

4.8 Hydrology and Water Quality

This section describes potential hydrology and water quality impacts associated with construction and operation of the Proposed Project.

Project components that do not involve ground disturbance or groundwater impacts were not evaluated in this section. These components include installation of upgraded relay systems and equipment at the SCE Newhall, Chatsworth, and San Fernando Substations.

4.8.1 Existing Hydrology and Water Quality Setting

The Proposed Project lies within both the Santa Clara River Valley watershed and the Los Angeles River (San Fernando Valley) watershed, as presented on Figure 4.8-1 Hydrology and Floodplains. These watersheds are divided by the east/west trending Santa Susana Mountains. The Proposed Project components including the proposed Central Compressor Station, proposed office trailer and guard house relocation, proposed SCE Natural Substation and almost half of the proposed SCE 66 kV sub-transmission lines are located within and south of the Santa Susana Mountains in the Los Angeles River watershed. The remainder of the proposed SCE 66 kV sub-transmission line modification is located in the Santa Clara River Valley watershed, north of the Santa Susana Mountains.

The Santa Clara River Valley watershed encompasses the Santa Clara River, the largest river system in southern California that remains in a relatively natural state. The river originates in the northern slopes of the San Gabriel Mountains in north Los Angeles County, traverses in a westerly direction into Ventura County, and discharges into the Pacific Ocean near the city of Ventura. The river runs approximately 100 miles from its headwaters near Acton, California, to its outlet, and drains an area of approximately 1,600 square miles. The entire Proposed Project is located south of the Santa Clara River; the closest component is the proposed SCE 66 kV sub-transmission line modification originating at the SCE Newhall Substation, located approximately 1.4 miles south of the Santa Clara River.

For ease of reference, the portion of the Santa Clara River within Los Angeles County is generally referred to as Upper Santa Clara River. The portion within Ventura County is generally referred to as Lower Santa Clara River. The proposed SCE 66 kV sub-transmission modification, which originates at the SCE Newhall Substation and travels through Gavin Canyon, is north of the Santa Susana Mountains within Los Angeles County and therefore drains toward the Upper Santa Clara River.

The Upper Santa Clara River watershed consists of approximately 680 square miles of mostly natural land with some mixed use developed areas. Some of the major tributaries in the Upper Santa Clara River watershed include Castaic Creek, San Francisquito Canyon, Bouquet Canyon, Sand Canyon, Mint Canyon, and the South Fork of the Santa Clara River (Los Angeles County Department of Public Works [LACDPW], 2009a). The proposed SCE 66 kV sub-transmission modification, which originates at the SCE Newhall Substation, is located within the drainage of the South Fork of the Santa Clara River tributary and is primarily located within open space, next to a transportation corridor but also within commercial and residential areas. The upstream portion of the proposed SCE 66 kV sub-transmission modification is within open space next to the transportation corridor and the downstream portion is within

commercial and residential areas. Existing land uses are further described in Section 4.9 Land Use and Planning.

In general, the Santa Clara River Valley watershed is semi-arid, and receives an average range of 14 inches to 16 inches of rainfall per year. Nearly all of the rainfall occurs between the months of November and March. The surface waters are primarily arroyos and normally dry creeks that have historically carried storm flows and post-storm flows from the upper watershed down to the alluvial valleys (California Department of Water Resources, [DWR], 2004). As discussed later, storm water flows of sufficient intensity will reach the Santa Clara River from the upper portion of the watershed where the Proposed Project is located.

The Los Angeles River watershed covers a land area of over 834 square miles including the eastern portions of the Santa Monica Mountains, the Simi Hills, and the Santa Susana Mountains to the San Gabriel Mountains in the west. The watershed encompasses and is shaped by the path of the Los Angeles River that flows from its headwaters in the western portion of the San Fernando Valley eastward to the Glendale Narrows, where it turns southward and flows across the Los Angeles coastal plain into San Pedro Bay. The Los Angeles River includes diverse patterns of land use; the upper portion is mostly forest, chaparral, and open space, while the lower portion is highly intensive commercial, industrial and residential land use. The major tributaries of the Los Angeles River include Burbank Western Channel, Pacoima Wash/Tujunga Wash, Aliso Canyon Wash, Bull Creek, and Verdugo Wash in the San Fernando Valley; and the Arroyo Seco, Compton Creek, and Rio Hondo south of the Glendale Narrows (LACDPW, 2009b). As discussed later, storm water flows of sufficient intensity will reach the Los Angeles River from the upper portion of the watershed where the Proposed Project is located.

The proposed SCE 66 kV sub-transmission modification located north of the SCE Chatsworth Tap to the Storage Field (see Figure 3.1-2), where project components including the proposed SCE Natural Substation, the proposed Central Compressor Station, the proposed PPL, the proposed office trailer relocation, and proposed guard house relocation are located in and south of the Santa Susanna Mountains. These components are within the drainage areas of the Aliso Canyon Wash and Bull Creek tributaries of the Los Angeles River. Project components located in upstream portions of the tributaries are located primarily in undeveloped open space or developed as the Aliso Canyon Natural Gas Storage Field; the lower portions of these tributaries are located in fully developed residential areas. Existing land use is further described in Section 4.9 Land Use and Planning.

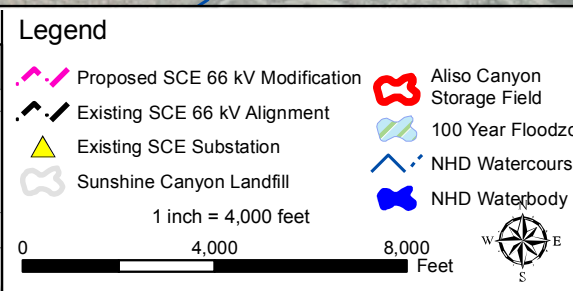
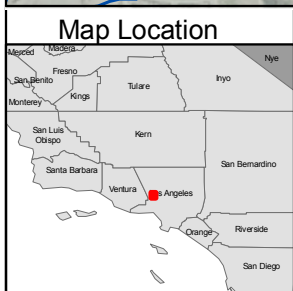
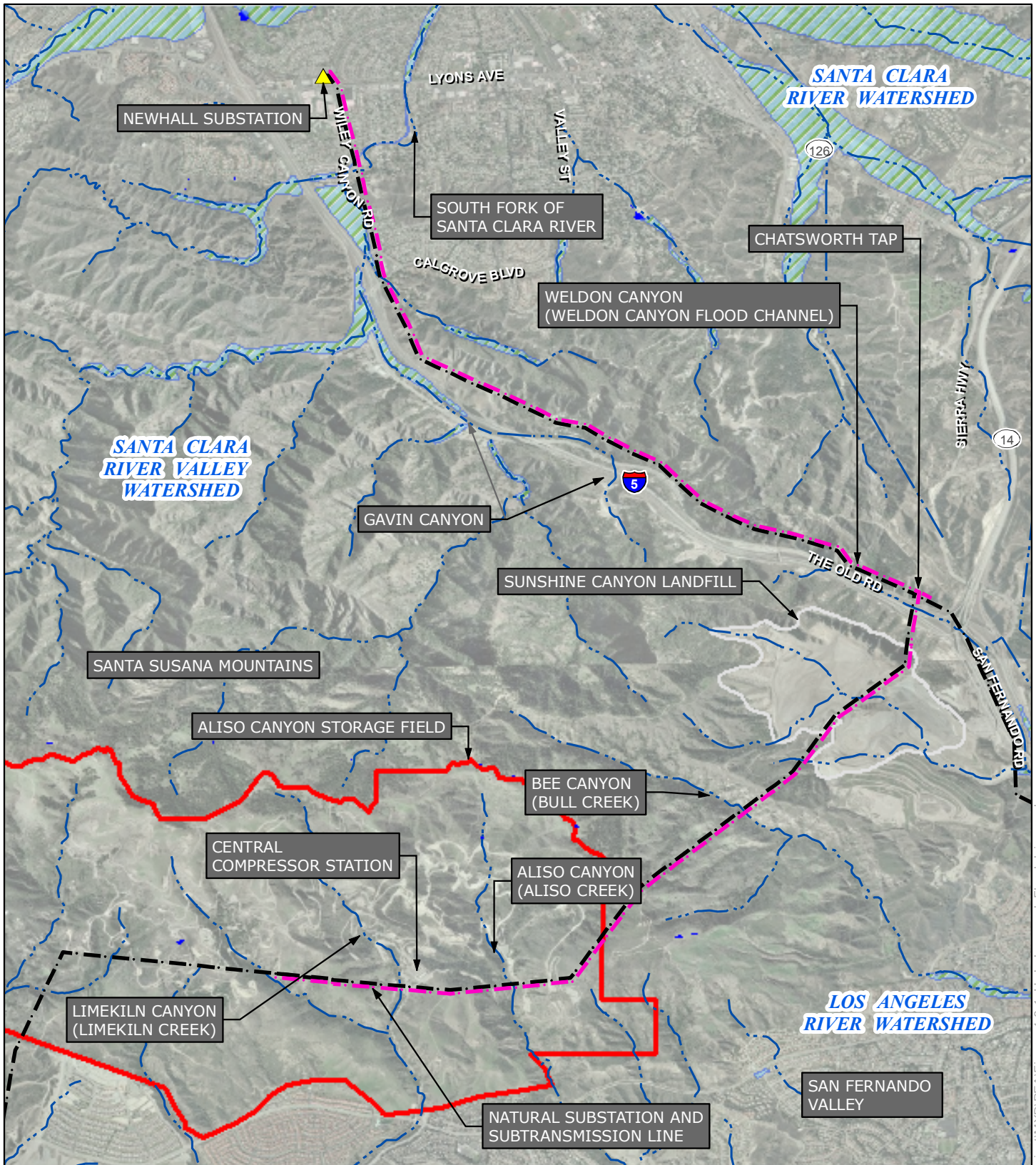
The Los Angeles River Watershed has 22 lakes within its boundaries including Devil Gates Dam, Hansen Basin, Lopez Dam, Pacoima Dam, and the Sepulveda Basin. In addition, there are a number of spreading grounds in the watershed including sites at Dominguez Gap, the Headworks, Hansen Dam, Lopez Dam, and Pacoima Dam.(LACDPW, 2009b). A portion of the proposed SCE 66 kV sub-transmission modification located to the west of the SCE Chatsworth Tap is located upgradient of the Los Angeles Reservoir, however the upgradient storm water flows are diverted around the Los Angeles Reservoir in Bull Creek.

The Los Angeles watershed receives an average range of 15 to 23 inches of rainfall per year. Similar to the Santa Clara River Valley watershed, nearly all of the rainfall occurs between the months of November and March (DWR, 2004)

In mountain areas, the steep canyon slopes and channel gradients promote a rapid concentration of storm runoff. Depression storage and detention storage effects are minor in the rugged terrain. Soil moisture during a storm has a pronounced effect on runoff from the porous soil supporting a good growth of deep-rooted vegetation such as chaparral. Soil moisture deficiency is greatest at the beginning of a rainy season, having been depleted by the evapotranspiration process during the dry summer months. Precipitation during periods of soil moisture deficiency is nearly entirely absorbed by soil, and except for periods of extremely intense rainfall, significant runoff does not occur until soil is wetted to capacity. Due to high infiltration rates and porosity of mountain soil, runoff occurs primarily as subsurface flow or interflow in addition to direct runoff. Consequently, most streams in the County are ephemeral.

Storm water runoff occurs after the soil has become saturated and the steep canyon slopes and channel gradients in the upper portion of these watersheds promote a rapid concentration of storm water runoff into the normally dry creeks or washes. The LACDPW has constructed and also maintains concrete flood control channels for the lower portions of these creeks or washes that are located in developed (primarily for residential) areas of the watersheds within Los Angeles County. The Proposed Project is located in areas upstream of LACDPW flood control channels. The closest concrete lined flood control channel to the Proposed Project is the South Fork of the Santa Clara River north of Lyons Road that is adjacent to the proposed SCE 66 kV sub-transmission modification originating at the SCE Newhall Substation. The remainder of the Proposed Project including the proposed SCE 66 kV sub-transmission line modification starting just north of the SCE Chatsworth Tap to the project components within the Storage Field are located upstream and at least 1.25 miles north of the following concrete lined channels: Bull Creek east of Balboa Boulevard, Aliso Creek/Wilbur Creek south of the Ronald Reagan Freeway (118) and Limekiln Creek/Wash south of Devonshire (LACDPW, 2009). The proposed SCE 66 kV sub-transmission modification within the I-5 transportation corridor right of way at the SCE Chatsworth Tap is directly upstream of the Weldon Canyon Flood Control Channel south of San Fernando Road.

The existing SCE 66 kV sub-transmission lines originating at SCE's Newhall Substation, which travels up into Gavin Canyon is located within the south eastern portion of the Santa Clara River Valley watershed, and within the Santa Clara River South Fork drainage area. According to the Newhall Quadrangle topographic map, the surface water drainage for this component of the project drains in an unnamed creek to the north via Gavin Canyon into the South Fork of the Santa Clara River (USGS, 1988), as shown on Figure 4.8-1. The SCE Newhall Substation is located in the City of Santa Clarita, which has developed a storm water system to collect storm water from the developed commercial and residential areas and is connected to the LACDPW flood control system. The SCE 66 kV sub-transmission system south of the SCE Newhall Substation is partially (~ 2,000 feet) located within the South Fork of the Santa Clara River 100 year flood zone (according to FEMA maps), an area that is mixed (commercial/industrial) land use. However the majority (~ 3.5 miles) of the SCE 66 kV sub-transmission system south of the SCE Newhall Substation is located in open space mountain areas adjacent to the I-5 transportation corridor as shown on Figure 4.8-1.



Aliso Canyon PEA

**Figure 4.8-1
Hydrology and
Floodplains**

Source: FEMA 2009,
NHD 2009, USGS 1969

AECOM

Project: 06205-134
Date: September 2009

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The proposed SCE 66 kV sub-transmission modification, located between Weldon Canyon and the Storage Field, is located in mountain and canyon open space areas that have existing natural drainage courses as described below that ultimately connect to LACDPW concrete lined channels with the following exceptions. The portion of the SCE 66 kV sub-transmission line in Weldon Canyon is located in a transportation corridor with bordering open space and commercial development; the storm water drainage connects directly to a LACDPW flood control channel and the portion of the SCE 66 kV sub-transmission line that is located immediately south and west of the I-5 highway in Weldon Canyon drains into the Sunshine Canyon Landfill property. This property has been developed for a municipal landfill that has an engineered storm drain system including a sedimentation basin.

The portion of the SCE 66 kV sub-transmission line between Weldon Canyon and the proposed SCE Natural Substation is located in the mountain areas of the upper portions of the Los Angeles River Watershed. The proposed SCE Natural Substation and the proposed Central Compressor Station are located in the Limekiln Canyon watershed that has an area of 1,061 acres (LACDPW, 2008). Limekiln Canyon water shed is in the north western portion of the Los Angeles River watershed and bordering the southern edge of the Santa Clara River Valley watershed. Both of these components are located in an area that was developed for an oil field and redeveloped for a natural gas storage facility. The alignment of the proposed SCE 66 kV sub-transmission modification west of Weldon Canyon is located in several watersheds as the alignment crosses Sunshine Canyon, Bee Canyon, Aliso Canyon, and Limekiln Canyon (LACDPW, 2009). These canyons are indicated on Figure 4.8-1, Hydrology and Floodplains. Sunshine Canyon, Bee Canyon, Aliso Canyon, and Limekiln Canyon are drained by Weldon Canyon Flood Control Channel, Bull Creek, Aliso Creek/Wilbur Creek and Limekiln Creek/Wash, all of which are tributaries of the Los Angeles River. The land use in these canyons where these creeks originate is open space or has been developed for natural gas storage and once these creeks exit the canyons the land use around the down stream portions of these creeks is developed for residential or commercial uses. The SCE 66 kV sub-transmission system crosses over these creeks; the proposed Central Compressor Station, proposed office trailer and guard house relocation, and proposed SCE Natural Substation are located within 0.5 mile of Limekiln Creek.

As part of the County flood control program, LACDPW has constructed and maintains debris basins. Debris basins are generally located in residential or commercial areas immediately down stream of open space, mountainous areas. The function of debris basins is to retain sediment and vegetative debris that are swept down from the open space areas as well as control storm water flows. They are usually designed for allowing multiple years of deposition before cleaning, however annual debris and sediment production is increased significantly after a fire occurs in a watershed. The Proposed Project, including the proposed Central Compressor Station, proposed SCE Natural Substation and the proposed SCE 66 kV sub-transmission modifications are located in or cross Limekiln, Aliso and Bee Canyons. These canyons are upstream of LACDPW flood control debris basins. The closest debris basins to the Proposed Project and existing SCE 66 kV sub-transmission lines are the Limekiln Debris Basin (~1.6 mile south), the Aliso Debris Basin (~ 1.5 miles south) and Bull Creeks in the Los Angeles River watershed.

A segment of the existing SCE 66 kV sub-transmission line south and west of the SCE Chatsworth Tap crosses over the Sunshine Canyon Landfill. The Sunshine Canyon Landfill constructed and maintains sedimentation basins for storm water control of the entire developed landfill footprint as well as storm water run on from the less developed canyons up stream of the landfill (Stirrat, 2008).

In general, the alignment of the proposed SCE 66 kV sub-transmission modification is not located within a Federal Emergency Management Agency (FEMA) 100-year designated flood zone with one exception. The FEMA 100-year floodplains in the vicinity of the Proposed Project are shown on Figure 4.8-1, Hydrology and Floodplains. Only a small portion (~ 2,000 feet) of SCE's existing 66 kV sub-transmission lines south of SCE's Newhall Substation are located within a FEMA designated 100-year Flood Hazard Zone. This section of the existing sub-transmission line, known as the SCE MacNeil-Newhall-San Fernando 66 kV existing source line, is supported by steel lattice frame towers. For the Proposed Project the towers will be replaced with TSPs and the line will be re-conducted. The existing towers have four legs with connecting cross beams located at the base of each tower. TSPs are a single steel pole.

The Proposed Project, including portions of SCE's existing 66 kV sub-transmission system associated with the Proposed Project, are not located in or downstream of any surface water bodies or on-site detention basins.. The closest water bodies to the Proposed Project and existing 66 kV sub-transmission lines in the Santa Clara River Valley East Sub basin are Castaic Lake, Piru Lake, Pyramid Lake, and Bouquet Reservoir, all of which are more than 5 miles from the Proposed Project. The closest water bodies to the Proposed Project, and existing 66 kV sub-transmission line in the Upper Los Angeles River basin include the Van Norman Lakes, Los Angeles Reservoir, Pacoima Reservoir and Chatsworth Reservoir. Of these, the Los Angeles Reservoir is about 1.5 miles from the proposed 66 kV sub-transmission modification.

The Los Angeles River watershed has impaired water quality in the middle and lower portions of the basin due to runoff from dense clusters of commercial, industrial, residential, and other urban activities and not from the upper portions of the basin that are open space and less developed. Section 303(d) of the CWA requires that states make a list of waters that are not attaining standards after the technology-based limits are put into place. As of 2006, the Los Angeles RWQCB designated the following water bodies as impaired with associated pollutants: Aliso Canyon Wash for copper, fecal coliform and selenium; Bull Creek for indicator bacteria, and the Los Angeles River Reach 5 for ammonia, coliform bacteria, copper, lead, nutrients (algae) and trash. These water bodies and associated pollutants were recently proposed (as of July 2009) by the Los Angeles RWQCB to the EPA to remain on the Section 303(d) list. None of the other creeks previously described as downstream of the Proposed Project are on the proposed list (SWRCB, 2009 and LACDPW, 2009). The alignment of the proposed SCE 66 kV sub-transmission modification will cross Aliso Canyon Creek and Bull Creek in the upstream portions of these creeks that are currently open space. These creeks intersect the Los Angeles River Reach 5, after flowing through areas with commercial, industrial and residential uses and over 5 miles south of the Proposed Project.

Groundwater

Groundwater in the County of Los Angeles is stored in basins underlying five major geographic areas. These groundwater basins are separated by geologic features which impede groundwater movement, or by political boundaries. These basins are the Upper San Fernando, San Gabriel Valley, the Coastal Plain, Santa Clarita Valley and Antelope Valley. The San Fernando Valley is also known as the Upper Los Angeles River Area. Most of the runoff from the surrounding mountains flows to the Valley. The Valley is composed of four basins: the San Fernando Mina, Sylmar, Verdugo and Eagle Rock (DWR, 2004).

The Proposed Project and the existing 66 kV sub-transmission lines lay within the Santa Clara River Valley East Sub basin and north of (outside) the San Fernando Valley (Los Angeles River) groundwater basins. Similar to the watersheds, these two groundwater basins are divided by the Santa Susana Mountains.

Groundwater is encountered in alluvium, terrace deposits and the Saugus Formation of the Santa Clara River Valley basin. Terrace deposits generally lie above the water table and likely have limited ability to supply ground water to wells (DWR, 2004).

During installation of the TSPs that are part of the proposed SCE 66 kV sub-transmission modifications, there is a possibility that shallow groundwater would be encountered during drilling of the boreholes from foundation locations placed in alluvial deposits. If water is encountered during drilling for TSP foundations, SCE would evaluate the stability of the strata. If the strata are stable, SCE would continue drilling, set the rebar cage, and fill the hole with concrete.

If SCE determines the strata are unstable, SCE will use drilling mud, a mixture of clay, usually bentonite, and water to fill the hole to above the water level. Special chemicals are added to the mud to compensate for the varying composition of the water and the formation being drilled and to increase the weight of the column. The drilling mud, by hydrostatic pressure, also helps prevent the collapse of unstable strata into the hole and the intrusion of water from water-bearing strata that may be encountered. After the hole is drilled, SCE will set the rebar cage and fill the hole with concrete. If caving continues to be a problem with the addition of the drilling mud, SCE would fill the hole with 2-sack concrete, allow it to set, and continue drilling. If this does not solve the problem, SCE would drive a steel casing into the hole to prevent additional caving, set the rebar cage, and fill the hole with concrete.

Any displaced water would be allowed to run off, provided no contaminants, if allowed by the LGA. SCE will vacuum the drillers mud into a vacuum truck from within the excavated hole, and properly dispose of the drillers mud. Any excavated 2-sack concrete slurry will be hauled away and properly disposed of. It is expected that the construction techniques for the installation of the TSPs could require either minor dewatering for rebar and concrete placement or placement of these materials in the wet. If minor dewatering should occur, it would be for a short period of time and would not affect groundwater levels in the region. Any water removed during construction would be discharged in a manner consistent with applicable permits or collected and transferred to appropriate disposal facilities off site.

The construction of the proposed Central Compressor station will include proper drainage of surface and subsurface water runoff that is critical to the stability of the slopes and entire site. Subsurface drains will be installed at the bottom of the pre-existing canyon areas with outlets at the downstream end of the site. Back drains could be required on the north side of the site to be used in conjunction with the subsurface drains. Under drains could be required around the turbine foundations to intercept ground water. It is anticipated that the under drains and sub-drains will discharge to the existing Limekiln Canyon Creek (Washington Group, 2007) that is adjacent to the southwest of the site). If minor dewatering is required for construction, it would be for a short period of time and would not affect groundwater levels in the region. Any water removed during construction would be discharged in a manner consistent with applicable permits or collected and transferred to appropriate disposal facilities off site.

Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

The following regulations from the Federal government regarding water quality are applicable to the Proposed Project:

Federal Clean Water Act - The Federal CWA, as amended by the Water Quality Act of 1987, 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 and tributaries thereto, and adjacent wetlands. Wetlands and permanent and intermittent drainages, creeks, and streams are generally subject to the jurisdiction of the USACE under Section 404 of the Federal 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 US, including wetlands, requires the acquisition of a permit from the USACE pursuant to Section 404 of the Federal CWA. Refer to Section 4.4 Biological Resources for the evaluation of the Proposed Project and the existing 66 kV sub-transmission system regarding this regulation.

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p) which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. The EPA has authorized the Regional Water Quality Control Board (RWQCB) to implement this program. Further discussion of the RWQCB implementation of this program is presented below.

Section 402 of the Clean Water Act. The State Water Resource Control Board (SWRCB) administers a statewide NPDES general construction storm water permit that covers a variety of construction activities that could result in wastewater discharges. Under this General Permit the State issues a project-level construction permit for projects that disturb more than an acre of land. The SWRCB Construction General Storm Water Permit process involves notification of the construction activity by providing a Notice of Intent (NOI) to the SWRCB; development of a SWPPP; and implementation of specific monitoring activities. The SWPPP outlines construction methods to avoid and minimize movement of sediment and pollutants into storm water. The Clean Water Act (33 U.S.C. Section 1342 (l)(2)) exempts Natural Gas Transmission projects to waters of the United States from the necessity for obtaining coverage under this state administered NPDES General Construction Storm Water Permit but requires storm water BMPs and prohibits the exceedance of Water Quality Standards. Construction storm water BMPs from the company's Water Quality Construction BMP Manual will be implemented during construction related activities conducted by SoCalGas to proactively protect storm water. The portion of the project involving electric transmission will notify for coverage under the NPDES General Construction Storm Water Permit and a SWPPP with appropriate BMPs will be developed. Any point source is unlawful unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p) which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. The EPA has authorized the Regional Water Quality Control Board

(RWQCB) to implement this program. Further discussion of the RWQCB implementation of this program is presented below.

State/County Plans, Policies, Regulations, and Laws

The following regulations and policies from the State of California regarding water quality are applicable to the Proposed Project.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (Porter-Cologne) provides a comprehensive water quality management system for the protection of California waters. Porter-Cologne designates the SWRCB as the ultimate authority over state water rights and water quality policy, and also establishes nine RWQCBs that oversee water quality at the local and regional levels. The SWRCB and RWQCBs have the responsibility for issuing permits for certain point-source discharges, and for regulating construction and storm water runoff.

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.

The RWQCBs regulate discharges to waters within their respective jurisdictions through administration of Federal NPDES permits, waste discharge requirements, and 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 LARWQCB holds jurisdiction over the Proposed Project area.

The SWRCB has jurisdiction over depositing fill or dredging in “State Only Waters” and issues Waste Discharge Requirements (WDRs) for these projects. This may be applicable to the Proposed Project. The Proposed Project will consult with the Army Corps of Engineers and the SWRCB for any necessary permits or requirement to comply with this issue.

State General Storm Water Permits. In response to CWA requirements, the State of California has adopted general storm water permits covering nonpoint source discharges for certain types of discharges, including from activities at certain industrial facilities and from construction sites involving more than 1-acre of disturbance.

The General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, Adopted as of September 2009) requires preparation of a SWPPP and implementation of BMPs to reduce the potential for non-storm water pollutants (chemicals and sediment) to be discharged from a construction site to waters of the State. The Proposed Project will be required to prepare a SWPPP because the Proposed Project will involve greater than 1-acre of ground disturbance and/or is part of a larger common plan of development that in total disturbs 1-acre or more. The Clean Water Act (33 U.S.C. Section 1342 (l)(2)) exempts Natural Gas Transmission projects to waters of the United States from the necessity for obtaining coverage under this state administered NPDES General Construction Storm Water Permit but requires storm water BMPs and prohibits the exceedance of Water Quality Standards. Construction storm water BMPs from the company’s Water Quality Construction BMP Manual will be

implemented during construction related activities conducted by SoCalGas to proactively protect storm water. The portion of the project involving electric transmission will notify for coverage under the NPDES General Construction Storm Water Permit and a SWPPP with appropriate BMPs will be developed.

The Storage Facility is currently covered under the General Industrial Permit. Changes to the facility as a result of the Proposed Project, e.g., addition of the proposed Central Compressor Station, are required to be incorporated into the existing facility SWPPP. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of best available technology (BAT) economically achievable and best conventional pollutant control technology (BCT). The General Industrial Permit also requires development of a SWPPP as well as a monitoring plan. Through the SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce storm water pollution are described (LARWQCB, 2009). If the General Industrial Permit is revised, the Facility will submit documentation as required and comply with the new permit.

Regional and Local Plans, Policies, Regulations, and Ordinances

The following regulations and policies from Los Angeles County regarding hydrology or water quality are applicable to the Proposed Project.

County of Los Angeles. If the project involves cutting or filling more than 50 cubic yards of soil, LACDPW requires a grading permit for the project per Title 26, Chapter 33 of the Los Angeles County Code. If drainage or other protective structures are affected by the grading program, the County requires that the grading plan state that these structures will be maintained in good condition and an inspection program shall be implemented to prevent damage from burrowing rodents. If the Los Angeles County Flood Control District ROW is affected, all work shall conform to the applicable Flood Control permit.

County of Los Angeles. If grading authorized by the grading permit is to extend into or through the rainy season (November 1 to April 15 of the following year) separate updated plans for erosion control must be submitted to the LACDPW prior to October 1 per Section 3319.3 of the County of Los Angeles Building Code. SWPPP requirements must be integrated into the Erosion Control Plans per Title 62, Section 7010 of the Los Angeles County Code.

County of Los Angeles. The County of Los Angeles issued a Conditional Use Permit, Case No. 473-(5) for the Natural Gas Storage facility in 1974. Condition number 6 of this permit states that "provisions be made for all natural drainage to the satisfaction of the County Engineer. Drainage plans, including two drainage plans signed by a State of California certified professional engineer, shall be submitted to the County Engineer, Design Division for approval prior to grading or construction (LACDRP, 1974). The CUP limits of conformance are defined by Exhibit A, the facility "plot plan." The basis for a CUP revision is substantial conformance with the existing conditions of land use and Exhibit A. Please note that the LACDPW review process for the grading permit will include hydrologic evaluation and drainage designs, if required by LACDPW (LACDPW Grading Review Sheet, 2009). It is anticipated that the LACDPW review of the Proposed Project grading permit application will satisfy the Condition number 6.

The Proposed Project will comply with the existing regulations for storm water control as required by the County of Los Angeles Ordinance 22.52.2210. The Proposed Project will consult with the County to determine if the Proposed Project is required to incorporate appropriate storm water mitigation measures into the design of the project. The Development Planning for Stormwater Management – A Manual for

the Standard Urban Stormwater Mitigation Plan (SUSMP), dated September 2002, prepared by the LACDPW will be used as appropriate for the design of Best Management Practices to meet these standards.

4.8.2 Significance Criteria

The significance criteria for assessing the impacts to hydrology and water quality come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Violate any water quality standards or waste discharge requirements;
- 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;
- 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;
- 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;
- 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;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year floodplain, as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- 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
- Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

4.8.3 Applicant Proposed Measures

There are no Applicant Proposed Measures associated with hydrology or water quality resources.

4.8.4 Environmental Impacts

The Proposed Project includes the following construction activities: proposed Central Compressor Station, proposed SCE Natural Substation, and proposed SoCalGas PPL, proposed office trailer and guard house relocation, and proposed SCE 66 kV sub-transmission modifications. The Proposed Project includes minor modifications to three SCE substations within the existing SCE 66 kV sub-transmission alignment. Figure 4-8-1 shows the major project components.

The Proposed Project is located mainly on unincorporated Los Angeles County lands, with a small portion within the City of Santa Clarita in the southwest end of the Santa Clarita Valley. The southeastern section of the Proposed Project area lies within the city of Los Angeles. The existing SCE 66 kV sub-transmission alignment is located in a transitional zone between more developed areas of the city of Santa Clarita and undeveloped areas within Los Angeles County.

The location of the proposed SCE Natural Substation will be on the SoCalGas fee-owned property at the Aliso Canyon Storage facility, as shown on Figure 4-8-1. This location is west of the site proposed for the proposed Central Compressor Station.

The proposed Central Compressor Station will be constructed in an area that has been previously disturbed as part of the development of the natural gas storage facility. As part of the proposed Central Compressor Station construction, the existing office trailers will be relocated. The site for the relocated offices is also a previously disturbed site. There will not be any additional access roads constructed during construction of the proposed Central Compressor Station. The site is an existing developed area, with existing well-maintained roads.

The alignment of the proposed SCE 66 kV sub-transmission modification originates in a developed portion of Newhall, a community within the city of Santa Clarita. The modifications to the existing 66 kV sub-transmission system include pole replacement, re-conductoring, telecommunication stringing, and the addition of a new circuit segment from the SCE Chatsworth Tap to the proposed SCE Natural Substation. This component of the project will be conducted in a previously disturbed utility easements and rights-of-way.

Various existing dirt roads will have to be rehabilitated, including grading and widening to support construction activities associated with the proposed SCE 66 kV sub-transmission modifications; in addition, an existing access road will have to be widened to provide equipment access during construction of the proposed SCE Natural Substation. The Proposed Project will require three on-site staging areas, totaling approximately 2.5 acres, to locate equipment and materials during construction of the proposed Central Compressor Station. These staging areas are all located in areas previously disturbed by the Storage Facility construction. Roads used during construction of the proposed Central Compressor Station are existing paved roads currently used by the Proponent. Additional access roads will not be required for construction activities.

4.8.4.1 Impact for Hydrology and Water Quality

The primary impact of the Proposed Project to hydrology and water quality occurs during the construction phase. Impacts from the Proposed Project during operation may occur but will be minor when compared

to the potential impacts during construction. This impact analysis evaluates both construction and operational impacts together under each significance criteria.

The Proposed Project will require a total surface disturbance of on the order of less than 1 acre for the proposed Central Compressor station, 0.5 acre for the proposed SCE Natural Substation and 2.5 acres for the on-site staging areas. The proposed Central Compressor station, the proposed SCE Natural Substation and the staging areas are located within the Limekiln Canyon watershed. The Limekiln Canyon watershed has an area of 1,061 acres. The Proposed Project will not affect more than 0.5% of the area of the watershed and so the total Proposed Project development will have a minor effect on the overall hydrologic characteristics of this watershed.

Permit and regulatory requirements will be achieved during the Proposed Project. Implementation of the construction-phase SWPPP will minimize the potential impacts from sediment and hazardous materials releases to water quality during construction of the Proposed Project. The Proposed Project is required to apply for coverage under the General Construction Activity NPDES Storm Water Permit. This permit is required for any construction activity that includes clearing, grading, excavation, reconstruction, and dredge and fills that result in the disturbance of at least one acre of total land area. The general permit requires preparation of a site-specific SWPPP that would include measures from the general permit to reduce potential for generating polluted storm water runoff. Any sediment in the storm water will be reduced by using BMPs as described in the SWPPP. The potential for water quality impacts are minimal, but would be further reduced or avoided through implementation of erosion control measures on-site.

Also during construction, small quantities of fuels may be transported and/or transferred within the alignment of the proposed SCE 66 kV sub-transmission modification and the Storage Facility in order to facilitate fueling of non-road licensed construction equipment. However construction equipment will routinely fuel at the marshalling yards and therefore minimize the quantity of temporary fuel storage. Within the 66 kV sub-transmission alignment, most fueling is expected to be performed from a self-contained service vehicle. The site-specific SWPPP prepared for the construction will also include BMPs to address transportation, transfer and temporary storage of fuels or other hazardous materials. Only if the volume of fuel or oil stored on-site during construction is greater than 1,320 gallons, then a site-specific SPCC Plan would be required for the construction phase. A site-specific SPCC Plan would address transportation, transfer and temporary storage of fuels or oil similar to fuel or oil spill prevention BMPs in the SWPPP. Drips and spills would be contained or addressed on-site before they could come in contact with storm water and so not affect storm water quality. Implementation of BMPs in the SWPPP or implementation of a site-specific construction SPCC Plan would reduce the potential and minimize contact between drips or spills of construction related materials and storm water.

The volume of oil within the electrical equipment operating within the proposed SCE Natural Substation is expected to be greater than 1,320 gallons, and so a site-specific SPCC Plan would be required for the substation operation (40 CFR 112). A site-specific SPCC Plan would address transfer and use of oil in qualifying electrical equipment. Storm water containing drips or spills of potential pollutants will be treated, contained or addressed and cleaned up on site before being come in contact with storm water and so not affect storm water quality. The plan would also provide for spill prevention training of applicable personnel and maintaining spill cleanup equipment on hand. Implementation of a site-specific operational SPCC Plan would reduce potential impacts and minimize contact between drips or spills from qualifying oil containing equipment and storm water.

Within the Storage Facility, all transfer and storage of oil is controlled by the existing SPCC Plan. The volume of oil within the operating equipment for the proposed Central Compressor Station is expected to be greater than 1,320 gallons, and so either a site-specific SPCC Plan would be required for the proposed Central Compressor Station operation or the existing SPCC Plan for the Storage Facility would be amended. The plan also provides for spill prevention training of applicable personnel and maintaining spill cleanup equipment on hand. Implementation of this SPCC will minimize the potential for hazardous materials releases during new compressor station operation that could affect water quality.

Similarly the operation of the proposed Central Compressor Station will be incorporated into the existing SWPPP developed for the Storage Facility. A Notice of Change will be submitted to the RWQCB notifying the RWQCB of the facility additions. Implementation of the SWPPP will minimize the potential for hazardous materials releases during new compressor station operation that could affect water quality.

4.8.4.2 Significance Evaluation

The potential impact to hazards from construction and operation of the Proposed Project was evaluated using the stated CEQA significance criteria and is presented in this section. For the purpose of presenting potential hazards resource impacts, CEQA criteria were evaluated and are discussed together for construction and operations. Similarly the operation of the proposed Central Compressor Station will be incorporated into the existing SWPPP developed for the Storage Facility. A Notice of Change will be submitted to the RWQCB notifying the RWQCB of the facility additions. Implementation of the SWPPP will minimize the potential for hazardous materials releases during new compressor station operation that could affect water quality

Evaluation of the significance criteria for assessing the impacts to hydrology and water quality according to the CEQA Checklist significance criteria are:

Would the Proposed Project violate any water quality standards or waste discharge requirements?

The direction of storm water flow through the Proposed Project's staging areas, proposed Central Compressor Station site, proposed PPL, proposed SCE Natural Substation and alignment of the proposed SCE 66 kV sub-transmission modifications, presently flows over moderate to steep slopes into the natural canyon drainages, into LACDPW flood control channels and eventually to the Los Angeles River or Santa Clara River. If sediment or construction-related materials (diesel fuel, lubrication oil, hydraulic fluids, or antifreeze) are accumulated into storm water flow, they could be discharged from the site. The Federal Water Pollution Control Act (or the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with an NPDES permit. The General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General NPDES Permit, 99-08-DWQ) requires the development and implementation of a SWPPP which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters. SoCalGas will utilize and implement the existing facility and company BMP Manual to reduce and avoid potential water quality impacts during construction and operation.

The SWPPP will specify site-specific BMPs to limit or eliminate sediment or other pollutant discharges from each construction activity location. The BMPs will take into account the existing drainage controls at

the Storage Facility and will include at a minimum erosion and sediment control BMPs and as well as material management BMPs such as hazardous materials (including fuel) handling procedures. Erosion control BMPs can be used to temporarily prevent erosion from concentrated storm water flows. Erosion BMPs prevent erosion by intercepting, diverting, conveying and discharging concentrated storm water flows in a manner that prevents soil detachment and transport. Temporary concentrated flow conveyance BMPs include:

- Temporary earth dikes and drainage swales to divert runoff water to desired location,
- Velocity dissipation devices such as rock, grouted rip-rap or concrete rubble that prevent scour caused by concentrated storm water flows, and
- Slope drain pipes used to intercept and direct surface runoff into a stabilized watercourse, trapping device or stabilized area

Sediment control BMPs trap soil that has become detached and moved by storm water. Sediment control BMPs rely on intercepting and slowing runoff and then filtering or settling the sediment particles Sediment control BMPs include:

- Silt Fences, fiber rolls, sand bag or straw bale barriers, or fiber rolls that temporarily detain storm water to allow settling of sediment particles
- Gravel bag berms or check dams that temporarily detain storm water and filter sediment particles,

Material management BMPs prevent, reduce or eliminate the discharge of pollutants from material delivery and storage locations. Material management BMPs include:

- Delivering and storing materials in a designated area
- Using secondary containments for materials storage area, and
- Training employees in the safe and proper use of hazardous materials

The implementation of the SWPPP requires inspecting, monitoring and maintaining BMPs. The potential impact of the proposed project to violate the CWA standards will be less than significant if the SWPPP includes erosion control, sediment control and material management BMPs, these BMPs are installed at appropriate locations and if these BMPs are monitored and maintained during construction.

As described in the Hazards and Hazardous Materials section of this PEA, operation of the proposed SCE Natural Substation includes the use of transformer oil in electrical transformers. This material could impact water quality if it were catastrophically released, or released during a period of rainfall. The anticipated quantity of oil at the proposed Natural substation (regardless of which specific location is selected) will exceed the threshold pursuant to CFR 40, Part 112, requiring preparation and implementation of a SPCC Plan. The SPCC Plan contains a number of specific measures including secondary containment, physical storm water controls, and operational controls such as oil handling procedures and employee training, designed to prevent oil releases.

In addition, the Storage Facility has in place an SPCC Plan for the existing operations. Any additional oil storage associated with the proposed Central Compressor Station is required to be incorporated into this existing plan. Incorporation of these SPCC Plans into the proposed SCE Natural Substation and proposed Central Compressor Station operations will assist in ensuring there is no significant impact relative to violations of water quality standards.

Would the Proposed Project 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 ground water table level?

During installation of the TSPs that are part of the proposed SCE 66 kV sub-transmission modifications, there is a possibility that shallow groundwater would be encountered during drilling of the boreholes from foundation locations placed in alluvial deposits. It is expected that the construction techniques for the installation of the TSPs could require placement of these materials in the wet. If minor dewatering should occur, it would be for a short period of time and would not affect groundwater levels in the region. Any water removed during construction would be discharged in a manner consistent with applicable permits or collected and transferred to appropriate disposal facilities off site.

As a result, construction and operation of the Proposed Project would not 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.

Would the Proposed Project 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?

The Proposed Project will require a total surface disturbance of less than 1 acre for the proposed Central Compressor Station, 0.5 acre for the proposed SCE Natural Substation and 2.5 acres for the on-site staging areas. The proposed Central Compressor Station, the SCE Natural Substation and the staging areas are located within the Limekiln Canyon watershed. The Limekiln Canyon watershed has an area of 1,061 acres. The proposed project will not affect more than 0.5% of the area of the watershed and so the total Proposed Project development will not substantially affect on the overall hydrologic characteristics of this watershed.

Construction of the proposed SCE 66 kV sub-transmission modifications would not require extensive grading or surface alteration around TSP sites or along public roads because existing transmission routes or easements would be used. Any grading that is needed would be minor (less than 0.1 acre at each site) and are spread out along the sub-transmission line and so the effect of each TSP site would not have a significant affect on the overall drainage patterns of each water shed. Drainage structures or temporary wet crossings may be installed for access in areas that cross natural surface water channels and will maintain existing drainage patterns. Based on the minor amount of grading for each TSP site, there would be less than significant impacts to drainage patterns leading to erosion during construction of the proposed SCE 66 kV sub-transmission modifications.

Construction of the proposed SCE Natural Substation as shown on Figure 3.1.3) would require excavation and filling to construct a level pad, dependent upon the existing grades and the final footprint of the proposed SCE Natural Substation The grading activities will alter the drainage pattern only on the

proposed SCE Natural Substation's footprint and should not alter the overall drainage of the area because the proposed SCE Natural Substation footprint (on the order of 0.5-acre) is very small compared to the overall drainage area of Limekiln Canyon Watershed (1,061 acres).

The proposed SCE Natural Substation is proposed to be located on the top of a ridge in an area immediately adjacent to the existing SCE 66 kV sub-transmission line. This area has a relatively low slope, has room to accommodate the approximately 0.5 acre substation, and little area above that drains onto it. Therefore, the proposed SCE Natural Substation would similarly not alter the overall drainage pattern in the area. The proposed SCE Natural Substation is not located in the course of a stream or river and so would not alter the course of a stream or river.

Construction of the proposed Central Compressor Station would require grading on the order of 100,000 cubic yards. According to the pre-engineering study, the construction of the proposed Central Compressor Station will include proper drainage of surface and subsurface water runoff that is critical to the stability of the slopes and entire site. Subsurface drains will be installed at the bottom of the pre-existing canyon areas with outlets at the downstream end of the site. Back drains could be required on the north side of the site to be used in conjunction with the subsurface drains. Under drains could be required around the turbine foundations to intercept ground water. It is anticipated that the under drains and sub-drains will discharge to the Limekiln Creek Canyon creek to the south of the site (Washington Group, 2007)

Therefore, the design and construction of the proposed Central Compressor Station is expected to maintain pre existing conditions and will not have a significant effect on the existing drainage pattern of the area; and will not alter the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

Would the Proposed Project 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?

As discussed above, the Proposed Project would not substantially alter existing drainage patterns of Limekiln Canyon watershed during construction. The Proposed Project will include less than 0.5 % of Limekiln Canyon water shed, an insignificant portion of the watershed. The Proposed Project would not substantially increase surface water runoff during rain events in this watershed and so would not increase the potential for flooding, on-site or off-site. Impacts would be less than significant.

Would the Proposed Project 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?

As discussed above, the Proposed Project will include less than 0.5 % of the area of Limekiln Canyon water shed and so would not substantially increase surface water runoff during rain events. Since there is not a substantial increase in the amount of storm water runoff from the Proposed Project above existing conditions, the capacity of storm water systems in the area would not be exceeded. The potential for contamination to be present in storm water runoff is addressed in Section 4.7 Hazards and Hazardous Materials. Impacts to storm water drainage systems would be less than significant.

Would the Proposed Project otherwise substantially degrade water quality?

The construction of the Proposed Project and the operation of the Proposed Project will include hazardous materials with the potential to degrade water quality only if a significant spill of these materials occurred and was not addressed before the hazardous materials mixed with ground water or surface water. During construction, oil and fuel will be used for operation of construction equipment. During operation, the transformers in the SCE Natural Substation will contain oil. These hazardous materials have a potential to impact and degrade water quality if they are spilled. The Proposed Project will implement a SWPPP and a SPCC to prevent spills and also to address a spill and prevent contact with water. The SWPPP implemented for the Proposed Project construction would minimize the effects of any oil, fuel, or construction-related fluids that have the possibility of being leaked from equipment and discharged with storm water (refer to Section 4.7 Hazards and Hazardous Materials, for more information on the use and control of hazardous materials during construction). The SPCC implemented for the Proposed Project operation would minimize the effects of any oil that have a possibility of being leaked from transformer equipment and existing wells, which is discharged to water drainages. The SPCC will include a description of the containment surrounding the transformers and procedures for inspecting accumulated storm water from the containments to ensure that storm water quality is not impacted with oil before discharge to the drainage system. Implementation of the SWPPP and the SPCC will reduce the impact of the Proposed Project to less than significant for the risk of substantially degrading water quality.

Would the Proposed Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Only a small portion (~ 2,000 feet) of the existing SCE 66 kV sub-transmission lines south of the Newhall Substation are located within a FEMA designated 100-year Flood Hazard Zone, as illustrated on Figure 4.8-1. The existing SCE 66 kV sub-transmission lines are supported by towers. The existing towers will be replaced with engineered tubular steel poles (TSPs) and the line will be re-conducted. The existing towers have four legs with connecting cross beams located at the base of each tower. TSPs are a single steel pole. During a flood event, organic debris including tree branches would be more likely to be caught and retained on the existing towers than the proposed TSPs because the existing towers have more surfaces and more surface area perpendicular to the direction of the flood flow than the TSPs. Therefore the existing towers have a greater probability to retain organic debris that could impede or redirect a flood flow than the proposed TSPs. The TSPs will replace the existing towers and so will reduce the potential to impede or redirect flood flows due to accumulated debris at the base. Therefore there is less than significant impact from the replacement of the existing towers with the proposed TSPs.

The proposed SCE Natural Substation and the proposed Central Compressor Station are not located within a FEMA designated flood zone. Therefore, there is a less than significant impact on placing structures in a 100-year flood hazard that could impede flood flows.

Would the Proposed Project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?

The Proposed Project is located more than 15 miles from the Pacific Ocean at an elevation about 1,800 feet above MSL, and reasonably beyond the impact of a tsunami.

Review of the State of California Department of Mines and Geology seismic hazards maps for the Oat Mountain and Newhall quadrangles (CDMG, 1998) indicates that the Proposed Project is located within areas of earthquake induced landslide potential (refer to Section 4.6 Geology, Soils, and Seismicity, for more information). The final design of the Proposed Project, including the proposed SCE 66 kV sub-transmission modifications, will include geotechnical considerations to address any potential effects from landslides.

The Proposed Project is not located down stream of a levee or dam or a water body that could fail due to or be affected by a seiche in the event of moderate or stronger ground motion. Therefore the Proposed Project would not impede flood flows from a seiche and so could not expose people or structures to a significant risk from a flood flow due to seiche. The Proposed Project would not have an impact to the risk from a flood flow due to seiche.

Based on the above, the Proposed Project will not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Would the Proposed Project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Because the Proposed Project does not involve housing, there would be no impacts associated with placing housing within a 100-year floodplain.

Would the Proposed Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The Proposed Project is not located down stream of a levee or dam or a water body. The proposed SCE Natural Substation and the proposed SoCalGas Central Compressor Station are not located within a FEMA designated flood zone. Only a small portion (~ 2,000 feet) of SCE's existing 66 kV sub-transmission lines south of the Newhall Substation are located within a FEMA designated 100-year Flood Hazard Zone.

The existing SCE MacNeil-Newhall-San Fernando and Chatsworth-MacNeil-Newhall-San Fernando existing source lines are supported on the same towers. The existing towers will be replaced with TSPs and the line will be re-conducted to one span south of the SCE Chatsworth Tap. The existing towers have four legs with connecting cross beams located at the base of each tower. TSPs are a single steel pole. During a flood event, organic debris including tree branches would be more likely to be caught and retained on the existing towers than the proposed TSPs because the existing towers have more surfaces and more surface area perpendicular to the direction of the flood flow than the TSPs. Therefore the existing towers have a greater probability to retain organic debris that could impede or redirect a flood flow than the proposed TSPs. The existing towers have a greater potential to expose people or structures to the risk of flooding from impeding or redirecting flood flows. The TSPs will replace the existing towers and so will reduce the potential to impede or redirect flood flow due to accumulated debris at the base and so will reduce the potential to expose people or structures to a significant risk from flooding. Therefore the impact of replacing the existing towers with TSPs will result in a reduced potential to expose people or structures to a significant risk from flooding and will result in a reduced or no impact of the Proposed Project to exposing people or structures to a significant risk from flooding.

4.8.5 Mitigation Measures

The Proposed Project was determined to have **a less than significant impact without mitigation** due to construction and operation; therefore no mitigation measures are recommended. As identified above, the Proponent intends to comply with all applicable regulatory and permit requirements that are designed to minimize impacts to hydrology and water quality. Compliance plans that will be implemented include a construction phase SWPPP, a separate SPCC Plan for the proposed SCE Natural Substation and an update of the existing SWPPP and SPCC Plan developed for the Storage Facility including the Central Compressor station. If any BMPs are required or proposed by either Los Angeles County or the City of Los Angeles for storm water mitigation, the design will include these measures.

4.8.6 References

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