determine whether the drainage is dry or needs to be avoided (e.g., through placement of a temporary bridge) to allow it to dry out and avoid impacts. If a temporary or permanent bridge is required in order to avoid impacts, the following measures shall be implemented:

- Any temporary or permanent bridges shall be installed to avoid placement below the Ordinary High Water Mark of the drainage as feasible.

- Prior to construction, the applicant shall obtain all necessary permits and approvals from the USACE, Santa Ana RWQCB, and CDFW.

MM WQ-3: Design of access roads with erosion control measures. Access roads shall be designed and built to avoid adverse erosion and siltation impacts. Measures to be incorporated into unpaved roadway design and construction shall include, but are not limited to:

- Design road with insloping, outsloping, or crowning;
- Incorporate rolling dips;
- Incorporate water bars;
- Avoid overgrading; and

- Build ditches.

MM WQ-4: Disposal of groundwater from dewatering excavations. Groundwater extracted as a result of dewatering during construction shall not be discharged to waters of the state without written authorization from the Santa Ana RWQCB. Extracted groundwater shall be disposed of on-site in one of the following manners:

- Discharged to an upland area where it will not enter waters of the state but would instead evaporate or infiltrate;
- Used for dust control;
- Used for irrigation water;

- Used for other construction needs; or

- Disposed of at a licensed facility if water is suspected of being contaminated or degraded.

Impact WQ-2 (VIG): Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). *LESS THAN SIGNIFICANT*

Construction

Construction of the proposed Valley–Ivyglen Project would require approximately 36 million gallons (110 acre-feet) of water over a period of 28 months, which is equivalent to water use at an average of 47.2 acre-feet per year. All of the water required for construction and operation of the proposed Valley–Ivyglen Project would be provided by EVMWD and/or EMWD.

EVMWD obtains 20 percent of its water from the Elsinore Groundwater Basin. If all of the water for the proposed project came from the EVMWD, 47.2 acre-feet per year would represent about 0.18 percent of the total water produced by EVMWD during the 2013/14 fiscal year (EVMWD 2015). Moreover, only 20 percent of the water produced by EVMWD is supplied by groundwater. Water use for the proposed project would be temporary and would not substantially deplete groundwater supplies in the Elsinore Groundwater Basin. Impacts would be less than significant.

EMWD is subject to a settlement agreement that requires certain actions to ameliorate the overdraft of the San Jacinto Groundwater Basin. EMWD would provide water in accordance with terms of the settlement agreement. Supply of water from EMWD would therefore not substantially deplete groundwater supplies in the San Jacinto Groundwater Basin. Impacts would be less than significant.

Shallow perched groundwater may be encountered during excavation for the proposed TSPs and hybrid poles installed in the southeastern area of Elsinore Basin. TSP and hybrid poles would be installed at a depth of 20 to 50 feet bgs in concrete foundations with diameters ranging from 5 to 8 feet. If groundwater is encountered during excavation, the applicant may dewater the hole. Dewatering activities would remove a relatively small amount of water from the upper aquifer in such a case. The dewatering would not affect groundwater levels in the aquifers used for groundwater supply because the groundwater basin is a minimum of 250 bgs. Impacts from perched groundwater extraction would be less than significant.

Operation and Maintenance

Less than 1 acre of new impervious surface areas would be created by installation of the proposed 115-kV structures and underground vault components. This acre would be distributed in small areas over the 24-mile project alignment. The impervious surface, therefore, would not substantially interfere with groundwater recharge. Impacts would be less than significant.

Water required for operation of the proposed Valley–Ivyglen Project would be provided by EVMWD and/or EMWD. Negligible quantities of water would be required for routine operations and maintenance activities, which would include potable water for workers, water for restoration areas, and water for cleaning insulators. Impacts on groundwater supply would be less than significant.

Impact WQ-3 (VIG): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Grading and excavation required for construction of the proposed Valley–Ivyglen 115-kV and telecommunications lines, access roads, drainage facilities, retaining walls, and staging areas could alter existing drainage patterns at project sites and cause increased erosion due to soil disturbance. The total temporary ground disturbance during construction would be about 633.7 acres. Even though most of the temporary disturbance would be spread throughout the project area at structure sites, the aggregate of the disturbed area is large enough that it could result in substantial erosion or siltation, particularly where there are drainage crossings. This would be a significant impact.

SCE has proposed several Project Commitments that would reduce erosion and siltation impacts from drainage alteration. Project Commitment D requires restoration of temporarily disturbed areas to pre-construction conditions, which would reduce the long-term sedimentation impacts of grading and ground disturbance. Project Commitment E requires that grading incorporate measures to minimize erosion and siltation. Impacts would still be significant, however, because there are no specific measures related to avoiding situations that would result in sedimentation and erosion, and no specific measures that reduce sedimentation and erosion caused by ground disturbance. MM BR-15 outlines BMPs to be included in the SWPPP to minimize erosion and sedimentation. MM WQ-2 outlines procedures implemented for drainage crossings. MM WQ-3 requires implementation of methods for access road construction that reduce erosion. MM BR-7 requires attainment of success criteria when implementing the restoration plan required under Project Commitment D. With implementation of these mitigation measures, erosion and sedimentation impacts during construction would be less than significant.

Operation and Maintenance

Project operation and maintenance would not involve new ground disturbance that could result in substantial erosion or sedimentation and adversely affect water quality. There would be no impact.

Mitigation Measures

MM BR-7: Habitat Restoration and Revegetation Plan Requirements.

MM BR-15: Stormwater Pollution Prevention Plan (SWPPP) Best Management Practices (BMPs).

MM WQ-2: Drainage crossing procedures and practices.

MM WQ-3: Design of access roads with erosion control measures.

Impact WQ-4 (VIG): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

SCE would conduct grading and excavation as part of the Valley–Ivyglen Project construction for 115-kV power lines, telecommunications lines, access roads, drainage facilities, retaining walls, and staging areas.

The grading would change drainage in the area of grading, but most ground disturbance would be distributed along the entire project area in small work areas (see Table 2-5) such that there would be minimal changes to drainage patterns due to work areas. These small interstitial graded areas would not result in a substantial increase in the rate or amount of surface runoff. Access roads and retaining walls would require grading that could increase runoff and result in flooding or ponding. Roads may also cross and alter drainages by, for example, blocking them with the roadway and associated retaining wall. This could also cause ponding and flooding on and off site. This impact would be significant. MM WQ-5 would be implemented to maintain volume and connectivity of drainages crossed by access roads to reduce the risk of flooding. MM WQ-3 requires implementation of erosion control measures, which would also reduce the potential for stormwater to cause flooding. MM BR-7 would require revegetation and restoration of temporarily disturbed areas, which would increase percolation and decrease changes to runoff. Impacts related to grading would be less than significant with mitigation.

115-kV Segment VIG1 would be located in the Romoland Master Drainage Plan area and in the San Jacinto River Master Drainage Plan area. Several TSPs would be placed along the San Jacinto River. TSPs and lattice steel towers would be placed adjacent to proposed open channels in the Romoland MDP area. Installation of poles in these areas in a way that would threaten the function of drainage improvements or implementation of MDPs may result in flooding, which would be a significant impact. MM WQ-6 would be implemented to require the applicant obtain a finding from the RCFCWCD that project elements would not impede flood control functions. Impacts would be less than significant with implementation of MM WQ-6.

Operation and Maintenance

Project operation and maintenance would not involve new ground disturbance that would increase flooding on- or off-site as a result of an alteration to drainages. There would be no impact under this criterion.

Mitigation Measures

MM BR-7: Habitat Restoration and Revegetation Plan Requirements.

MM WQ-3: Design of access roads with erosion control measures.

MM WQ-5: Maintain capacity and connectivity of drainages. SCE shall design and construct access roads to maintain the capacity and connection of drainages that are adjacent to and crossed by access roads for the proposed projects. Methods to maintain drainage characteristics include installation of culverts or designing low water crossings. Prior to any alteration of a drainage, including grading or the placement of fill material or culverts in a drainage, SCE shall obtain any permits required by the USACE, Santa Ana RWQCB, and CDFW.

MM WQ-6: Avoid impeding MDP implementation and function. Prior to construction, SCE shall provide final engineering designs to the RCFCWCD for project elements located within MDP areas. Construction within MPD areas shall not be allowed to proceed until SCE obtains written confirmation from the RCFCWCD that project elements located in these areas would not impede the function of flood control facilities and would not prevent implementation of the MDP.

Impact WQ-5 (VIG): Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
LESS THAN SIGNIFICANT

Construction

Water would be used for dust control and may also be used to maintain soil cohesiveness during excavations. Water trucks would be used to apply water at rates and in amounts sufficient to infiltrate the soil. Water would not be applied in a manner that would create runoff. Impacts would be less than significant.

Temporary impacts during construction would occur on up to 625.8 acres. Most of these impacts would be associated with of pole work areas, staging areas, and access roads. Pole work areas and access roads would be spread throughout the entire alignment such that the amount of runoff created in any particular area would not be substantial. Further, the majority of the ground disturbance would be temporary; final disturbance would total about 141.5 acres and be distributed throughout the entire project area. Staging areas would be covered with gravel or crushed rock, which would reduce the amount of runoff generated. Impacts would be less than significant, and no mitigation would be required.

The project would require the use of hazardous materials, which could adversely affect runoff water quality. Potential impacts on water quality related to hazardous materials use are discussed under Impact WQ-1 (VIG) and would be less than significant with mitigation.

Operation and Maintenance

Negligible quantities of water would be required for routine operations and maintenance activities, which would include potable water for workers, water for restoration areas, and water for cleaning insulators. The only water used on the ground would be for restoration areas. For restoration, water would be applied at a rate and in amounts sufficient to infiltrate the soil. Water use for restoration activities would not create substantial runoff. Impacts would be less than significant.

The project would require the use of hazardous materials, which could adversely affect runoff water quality. Potential impacts on water quality related to hazardous materials use are discussed under Impact WQ-1 (VIG) and would be less than significant.

Impact WQ-6 (VIG): Otherwise substantially degrade water quality.
LESS THAN SIGNIFICANT

During construction and operation, pesticides may be used for vegetation management activities around structures installed as part of the proposed project. Normal application would not be in sufficient quantities to result in runoff that would substantially degrade water quality. SCE would also follow industry standard BMPs and all product specifications and regulations for herbicide application. Impacts would be less than significant, and no mitigation would be required.

Impact WQ-7 (VIG): Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
LESS THAN SIGNIFICANT WITH MITIGATION

Sections of 115-kV Segments VIG1, VIG3, VIG4, VIG5, and VIG6 would be constructed within 100-year FEMA-designated flood hazard zones (Figure 4.9-4). These segments would use light-weight steel poles (LWS poles), guy poles, and TSPs. LWS poles and guy poles would be up to 3 feet in diameter at their

bases, while TSP foundations would be up to 8 feet in diameter but would only extend up to 2 feet above the ground surface. These structures would not substantially impede or redirect flood flows. Staging Areas VIG1, VIG5, VIG6, VIG13, and VIG14 would also be located within 100-year flood hazard areas, but there would be no permanent structures in these areas. Retaining walls constructed for access roads in or near drainages may impede or redirect flood flows. This would be a significant impact. MM WQ-5 requires maintaining drainage volumes and connectivity, which would also prevent impedance or redirection of flood flows. Impacts would be less than significant with mitigation.

Mitigation Measure

MM WQ-5: Maintain capacity and connectivity of drainages.

Impact WQ-8 (VIG): Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Sections of the proposed Valley–Ivyglen 115-kV subtransmission line would be installed within a FEMA-designated 100-year flood hazard zone or dam failure inundation hazard area, as shown in Figure 4.9-4. Construction would be the time when the greatest number of project-associated workers would be in these areas. Dam inundation areas represent about 48 percent of the 115-kV subtransmission line alignment, while 100-year flood hazard zones represent about 22 percent of the 115-kV subtransmission line alignment. Given that construction is temporary, workers would be in these areas for a limited amount of time. It is unlikely that workers would be in the area during a flood because work would be limited during rainy periods. The low probability of the occurrence for dam failure presents a minimal risk, however an impact in the case of occurrence could result in the injury or death of construction workers and would be significant. MM HZ-4 would require development of a Fire Control and Emergency Response Plan, which would outline evacuation procedures and require construction workers to be trained on the procedures to be followed in the event of an emergency. Impacts would be less than significant with mitigation.

Impacts related to alterations of the drainage patterns on site that would result in flooding are discussed in Impact WQ-5 (VIG).

Operation and Maintenance

Operation and maintenance would require occasional inspections of the 115-kv subtransmission line and associated structures. This would place a minimal amount of workers in flood zones and dam failure inundation areas during inspection. It is unlikely that a flood would occur during inspections since they would generally not take place in inclement wet weather. Although dam failure is unlikely to occur, dam failure would be a significant impact. MM HZ-4 would require development of a Fire Control and Emergency Response Plan, which would outline evacuation procedures and require training on those procedures. Impacts would be less than significant with mitigation.

Impacts related to alterations of the drainage patterns on site that would result in flooding are discussed in Impact WQ-5 (VIG).

Mitigation Measure

MM HZ-4: Fire Control and Emergency Response.

Impact WQ-9 (VIG): Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow.
LESS THAN SIGNIFICANT

There is no risk of tsunami in the project area. There would be no impact related to tsunami. Lake Elsinore is the largest body of water in the proposed project area, and there is a potential for seiche on this lake. However, the closest Valley–Ivyglen Project component is behind a topographic high in relation to and located 0.80 miles from the shore of Lake Elsinore. Therefore, there is no potential for inundation of the project area by seiche.

A mudflow is a downhill movement of soft, wet earth and debris caused by a rapid and heavy accumulation of rain or snowmelt. Mudflows usually begin on steep hillsides as shallow landslides that liquefy. There is a potential for mudflows to occur due to nearby mountains. Most segments are far from mountains or would be located on topographic highs such that they would not be exposed to a mudflow if one were to occur. 115-kV Segment VIG7 is located adjacent to a wash that originates in the mountains and may be subject to mud flows. Construction and operations personnel would be working in areas susceptible to mudflow only for short durations, resulting in a less than significant impact on workers. Mudflows may pose a significant risk to structures installed as part of the proposed project. Prior to the start of construction, the applicant would conduct a geotechnical study to evaluate the physical properties of the soils, geology, and slope stability at the new transmission and subtransmission structure sites, consistent with Project Commitment F (see Section 4.6, "Geology, Soil, and Mineral Resources"). The results and recommendations of the geotechnical investigation would be incorporated into final engineering designs for structure foundations. Impacts would be less than significant after implementation of Project Commitment F.

4.9.5 Environmental Impacts and Mitigation Measures (Alberhill Project)

4.9.5.1 Project Commitments (Alberhill Project)

The applicant has committed to the following as part of the design of the proposed Alberhill Project. See Section 2.6, "Project Commitments," for a complete description of each project commitment.

- **Project Commitment A: Landscaping and Irrigation Plan.** For the Alberhill Project, prior to the start of construction, the applicant would develop a Landscaping and Irrigation Plan for Alberhill Substation road frontage only along Temescal Canyon Road, Concordia Ranch Road and Love Lane that is consistent with surrounding community standards, substation security and safety requirements. The applicant would consult with Riverside County about the Plan and incorporate applicable County recommendations to the extent possible. Landscaping would be designed to filter views from the surrounding community and other potential sensitive receptors near the proposed substation and be consistent with the surrounding community. The landscape plan would include a plant species list and installation and construction requirements. The applicant would contract a landscape architect to complete the landscaping plan during final engineering for the Alberhill Project. Irrigation and landscaping installation would occur after construction of the substation perimeter wall, subtransmission and transmission poles/towers erected, underground utility lines/cable ducts installed and water service has been established. During operations, the applicant would maintain the substation site pursuant to the Landscaping and Irrigation Plan and be responsible for upkeep as long as the applicant owns the property.
- **Project Commitment B: Worker Environmental Awareness Plan.** Prior to construction of the proposed projects, a Worker Environmental Awareness Plan would be developed based on final engineering designs, the results of preconstruction surveys, project commitments, and mitigation measures imposed by the California Public Utilities Commission. A presentation would be prepared by the applicant and shown to all site workers prior to their start of work. A record of all trained

personnel would be kept with the construction foreman. In addition to the instruction for compliance with any site-specific biological or cultural resource protective measures and project mitigation measures, all construction personnel would also receive the following:

- A list of phone numbers of the applicant's personnel with the (archeologist, biologist, environmental compliance coordinator, and regional spill response coordinator);
- Instruction on the South Coast Air Quality Management District Rule 403 for control of dust;
- Instruction on what typical cultural resources look like, and if discovered during construction, to suspend work in the vicinity of any find and contact the site foreman and archeologist or environmental compliance coordinator;
- Instruction on individual responsibilities under the Clean Water Act, the Storm Water Pollution Prevention Plan for the projects, site-specific Best Management Practices, and the location of Material Safety Data Sheets for the projects;
- Instructions to notify the foreman and regional spill response coordinator in case of hazardous materials spills and leaks from equipment or upon the discovery of soil or groundwater contamination;
- A copy of the truck routes to be used for material delivery; and
- Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the projects.

- **Project Commitment D: Habitat Restoration and Revegetation Plan.** With input from the appropriate resource agencies, the applicant would develop and implement a Habitat Restoration and Revegetation Plan to restore temporarily impacted areas where construction of the projects would be unable to avoid impacts on native vegetation and sensitive resources, such as wetlands, wetland buffer areas, riparian habitat, and other sensitive natural communities. The applicant would restore all temporarily impacted areas disturbed during construction of the projects, including staging areas and pull, tension, and splicing sites, to as close to pre-construction conditions as possible, or to the conditions agreed upon between the applicant and landowner. Replanting and reseeding would be conducted under the direction of the applicant or contract biologists. If revegetation would occur on private property, revegetation conditions would be part of the agreement between the applicant and the landowner.
- **Project Commitment E: Grading Plan.** SCE shall consult with Riverside County regarding the grading plans for construction and operation of the proposed projects. Storm water improvements shall be designed to maintain a discharge of storm water runoff consistent with the characteristics of storm water runoff presently discharged from project areas including the Alberhill Substation site. Measures included in the plans shall minimize adverse effects on existing or planned storm water drainage systems. Ground surface improvements installed at the site pursuant to the plans shall be designed to minimize discharge of materials that would contribute to a violation of water quality standards or waste discharge requirements. The final grading design shall include features that would minimize erosion and siltation both onsite and offsite. In addition, the final grading (and drainage) design shall be based on the results of the geotechnical study and soil evaluation for the substation site (Project Commitment F).

4.9.5.2 Impacts Analysis (Alberhill Project)

Impact WQ-1 (ASP): Violate any water quality standards or waste discharge requirements.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Alberhill System Project components would cross several drainages as well as some rivers, as shown in Figure 4.9-2. Stormwater generally flows into ephemeral drainages and storm drain channels in the western portion of the project area, eventually discharging into Temescal Wash and on to the Santa Ana River. Temescal Wash and the Santa Ana River are listed as impaired under Section 303(d) of the CWA. In the eastern portion of the project area, the project would cross many drainages as well as the San Jacinto River, as shown in Figure 4.9-2.

Construction activities associated with the Alberhill Project would include activities that could result in release of hazardous materials or sediment to waterbodies and drainages. Activities associated with this proposed project include:

- Grading access roads, stringing and pulling sites, and around poles,
- Trenching for underground 115-kV subtransmission lines,
- Installing underground vaults,
- Removing wood poles,
- Excavating for pole and lattice steel tower installation,
- Staging area preparation,
- Access road construction and use,
- Grading the Alberhill Substation site, and
- Excavation of fill material from the Alberhill Substation site under Import Soil Option 1.

These activities have the potential to adversely affect water quality because they would use equipment that could release hazardous substances and would also require ground disturbance that can mobilize sediment. Acreages of soil disturbance are provided in Table 2-6 and Table 2-7. Temporary impacts would occur on up to about 377.3 acres if the conventional method of construction is used for the 500-kV transmission line. Temporary impacts would occur on up to about 313.8 acres if helicopter construction is used and no access roads are needed for the 500-kV transmission line. Though these areas would be spread across the entire project alignment, this amount of ground disturbance in the aggregate would result in substantial soil erosion and could increase sedimentation. Precipitation or water flow during or soon after ground disturbing activities could exacerbate soil erosion and sedimentation impacts. The resulting sedimentation could adversely affect water quality and violate water quality standards. In addition to sedimentation, ground-disturbing activities could initiate the release of existing contaminants into waters or drainage systems. Spills of hazardous materials used during construction could also result in a discharge that could adversely impact water quality. The potential for water quality and sedimentation impacts for 500-kV transmission line construction would be lower if helicopter construction methods are utilized, since no access roads would be constructed for the 500-kV transmission line. This would reduce the potential for sedimentation impacts compared to the conventional method of construction. Under both options for construction, there would be a significant impact related to water quality and sedimentation.

SCE has proposed several Project Commitments that would reduce water quality impacts. Project Commitment D requires restoration of temporarily disturbed areas to pre-construction conditions, which would reduce the long-term sedimentation impacts of grading and ground disturbance. Permanent impacts would occur on up to 87.9 acres after implementation of Project Commitment D. Project Commitment B would require that workers be trained in hazardous materials spill notification procedures. Project Commitment E would require preparation of a grading plan with measures to reduce erosion and

sedimentation. Impacts would still be significant, however, because there is no measure to reduce the potential for hazardous materials spills, no measure to clean up spills, no specific measures related to avoiding situations that would result in sedimentation and erosion, no specific measures related to water quality effects of blasting, and no specific measures that reduce sedimentation and erosion caused by ground disturbance. MM HZ-1 would be implemented and would require preparation of a hazardous materials management, handling, transport, disposal, and emergency response plan, which would reduce the likelihood of spills and would outline cleanup procedures. MM BR-15 outlines BMPs to be included in the SWPPP to minimize erosion and sedimentation. MM WQ-2 outlines procedures that shall be implemented for drainage crossings. MM WQ-3 requires implementation of methods for access road construction, if the conventional method of construction is used for the 500-kV transmission line, that reduce erosion. MM BR-7 requires attainment of success criteria when implementing the restoration plan required under Project Commitment D. With implementation of these Project Commitments and mitigation measures, water quality impacts during construction would be less than significant.

The proposed project would require construction near potentially jurisdictional waters, and about 1.71 acres of waters of the United States and waters of the state would be permanently impacted (Appendix G). Dewatering may also be required if the applicant encounters shallow groundwater during excavation. Blasting activities may result in unintentional placement of debris in waters of the United States and waters of the state. To comply with Sections 404 and 401 of the CWA and the Porter-Cologne Water Quality Control Act, prior to discharging water, fill, or other materials in waters of the United States or waters of the state, the applicant would be required to apply for permits from the USACE and RWQCB. SCE would be required to submit a preconstruction notification to the USACE, obtain 401 Water Quality Certification from the RWQCB, and adhere to all conditions and mitigation included in the permits. MM WQ-2 would require implementing measures at drainage crossings that would reduce the potential for impacts on water quality. MM WQ-1 would require implementing measures to prevent blast debris from entering waters. MM WQ-4 would require that any discharged water be removed from the site or discharged away from waters of the United States and/or waters of the state. Construction-related impacts on water quality would be less than significant with implementation of this mitigation.

Operation and Maintenance

Project operation and maintenance would not involve new ground disturbance that could result in substantial erosion or sedimentation or could adversely affect water quality. Occasional use of access roads constructed for the proposed project would not result in discharge of fill materials to waters of the state because such use would be infrequent and of limited intensity. Operational impacts related to water quality would be less than significant.

Mitigation Measures

MM BR-7: Habitat Restoration and Revegetation Plan Requirements.

MM BR-15: Stormwater Pollution Prevention Plan (SWPPP) Best Management Practices (BMPs).

MM HZ-1: Hazardous Materials Management.

MM WQ-1: Blasting Plan and Best Management Practices.

MM WQ-2: Drainage crossing procedures and practices.

MM WQ-3: Design of access roads with erosion control measures.

MM WQ-4: Disposal of groundwater from dewatering excavations.

Impact WQ-2 (ASP): Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). *LESS THAN SIGNIFICANT*

Construction

Construction of the proposed Alberhill Project would require approximately 120 acre-feet of water over a period of 28 months, which is equivalent to water use at 51.4 acre-feet per year. The water requirement for construction of towers along the 500-kV transmission line would be greater under the Conventional Method than under the Helicopter Construction option, as the latter would involve less ground disturbance and require less water for dust suppression. All of the water required for construction and operation of the proposed Valley–Ivyglen Project would be provided by EVMWD or EMWD.

EVMWD obtains 20 percent of its water from the Elsinore Groundwater Basin. If all of the water for the proposed project came from the EVMWD, 51.4 acre-feet per year would represent about 0.21 percent of the total water produced by EVMWD during the 2013/14 fiscal year (EVMWD 2015). Moreover, only 20 percent of the water produced by EVMWD is supplied by groundwater. Water use for the proposed project would be temporary and would not substantially deplete groundwater supplies in the Elsinore Groundwater Basin. Impacts would be less than significant.

EMWD is subject to a settlement agreement that requires certain actions to ameliorate the overdraft of the San Jacinto Groundwater Basin. EMWD would provide water in accordance with terms of the settlement agreement. Supply of water from EMWD would therefore not substantially deplete groundwater supplies in the San Jacinto Groundwater Basin. Impacts would be less than significant.

Shallow perched groundwater may be encountered during excavation for the proposed TSPs and hybrid poles installed in the southeastern area of Elsinore Basin. LWS poles would be installed at a depth of 6 to 14 feet bgs, and TSPs would be installed at a depth of 20 to 50 feet bgs in concrete foundations with diameters ranging from 5 to 8 feet. If groundwater is encountered during excavation, the applicant may dewater the hole. Dewatering activities remove a relatively small amount of water from the upper aquifer in such a case. The dewatering would not affect groundwater levels in the aquifers used for groundwater supply because the groundwater basin is a minimum of 250 bgs. Impacts from perched groundwater extraction would be less than significant.

Less than 1 acre of impervious surface would be created from lattice steel tower and TSP concrete foundations. This acre would be distributed in small areas over the 25-mile project alignment and would therefore not interfere with groundwater recharge. Up to 7.6 acres at the Alberhill Substation would be covered by impervious concrete. However, the majority of the site would be permeable, and there is substantial open space with permeable material around the substation area. Impacts on groundwater recharge would be less than significant.

Operation and Maintenance

During operations, minimal quantities of water would be required for cleaning electrical equipment (approximately 3,000 gallons per year), watering restoration areas, worker consumption, and as-needed maintenance activities. Operational water would be supplied through a connection to EVMWD's potable water system, located within Temescal Canyon Road. Impacts on groundwater supply would be less than significant.

No additional impervious surfaces would be added during operations. Therefore, there would be no operational impacts on groundwater recharge.

Impact WQ-3 (ASP): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Grading at the 42.9-acre substation site would be required to provide a flat area for substation construction. There are no substantial drainages on the site, but the site likely experiences minor water flow and ponding during and after precipitation events. Grading would require cut of about 91,000 cubic yards of soil and fill about 80,000 cubic yards of soil. The substation site would have a detention basin to capture surface flow and would be graded to direct surface flow into the detention basin. Excess drainage would flow off site to Temescal Wash. Grading across the 42.9-acre site could substantially change drainage patterns and potentially result in substantial erosion and sedimentation on or off site. Project Commitment A would require development and implementation of a Landscaping and Irrigation Plan for the substation site. Landscaping would help minimize erosion and sedimentation potential. Project Commitment D would require restoration and revegetation of temporarily disturbed areas, which would minimize erosion and sedimentation potential. Project Commitment E would require preparation of a grading plan that contains measures to minimize erosion and sedimentation. Impacts from erosion and siltation would significant after implementation of these project commitments. MM WQ-7 would require designing the detention basin in accordance with the Riverside County Stormwater Quality Best Management Practice Design Handbook (Riverside County Flood Control and Water Conservation District 2006). MM BR-7 requires attainment of success criteria when implementing the restoration plan required under Project Commitment D. MM BR-15 contains BMPs that would be included in the SWPPP to reduce temporary erosion and sedimentation impacts. Temporary erosion and sedimentation impacts at the Alberhill Substation site would be less than significant with mitigation.

Grading and excavation required for construction of the proposed 115-kV, 500-kV, and telecommunications lines, access roads, drainage facilities, retaining walls, and staging areas could alter existing drainage patterns at project sites and cause increased erosion due to soil disturbance. The total temporary ground disturbance during construction of these components would be up to 377.3 acres if the conventional construction method is used for the 500-kV transmission lines. Total disturbance would be about 313.8 acres if helicopter construction is used for 500-kV transmission lines because access roads to the 500-kV structures would not be required. Even though most of the temporary disturbance would be spread throughout the project area and at structure sites, the aggregate of the disturbed area is large enough that it could result in substantial erosion or sedimentation, particularly where there are drainage crossings. This would be a significant impact. SCE has proposed several Project Commitments that would reduce erosion and sedimentation impacts. Project Commitment D requires restoration of temporarily disturbed areas to pre-construction conditions, which would reduce the long-term sedimentation impacts of grading and ground disturbance. Project Commitment E requires that grading incorporate measures to minimize erosion and sedimentation. Impacts would still be significant, however, because there are no specific measures related to avoiding situations that would result in sedimentation and erosion, and no specific measures that reduce sedimentation and erosion caused by ground disturbance. MM BR-15 outlines BMPs to be included in the SWPPP to minimize erosion and sedimentation. MM WQ-2 outlines procedures that shall be implemented for drainage crossings. MM WQ-3 requires implementation of methods for access road construction that reduce erosion. MM BR-7 requires attainment of success criteria when implementing the restoration plan required under Project Commitment D. With implementation of these mitigation measures, erosion and sedimentation impacts during construction would be less than significant.

Operation and Maintenance

Project operation and maintenance would not involve new ground disturbance that could result in substantial erosion or sedimentation and adversely affect water quality. There would be no impact.

Mitigation Measures

MM BR-7: Habitat Restoration and Revegetation Plan Requirements.

MM BR-15: Stormwater Pollution Prevention Plan (SWPPP) Best Management Practices (BMPs).

MM WQ-2: Drainage crossing procedures and practices.

MM WQ-3: Design of access roads with erosion control measures.

MM WQ-7: Design detention basin to adequate size. SCE shall design the detention basin on the Alberhill Substation site in accordance with the Riverside County Stormwater Quality Best Management Practice Design Handbook (Riverside County Flood Control and Water Conservation District 2006).

Impact WQ-4 (ASP): Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
LESS THAN SIGNIFICANT WITH MITIGATION

SCE would conduct grading and excavation as part of the Alberhill System Project for 115-kV power lines, 500-kV transmission lines, access roads, drainage facilities, Alberhill Substation, and staging areas. The grading would change drainage in the area of grading. Grading associated with subtransmission and transmission structures would be distributed along the entire project area in small work areas (see Table 2-6 and Table 2-7). These small interstitial graded areas would not change the risk of flooding.

A 325-foot access road would be constructed along 115-kV Segment ASP5. If the conventional method of construction is used, about 6.1 miles of access road would be constructed for the 500-kV transmission lines; no access roads would be constructed for the 500-kV transmission line if helicopters are used for construction of the 500-kV transmission lines. Access roads and retaining walls would be contiguous graded areas that could increase runoff and result in flooding or ponding. Roads may also cross and alter drainages by, for example, blocking them with the roadway and associated retaining walls. This could also cause ponding and flooding on and off site. This impact would be significant. MM WQ-5 would be implemented to maintain capacity and connectivity of drainages crossed by access roads to reduce the risk of flooding. MM WQ-3 requires implementation of erosion control measures, which would also reduce the potential for stormwater to cause flooding. Impacts related to grading would be less than significant with mitigation.

115-kV Segment ASP8 would be located in the Romoland MDP area. 115-kV Segments ASP4 and ASP5 would be located in the Sedco MDP area. TSPs and LWSPs for 115-kV Segment ASP8 would be placed in close proximity to proposed storm drains. Structures for 115-kV Segments ASP4 and ASP5 would be placed in close proximity to open channels and underground storm drains. Installation of poles in these areas in a way that would threaten the function of drainage improvements or implementation of MDPs may result in flooding, which would be a significant impact. MM WQ-6 would be implemented with written confirmation from the RCFCWCD that project elements would not impede flood control functions. Impacts would be less than significant with implementation of MM WQ-6.

Grading at the 42.9-acre substation site would be required to provide a flat area for substation construction. There are no substantial drainages on the site, but the site likely experiences minor water flow and ponding during and after precipitation events. Grading would require cut of about 91,000 cubic yards of soil and fill of about 80,000 cubic yards of soil. The substation site would have a detention basin to capture surface flow from within the substation site. The site would be graded to direct stormwater runoff to the detention basin, which would have a capacity of 13.5 acre-feet (almost 4.4 million gallons) of water. Excess drainage would flow off site to Temescal Wash. Up to 7.6 acres of new impervious surface would be constructed at the Alberhill Substation site. However, the majority of the substation site would contain permeable aggregate, crushed rock, or soil. Flooding may occur if the detention basin is insufficient in size to handle runoff from the substation site. This would be a significant impact. MM WQ-7 would be implemented to ensure that the detention basin is an adequate size to capture anticipated stormwater flows. Flooding impacts would be less than significant with implementation of MM WQ-7.

Mitigation Measures

MM WQ-3: Design of access roads with erosion control measures.

MM WQ-5: Maintain capacity and connectivity of drainages.

MM WQ-6: Avoid impeding of MDP implementation and function.

MM WQ-7: Design detention basin to adequate size.

Impact WQ-5 (ASP): Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Water would be used for dust control and may also be used to maintain soil cohesiveness during excavations. Water trucks would be operated to ensure that water is applied at a rate and in amounts sufficient to infiltrate the soil. Water would not be applied in a manner that would create runoff.

Less than 1 acre of impervious surface would be created from lattice steel tower and TSP concrete foundations. This acre would be distributed in small areas over the 25-mile project alignment and would therefore not create runoff water that would exceed the capacity of stormwater drainage systems.

Up to 7.6 acres of impervious surface would be constructed at the Alberhill Substation site. However, the majority of the site would be permeable aggregate, crushed rock, or soil. The substation site would also have a detention basin to capture surface flow from within the substation site. The site would be graded to drain into swales and flow into the basin, which would have a capacity of 13.5 acre-feet (almost 4.4 million gallons) of water. Excess drainage would flow off site to Temescal Wash. There would be a significant impact if the detention basin and outflow to Temescal Wash were insufficient to handle runoff water from the site. MM WQ-7 would require designing the detention basin in accordance with Riverside County standards. Impacts would be less than significant with implementation of MM WQ-7.

The project would require the use of hazardous materials, which could adversely affect runoff water quality. Potential impacts on water quality related to hazardous materials use are discussed under Impact WQ-1 (ASP) and would be less than significant with mitigation.

Operation and Maintenance

Negligible quantities of water would be required for routine operations and maintenance activities, which would include potable water for workers, water for restoration areas, and water for cleaning insulators. Approximately 3,000 gallons per year of de-ionized water would be used for cleaning electrical equipment at the proposed Alberhill Substation. The only water used on the ground would be for restoration areas. For restoration, sufficient water would be applied to infiltrate soils and not create substantial runoff. Impacts would be less than significant.

Mitigation Measure

MM WQ-7: Design detention basin to adequate size.

Impact WQ-6 (ASP): Otherwise substantially degrade water quality.
LESS THAN SIGNIFICANT

During construction and operation, pesticides may be used for vegetation management activities around structures installed as part of the proposed project. Normal application would not be in sufficient quantities to result in runoff that would substantially degrade water quality. SCE would also follow industry standard BMs and all product specifications and regulations for herbicide application. Impacts would be less than significant, and no mitigation would be required.

Impact WQ-7 (ASP): Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
LESS THAN SIGNIFICANT

Sections of 115-kV Segments ASP1, ASP1.5, ASP2, ASP3, and ASP4 would be installed within or adjacent to 100-year flood hazard areas as designated by FEMA (Figure 4.9-4). 115-kV Segment ASP2 would not involve structure installation. The other segments would involve installation of TSPs and LWS poles. LWSPs would be up to 3 feet in diameter at their bases, while TSP foundations would be up to 8 feet in diameter but would only extend up to 2 feet above the ground surface. These structures would not impede or redirect flood flows, as flood flows would go around the structures. Staging Areas ASP4, ASP7, and ASP9 would also be located within 100-year flood hazard areas as designated by FEMA. There would be no permanent structures in these areas; equipment and materials would be stored at staging yards. Flood flows would go through the staging area, and equipment and materials would not impede or redirect flood flows. Impacts would be less than significant.

The proposed Alberhill Substation site; 500-kV transmission lines; 115-kV Segments ASP5 through ASP8; Staging Areas ASP1, ASP2, ASP3, ASP5, and ASP6; and access roads would not be located within 100-year flood hazard areas. There would be no impact in these areas.

Impact WQ-8 (ASP): Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Sections of the proposed Alberhill Project 115-kV subtransmission line would be installed within a FEMA-designated 100-year flood hazard zone or dam failure inundation hazard area, as shown in Figure 4.9-4. Construction would be the time when the greatest number of project-associated workers would be in these areas. Dam inundation areas represent about 32 percent of the 115-kV subtransmission line and 500-kV transmission line alignments, while 100-year flood hazard zones represent about 15 percent of the 115-kV

subtransmission line alignment. The Alberhill substation site is located in a dam inundation area; construction would last 21 months. Given that construction is temporary, workers would be in these areas for a limited amount of time. It is unlikely that workers would be in the area during a flood because work would be limited during rainy periods. Although dam failure is unlikely to occur, dam failure would be a significant impact. MM HZ-4 would require development of a Fire Control and Emergency Response Plan, which would outline evacuation procedures and require training on those procedures. Impacts would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance would require occasional inspections of the substation, 115-kv subtransmission line, 500-kV transmission line, the Alberhill Substation, and associated structures. This would place a minimal amount of workers in flood zones and dam failure inundation areas during inspection. It is unlikely a flood would occur during inspections since they would generally not take place in inclement wet weather. Although dam failure is unlikely to occur, dam failure would be a significant impact. MM HZ-4 would require development of an Emergency Response Plan, which would outline evacuation procedures and require training on those procedures. Impacts would be less than significant with mitigation.

Mitigation Measure

MM HZ-4: Fire Control and Emergency Response.

Impact WQ-9 (ASP): Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow.
LESS THAN SIGNIFICANT

There is no risk of tsunami in the project area. There would be no impact related to tsunami. Lake Elsinore is the largest body of water in the proposed project area, and there is a potential for seiche on this lake. The closest Alberhill System Project components are 115-kV Segments ASP2 and ASP4. 115-kV Segment ASP2 is behind a topographic high in relation to and 0.80 miles from the shore of Lake Elsinore. The shoreline closest to 115-kV Segment ASP4 is narrow and unlikely to facilitate a large seiche; 115-kV Segment ASP4 is also 0.5 miles from the shoreline. Thus, there is no potential for inundation of the project area by seiche. There is a potential for mudflows to occur in the project region due to nearby mountains. Project components are not, however, in areas such as washes at the base of mountains where mudflows may occur and expose people or structures to a significant risk of loss, injury, or death. Impacts would be less than significant.

4.9.6 References

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