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4.11 Soil Resources

4.11.1 Introduction

This soils section discusses the potential impacts of the PRP on soil resources and provides an assessment of the significance of impacts to soil resources during construction and operation for the PRP site and associated linear facilities (i.e., natural gas supply, water supply, water discharge, stormwater discharge, and electric transmission line corridors).

4.11.2 Laws, Ordinances, Regulations and Standards

The federal, state, and local LORS that apply to soil resources for the PRP are discussed below, and are summarized in Table 4.11-1.

Table 4.11-1. Laws, Ordinances, Regulations, and Standards for Agricultural and Soil Resources
Small Power Plant Exemption Application for the Pomona Repower Project

Jurisdiction	LORS	Requirements/Applicability	Administering Agency	SPPE Section Explaining Conformance
Federal	1972 Amendments to Federal Water Pollution Control (CWA, including 1987 amendments)	Regulates stormwater and non-stormwater discharges from construction and industrial activities	RWQCB – Los Angeles Region (4) and SWRCB. USEPA has oversight authority.	Subsection 4.11.2.1
	Natural Resources Conservation Service (1983), *National Engineering Handbook*, Sections 2 and 3	Standards for soil conservation	Natural Resources Conservation Commission	Subsection 4.11.2.1
State	Porter-Cologne Water Quality Control Act	Regulates stormwater discharge to state waters and to land	RWQCB – Los Angeles Region (4) and SWRCB	Subsection 4.11.2.2
	CBC	Discusses requirements for grading	Adopted locally; City of Pomona	Subsection 4.11.2.2
Local	City of Pomona General Plan	Describes local policies for protection of soil and water resources.	City of Pomona Community Development Department, Planning Division	Subsection 4.11.2.3
	City of Pomona Municipal Code	Regulates grading, erosion, and sediment control for construction projects within City Limits	City of Pomona, Public Works Department, Building and Safety Division	Subsection 4.11.2.3

4.11.2.1 Federal LORS

Federal Water Pollution Control Act of 1972 and the Clean Water Act of 1977. The 1972 Amendments to the Federal Water Pollution Control Act, commonly referred to as CWA, established requirements for discharges of stormwater or wastewater from any point source that would affect the beneficial uses of waters of the United States. Section 402 of the CWA effectively prohibits discharges of stormwater from construction sites unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The SWRCB is the permitting authority in California and has adopted a statewide general permit for stormwater discharges associated with construction activity (SWRCB, 2012) that

applies to projects resulting in 1 or more acres of soil disturbance. The project will result in disturbance of more than 1 acre of soil. Therefore, it will require coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Order No. 2009-0009-DWQ), which includes development and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) to meet permit requirements. Requirements are described in greater detail in Section 4.14, Water Resources.

U.S. Department of Agriculture Engineering Standards. The National Engineering Handbook (National Resource Conservation Service [NRCS], 1983), Sections 2 and 3 provide standards for soil conservation during planning, design, and construction. Activities associated with the project will conform to applicable standards in the National Engineering Handbook to ensure that the project will not cause soil loss through accelerated erosion.

4.11.2.2 State LORS

California Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (California Water Code, Division 7) provides for overall regulation under state law of water quality affecting all state waters, including both surface waters and groundwater. Under the Porter-Cologne Water Quality Control Act, the SWRCB has the ultimate authority over water quality policy, and nine RWQCBs oversee water quality on a day-to-day basis at the local/regional level. The Los Angeles RWQCB oversees surface water discharges in the PRP area, and the project will need to comply with all relevant Water Quality Control Plan (Basin Plan) provisions for this region.

California Building Code. The City of Pomona has adopted Appendix J of the CBC, which discusses requirements for grading and soils work, including permitting.

4.11.2.3 Local

City of Pomona General Plan. The City of Pomona General Plan (City of Pomona, 2014) presents policies that provide for guidance and implementation of land use controls in and around the City. Applicable policies to soil resources include:

- Section 7-F Community Design, which discusses requirements for qualified personnel to monitor grading if there is a potential to affect a historic resource structure, or any cultural, archeological, or paleontological resources.
- Section 7-E Conservation, which discusses requirements for control of surface-water runoff via the NPDES permit process.
- Section 7-G Noise and Safety, which discusses potential soil hazards, especially liquefaction, and potential of landslides when grading slopes.

While these policies have a peripheral relationship to soil resources, the applicability of the above-listed policies are discussed in more detail in the following sections of this Application: Section 4.4 Geologic Resources and Hazards Geology; Section 4.8 Paleontological Resources; and Section 4.14, Water Resources.

City of Pomona Municipal Code. Prior to construction of the project and associated linears, the City will issue the necessary permits in accordance with Sections 62-871, et seq., Diversion of Construction and Demolition Waste, of the Pomona City Code. (City of Pomona, 2013)

BMPs for the prevention of soil erosion and sedimentation for new developments and redevelopments are outlined in Section 18-495, and include requirements for NPDES permits.

4.11.3 Environmental Setting

The 2-acre PRP site is located within the City of Pomona in the southeastern portion of Los Angeles County. The site is located within an industrial area, at the site of the current San Gabriel Facility. It is located north of Mt. Vernon Avenue, with W. Holt Ave to the north, Erie Street to the west, and an unnamed alley to the east.

All surrounding properties are currently have industrial land uses, including a duct work and steel fabrication manufacturer (Superior Duct Fabrication), a paper products distributor (Allen Company Roll Division), an SCE substation, several recycling facilities (Precision Scrap Handling Systems and Ecoplast), and railroad tracks. The PRP site has been in industrial use since the 1930s, first as a part of a larger paper mill, and then as a cogeneration facility, which was developed in 1985 (AECOM, 2014).

The PRP site is located just north of the existing SCE Ganesha substation. Once constructed, the PRP will be connected to this substation by an existing 66kV sub-transmission line (which will be reconductored). Existing connections for potable water, recycled water, and gas are already present onsite. Offsite construction parking and laydown areas will be required. To the degree possible, adjacent property will be used (see Figure 2.3-1 for proposed locations).

A description of the soils in the project area was developed using the online soil survey information for the site via Web Soil Survey (NRCS, 2015). Because the site is in a highly-developed, urban area, specific soil information was not available for the property. The generalized soil descriptions from the Digital General Soil Map of the United States (STATSGO2) were used to obtain general soil information for the project area. This dataset consists of general soil association units comprised of groupings of soils with similar properties. Due to the highly developed nature of the property, it is also likely that fill soils underlie parts of the project area. Urban development often entails significant mixing of local soils from grading and the import of construction fill soils beneath foundations and roadways. These imported soils would necessarily have to be suitable for compaction to support structures and roadways, so they are expected to consist of a mixture with a wide range of coarse-textured particle sizes (from silt to gravel sizes). They would not be expected to contain unsuitable materials such as organic debris or expansive clays.

Soil map units for the project area are identified in Figure 4.11-1. Soil map unit characteristics for the area that would be potentially affected by project construction are summarized in Table 4.11-2. The project area includes the project site and project laydown areas. The table summarizes depth, texture, drainage, permeability, water runoff, and items related to revegetation potential. Actual soil conditions in the project area could differ from what is described in the generalized soil descriptions because of the potential for previous grading or other earthmoving activities at the site, and natural soil variation.

Table 4.11-2. NRCS Soil Map Unit Descriptions and Characteristics
Small Power Plant Exemption Application for the Pomona Repower Project

Map Unit	Description	
s1027	Urban land-Tujunga-Soboba-Hanford	
	The entire project site lies in this soil unit.	
	Landform:	Alluvial fans and floodplains
	Parent material:	Alluvium from granite
	Typical profile:	Sandy loam to loamy sand throughout
	Shrink-swell potential:	Low
	Depth and drainage:	Very deep, well to excessively drained
	Permeability:	Moderately rapid to very rapid
	Runoff class:	Negligible to low
	Capability class:	Not given
	Taxonomic class:	Tujunja: Mixed, thermic, Typic Xeropsamments Soboba: Sandy-skeletal, mixed, thermic Typic Xerofluvents Hanford: Coarse-loamy, mixed, superactive, nonacid, thermic Typic Xerorthents

Note:

Soil characteristics are based on soil mapping provided in STATSGO2, and a review of the corresponding NRCS OSDs. Soil map units described above are limited to those that would be directly impacted by the PRP and associated linear features.

4.11.3.1 Agricultural Use

The PRP site and linear features are located in the City of Pomona, within areas currently designated for light industrial use. The soils mapped at the project site and surrounding areas have been developed for industrial uses; given the current and historical land use, these areas are now unsuitable for commercial crop production.

4.11.3.2 NRCS Soil Map Units

Table 4.11-1 describes the properties of the NRCS soil map units found in the vicinity of the project site. As shown in Figure 4.11-1, the project site is associated with the soil association Urban Land-Tujunga-Soboba-Hanford. These soils developed in granitic alluvium, and have sandy textures throughout. The Phase 1 ESA of the project site (AECOM, 2014) noted that a portion of an adjacent property had soil excavated and removed during the removal of a LUST; in addition, fill soil may have been added during past development of the property, so there is potential for the soils underlying the project site to differ from the native soils described by the NRCS.

4.11.3.3 Potential for Soil Loss and Erosion

The factors that have the largest effect on soil loss include steep slopes, lack of vegetation, and erodible soils composed of large proportions of silt and fine sands. The runoff class designations for soils in the project area, as shown in Table 4.11-2, are indicated to be low to negligible. Topographic slopes in the immediate project area are expected to be nearly level, given the developed nature of the area. Considering the nearly level topography, soil type, existing development, and the anticipated use of construction erosion control BMPs, the overall potential for soil loss from water erosion is considered to be negligible.

The sandy surface materials would normally be expected to be very susceptible to wind erosion. However, the onsite soils are expected to be somewhat compacted beneath the paving and structures, which could mitigate wind erosion potential. In addition, the developed nature of the site and surrounding properties will limit locally significant ground-level winds that could lead to excessive wind erosion. The largest potential for wind erosion will exist during the demolition of the existing facility because site soils will be exposed. The use of BMPs to prevent erosion is expected to reduce this risk to a negligible amount.

4.11.3.4 Other Significant Soil Characteristics

Given the developed nature of the current site, the site has been completely leveled. Given the well to excessively drained soil conditions and the developed nature of the project site, the presence of saturated or hydric soils that occur in wetlands are not expected. Similarly, the coarse textured soil conditions described by the NRCS indicate that fine-textured (i.e., clayey), expansive soils are not likely in the project area.

4.11.4 Impacts

Potential impacts to soil resources are described below.

4.11.4.1 CEQA Environmental Checklist

The checklist in Table 4.11-3 assesses the significance of potential impacts.

4.11.4.2 Discussion of Impacts

The following information is intended to allow assessment of impacts associated with the proposed project activities.

PRP Site. The soil association mapped on the PRP site is Urban land-Tujunga-Soboba-Hanford. The soils of this association are dominated by alluvial sands or construction fill, which have likely been compacted

to provide footing for the existing buildings onsite. During project activities, a portion of the site will be disturbed by demolition. After construction is completed, the site will be covered (with project facilities, gravel, pavement, or vegetation) to minimize subsequent water and wind erosion. The onsite soils have already been disturbed by previous development activities, and decades of industrial use. Because the site is already in an urban, industrial use, the impacts to biological characteristics of the soil are expected to be minimal.

Table 4.11-3. CEQA Checklist to Assess Potential Impacts
Small Power Plant Exemption Application for the Pomona Repower Project

Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
SOILS—Would the project:				
Result in substantial soil erosion or the loss of topsoil?			**X**	
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				**X**
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				**X**

Changes in the physical characteristics of the soil will not occur due to the mechanical compaction required to provide suitable foundation support for the structures associated with the generating facility. It is assumed that the soils were previously compacted during the construction of the existing facilities; after structure demolition, it is anticipated that the soil will be returned to this compacted state.

The PRP site has not been used for agricultural purposes for many decades. Construction of the PRP would not change farmland status, nor would it remove land from agricultural production.

The soil loss potential from water erosion was not calculated because construction activities will occur within previously developed portions of the City of Pomona. Construction activities will employ mitigation and sedimentation/erosion controls consistent with construction BMPs to avoid water and wind erosion. Problems with offsite movement of soil are not anticipated given the soil type and nearly level nature of the PRP property and surroundings. After the facilities are constructed, bare soil areas will either be revegetated or covered with a protective layer (gravel, asphalt, or concrete), and surface runoff water will be routed to the existing City of Pomona storm drain.

There are no anticipated risks due to expansive soils associated with the project or linears. The mapped soils units in the PRP area have sandy loam to sand textures, and the presence of expansive clays at depth was not indicated in the NRCS soil information. PRP will tie into planned sanitary wastewater facilities so onsite septic systems will not be required. The presence of jurisdictional wetlands on the PRP site or along linear routes is not anticipated.

Reconductoring of 66-kV Transmission Lines. Reconductoring of the 66-kV transmission lines (gen-tie line) would occur on the existing transmission towers, which are located above previously developed and paved property. Because of this, the anticipated impacts to soil resources from reconductoring will be less-than-significant.

Water Supply, Sewer, and Gas Tie-ins. Existing connections for potable water, recycled water, sanitary sewer, and natural gas are present onsite; therefore, no adverse impacts are anticipated from linear features.

Operations at the Completed PRP Facility. PRP Facility operation will not result in impacts to the soil from erosion or compaction. Routine vehicle traffic during project operation will be limited to existing roads, which will be paved. Standard operating activities will not involve the disruption of soil. Anticipated impacts to soil resources from project operations will be less-than-significant.

Summary of Impacts. There are no lands currently used for agricultural purposes that would be affected by the project or linear facilities. No lands would be converted from farmland to a non-farmland use, due to the previously developed, industrial nature of the PRP site and surrounding area.

Use of BMPs during construction (see Section 4.11.5) will reduce the potential for soil erosion to a less-than-significant level. Gravel or asphalt covering undeveloped portions of the PRP site will reduce the potential for soil erosion after project completion to a less-than-significant level.

4.11.5 Cumulative Effects

The current City of Pomona General Plan designates the PRP site and vicinity for industrial purposes, which is consistent with the project. The PRP site is currently used for power generation, so the use would not change due to the project activities. Therefore, potential cumulative impacts associated with the PRP are considered to be less-than-significant.

4.11.6 Mitigation Measures

BMPs in accordance with the SWPPP and Drainage, Erosion and Sediment Control Plan (DESCP) will be used to minimize erosion at the site during construction. These erosion-control measures would be required to help maintain water quality, protect property from erosion damage, and prevent accelerated soil erosion or dust generation that destroys soil productivity and soil capacity. Typically, these measures include mulching, physical stabilization, dust suppression, berms, ditches, and sediment barriers. Water erosion and sedimentation will be mitigated through the use of surface protections and sediment barriers. Wind erosion potential will be reduced significantly by keeping soil moist or by covering soil stockpiles. Upon completion of construction activities, land surfaces will be permanently stabilized. The PRP site will be paved or completely covered with structures or pervious ground cover (for example, gravel or landscape). Therefore, soil erosion losses after construction are expected to be less than significant.

4.11.6.1 Temporary Erosion Control Measures

BMPs will be implemented during construction in accordance with the SWPPP required by the State's General Construction Permit for all construction projects over 1 acre in size that discharge to the nation's waters. Additionally, the CEC requires that project owners develop and implement a DESCP to reduce the impact of runoff from the construction site. In some cases, the DESCP may be combined with the SWPPP.

Temporary erosion control measures required for the SWPPP and DESCP would be implemented before construction begins, and would be evaluated and maintained during construction. These measures typically include, but are not limited to: revegetation, mulching, physical stabilization, dust suppression, berms, ditches, and sediment barriers. Temporary measures would be removed from the site after the completion of construction. The level nature of the PRP site and the coarse textured underlying soils, effectively reduce the potential for significant runoff.

During construction of the project, dust erosion control measures would be implemented to minimize the wind-blown loss of soil from the site. Water of a quality equal to or better than existing surface

runoff would be sprayed on the soil in construction areas to control dust prior to completion of permanent control measures.

Sediment barriers, which slow runoff and trap sediment, would be incorporated as discussed below. Sediment barriers include straw bales, sand bags, straw wattles, and silt fences. These features are generally placed below disturbed areas, at the base of exposed slopes, and along streets and property lines below the disturbed area. Sediment barriers are often placed around sensitive areas to prevent contamination by sediment-laden water near areas such as wetlands, creeks, or storm drains.

The PRP will be constructed on relatively level ground; therefore, it is not considered necessary to place sediment barriers around the entire property boundary. However, barriers may be placed in locations where offsite drainage could occur to prevent sediment from leaving the site. If used, sediment barriers would be properly installed (e.g., staked and keyed into the ground surface), then removed or used as mulch after construction. Runoff detention basins, drainage diversions, and other large-scale sediment traps are not considered necessary because of the PRP site's small size, level topography, and surrounding paved areas. Sediment barriers will be installed around the base of the soil stockpiles, and stockpiles will be stabilized and covered.

Mitigation measures, such as watering exposed soil surfaces, are used to reduce PM_{10} emissions during construction activities. The PM_{10} reduction efficiencies are taken from the SCAQMD CEQA Handbook (SCAQMD, 1993) and were used to estimate the effectiveness of the mitigation measures. Table 4.11-4 summarizes the mitigation measures and PM_{10} reduction efficiencies.

Table 4.11-4. Mitigation Measures for Fugitive Dust Emissions
Small Power Plant Exemption Application for the Pomona Repower Project

Mitigation Measure	PM_{10} Emission Reduction Efficiency (%)
Water active sites at least twice daily	34 to 68
Enclose, cover, water twice daily, or apply non-toxic soil binders, according to manufacturer's specifications, to exposed piles (gravel, sand, dirt) with 5 percent or greater silt content	30 to 74

Source:

SCAQMD CEQA Handbook, Table 11-4 (1993)

4.11.6.2 Permanent Erosion Control Measures

Permanent erosion control measures on the site will be addressed as part of a mitigation monitoring plan. The plan could include items such as drainage systems, graveling, paving, and long-term revegetation or landscaping. Revegetation or landscaping would follow from planting for short-term erosion control if required as part of the SWPPP.

The mitigation monitoring plan will include performance standards and monitor the effectiveness of revegetation mitigation measures. This plan will address the timing and methods for monitoring plant establishment, as well as reporting and response requirements.

4.11.7 Agencies and Agency Contacts

Permits required for the project, the responsible agencies, and schedule are shown in Table 4.11-5.

Table 4.11-5. Agency Contacts
Small Power Plant Exemption Application for the Pomona Repower Project

Agency	Name/Title	Phone Number/Address
Building and Safety Division	Terri Abercrombie, Permit Technician Supervisor	(909) 620-2371

4.11.8 Permits and Permit Schedules

Table 4.11-6 lists the permits related to soils and the permit schedule.

Table 4.11-6. Permits and Permit Schedule for Soils
Small Power Plant Exemption Application for the Pomona Repower Project

Permit	Contact Information	Schedule
Demolition Permit, if needed	Darron Poulsen* Water/Wastewater Operations Director (909) 620-2253 505 S. Garey Avenue Pomona CA 91766 darron_poulsen@ci.pomona.ca.us	Obtain prior to the start of demolition

* The City of Pomona has asked us to use Mr. Poulsen as the point of contact for this project.

4.11.9 References

AECOM. 2014. *Environmental Due Diligence Evaluation - San Gabriel Cogeneration Facility; 1507 Mount Vernon Avenue, Pomona, California.* September.

City of Pomona. 2013. Pomona City Code. https://www.municode.com/library/ca/pomona/codes/code_of_ordinances. Updated October 7.

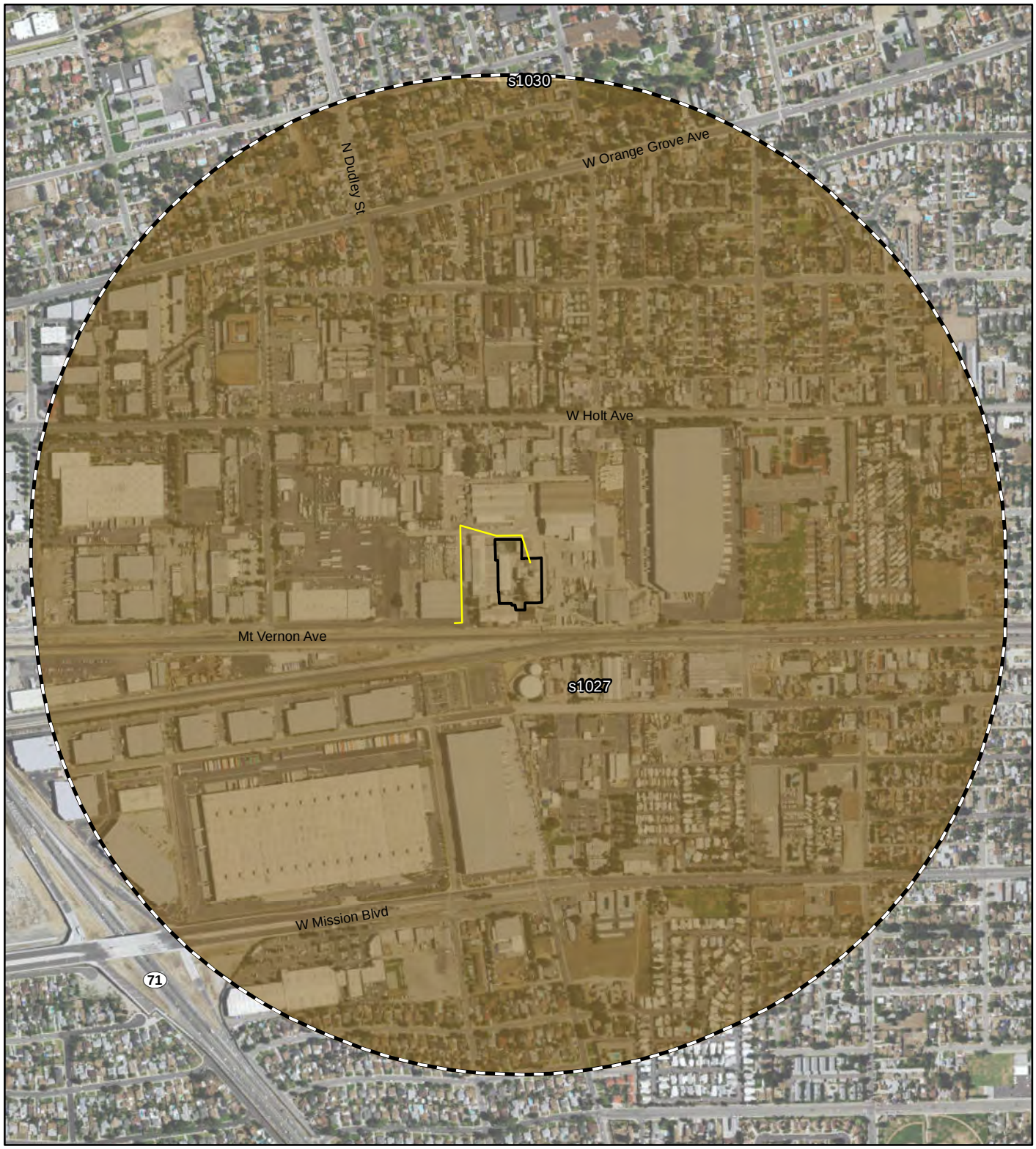
City of Pomona. 2014. *Pomona General Plan.* Adopted in March. http://ci.pomona.ca.us/index.php/280-announcements/1310-general-plan-update-project-2013.

National Resource Conservation Service (NRCS). 1983. *National Engineering Handbook*. http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Soil Survey Staff. 2015. Official Soil Series Descriptions http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/home/?cid=nrcs142p2_053587. Verified November 27.

South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Diamond Bar, California.

State Water Resources Control Board (SWRCB). 2012. General Construction Permit. http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf. Verified November 27, 2015.



LEGEND

- Existing 66kV Transmission Line
- 0.5-mile Project Buffer
- Project Location

NRCS Soil Map Unit

- Soper-Fontana-Calleguas-Balcom-Anaheim (s1030)
- Urban land-Tujunga-Soboba-Hanford (s1027)

N

0 800

Feet

1:9,600

FIGURE 4.11-1

NRCS Soil Map Units within Project Area
Pomona Repower Project
Pomona, California

Source Information: Esri World Imagery; USDA NRCS

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