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5.3 AGRICULTURE AND SOILS

This section discusses the soils and agricultural resources for the proposed Salton Sea Unit 6 Project (SSU6 Project).

5.3.1 Affected Environment

5.3.1.1 Introduction

The proposed SSU6 Project is located south of the Salton Sea. This region of the Imperial Valley is used mostly for agriculture and geothermal power production. The Alamo River is east of the project area, and the New River enters the Salton Sea to the southwest. This section discusses the affected soil and agricultural resources for the SSU6 Project.

The affected environments for soil and agriculture resources are described in this section. Potential impacts are discussed in Section 5.3.2, cumulative impacts are discussed in 5.3.3, and applicant-committed mitigation measures are presented in Section 5.3.4. Tables and figures are found at the end of this section.

5.3.1.2 Regional Setting

Imperial County is a rural agricultural county in the southern portion of the Imperial Valley. The region has a long growing season and low precipitation (approximately 2.8 inches per year). Precipitation occurs primarily from mid-fall to mid-spring. Summers are long and hot; winters are mild. Imperial County is a leading agricultural area because of both environmental and cultural factors including good soils, a year-round growing season, the availability of adequate water transported from the Colorado River by a complex canal system, extensive areas committed to agricultural production, a gently sloping topography, and a climate that is well-suited for growing crops and raising livestock (Imperial County General Plan, Agricultural Element, 1993).

Approximately 20 percent of Imperial County is irrigated for agricultural purposes. Most irrigated agricultural land (512,163 acres) occurs in the Imperial Valley. Irrigation water was first delivered to the Imperial Valley in June 1901, by the California Development Corporation by diverting it from the Colorado River through a channel cut in Mexico to the Alamo River. In 1905 the Colorado River flooded and ran uncontrolled through Imperial Valley, inundating 488 square miles of farmland and creating the Salton Sea. The water delivery system was improved over the next several decades including the completion of the All American Canal, which replaced the Alamo Canal, in 1941. The Imperial Irrigation District (IID) has operated the water system since 1911. Irrigation agriculture in Imperial Valley is extremely diverse and includes many types of vegetable crops including lettuce, carrots, onions, tomatoes, cauliflower, and broccoli; alfalfa, Sudan grass, and other animal feed; sugar beets; wheat and other grains; melons; cotton; and various citrus, fruits, and nuts (Imperial County General Plan, Agricultural Element, 1993).

The IID water service area is generally level, with low levels of natural erosion. Erosion is dependent on texture (i.e., clay, sand, or silt content), moisture content, and agronomic practices (i.e., cropped, fresh-tilled, or fallow). Lacustrine basin soils in the IID water service area formed on nearly level old lakebeds near prehistoric Lake Cahuilla. These soils generally consist of silty

clays, silty clay loams, and clay loams; and are deep and highly calcareous; and usually contain gypsum and soluble salts. The central areas in the IID water service area generally have fine-textured silts, which are primarily used for crops. Soils within Imperial County have no potential for farming, unless irrigated, because of the dry climate. Continued agricultural use of soils within the IID water service area requires both irrigation and installation of subsurface tile drains to carry away water and salts that would have otherwise built up in the soils and prevented crop growth. Tile drains discharge irrigation water to surface drains (IID, 2000).

5.3.1.3 Affected Soils Resource

Soil types near the SSU6 Project are described and mapped at the level of "mapping units," which are defined to the approximate level of detail appropriate for soil management decision making. The location of, and properties of, the soil-mapping units are based on interpretation of the Soil Survey of the Imperial Valley Area (Soil Conservation Service [SCS], 1981). The SCS is now known as the Natural Resource Conservation Service (NRCS). Fifteen soil-mapping units will be potentially affected by the construction of the SSU6 Project. Soil types identified for the various SSU6 Project components (i.e., SSU6 plant, IID substation, construction parking and lay-down areas, transmission lines, production and injection well pads and pipelines) are listed by acreage or milepost (MP) in Table 5.3-1 and shown on Figures 5.3-1A through 5.3-1E. Table 5.3-2 summarizes the physical and chemical characteristics of these 15 soil-mapping units and provides interpretations for erosion (erosion hazard index and re-vegetation potential) and agricultural productivity (land capability, etc.).

The SSU6 Project is underlain by soil mapping-units formed primarily on flood plains and alluvial basin floors and are generally composed of very deep soils, with slow to moderately rapid permeabilities, slow runoff, and low to high shrink-swell potential. Because of extensive irrigation, a perched water table is often present at depths of 36 to 60 inches, and can rise to a depth of 18 inches during periods of heavy irrigation.

The following paragraphs provide a brief description of the soil-mapping units potentially affected by construction of the SSU6 Project.

5.3.1.3.1 Fluvaquents, Saline

This nearly level, very deep saline soil is poorly drained and forms in flood plains within the project area. The representative profile is greater than 60 inches. Soil textures range from silty clay to fine sand soil, with a water table at a depth of 36 inches. The hazard to erosion is slight. Surface runoff is slow to ponded. This soil unit is poorly suited to urban development because of the high water table, flood hazard, and salinity.

This soil-mapping unit is mapped beneath 0.19 acres of the plant facility and 0.06 miles of pipeline.

5.3.1.3.2 Glenbar Clay Loam, Wet

This nearly level, very deep soil forms on flood plains and alluvial basins within irrigated portions of the project area. The representative soil profile is greater than 60 inches. The surface texture of this soil type is clay loam, and it has a seasonal shallow perched water table because of

irrigation. The shrink-swell potential of this soil type is moderate. The susceptibility of the soil to erosion from water and wind is moderate.

This soil-mapping unit is mapped beneath 0.18 miles of the IID Midway Interconnection and 0.15 miles of pipeline.

5.3.1.3.3 Glenbar Complex

This nearly level, very deep well-drained calcareous soil complex forms along the edges of valleys in non-irrigated portions of the project area. The representative soil profile is greater than 60 inches. The surface texture of this soil type is loam. This soil complex is highly susceptible to water erosion and moderately susceptible to wind erosion. The soil's permeability is moderately slow and the shrink-swell potential is low to moderate.

This soil-mapping unit is mapped beneath 0.56 miles of the L-Line Interconnection.

5.3.1.3.4 Holtville Silty Clay, Wet

This nearly level, very deep poorly drained soil forms on flood plains and alluvial basin floors in the project area. The representative soil profile is greater than 60 inches. The surface texture of this soil type is silty clay. This soil is moderate to highly susceptible to water erosion and moderately susceptible to wind erosion. The soil's permeability is slow to rapid and the shrink-swell potential ranges up to a high susceptibility to wind erosion. This soil has a high seasonal water table because of irrigation. This soil unit generally has severe limitations for building development because of the soil's high shrink-swell potential and low soil strength and will require appropriate building foundation design.

Approximately 37 percent of the SSU6 plant facility is underlain by this soil-mapping unit. This soil-mapping unit is mapped beneath 28.41 acres of the plant facility, 4.5 acres of the construction parking area, 7.2 acres of the construction lay-down area, 27.86 acres of well pads, 4.6 miles of the L-Line Interconnection transmission line, 3.57 miles of the IID Midway Interconnection and 2.77 miles of pipeline.

5.3.1.3.5 Imperial Silty Clay

This nearly level, very deep moderately well drained soil forms on flood plains, basin floors, and lakebeds in the project area. The representative soil profile is greater than 60 inches. The soil texture is silty clay throughout the entire soil profile. This soil is highly susceptible to water erosion and moderately susceptible to wind erosion. The soil's permeability is slow and the shrink-swell potential is high.

This soil-mapping unit is mapped beneath 0.7 miles of the L-Line Interconnection.

5.3.1.3.6 Imperial Silty Clay, Wet

This nearly level, very deep poorly drained soil forms on flood plains, basins, and lakebed in the project area. The representative soil profile is greater than 60 inches. The soil texture is silty clay throughout the entire soil profile. The soil is highly susceptible to water erosion and

moderately susceptible to wind erosion. This soil has a seasonal high water table because of irrigation. The permeability is slow and the shrink-swell potential is high.

This soil-mapping unit is mapped beneath 0.5 miles of the L-Line Interconnection and 6.07 miles of the IID Midway Interconnection.

5.3.1.3.7 Imperial-Glenbar Silty Clay Loams, Wet, 0 to 2 Percent Slope

This nearly level, very deep, poorly drained, calcareous soil forms in floodplains and lakebeds with irrigated portions of the project area. The representative soil profile is greater than 60 inches. The surface soil texture is silty clay loam. The soil is highly susceptible to water erosion and moderately susceptible to wind erosion. The permeability is slow to rapid and the shrink-swell potential ranges from moderate to high. This soil unit generally has severe limitations for building development because of the soil's shrink-swell potential and low soil strength and will require appropriate building foundation design.

Approximately 63 percent of the plant facility is underlain by this soil-mapping unit. This soil-mapping unit is mapped beneath: 47.45 acres of the plant facility, 0.12 acres of the construction parking area, 13 acres of the construction lay-down area, 8.25 acres of well pads, 5 miles of the L-Line Interconnection, 3.51 miles of the IID Midway Interconnection and 0.99 miles of pipeline.

5.3.1.3.8 Indio Loam, Wet

This nearly level, very deep, poorly drained soil forms on flood plains and basin floors in the project area. The representative soil profile is greater than 60 inches. The soil's surface texture is loam. The soil is highly susceptible to water erosion and moderately susceptible to wind erosion. This soil has a seasonal high water table because of irrigation. The permeability is moderate and the shrink-swell potential is low.

This soil-mapping unit is mapped beneath 0.28 miles of the L-Line Interconnection.

5.3.1.3.9 Meloland Fine Sand

This nearly level, very deep, well-drained soil forms on flood plains and basin floors on the valley edges of non-irrigated portions of the project area. The representative soil profile is greater than 60 inches. The soil's surface texture is fine sand. The soil is moderately to highly susceptible to water erosion and highly susceptible to wind erosion. The permeability is slow and the shrink-swell potential is low to high.

This soil-mapping unit is mapped beneath 0.46 miles of the L-Line Interconnection.

5.3.1.3.10 Meloland Very Fine Sandy Loam, Wet

This nearly level, very deep, poorly drained soil forms on flood plains and basin floors in the project area. The representative soil profile is greater than 71 inches. The soil's surface texture is very fine sand. The soil is moderately to highly susceptible to water erosion and moderately susceptibility to wind erosion. This soil has a seasonal high water table because of irrigation. The permeability is slow and the shrink-swell potential is low.

This soil-mapping unit is mapped beneath 1.14 miles of the L-Line Interconnection and 0.96 miles of the IID Midway Interconnection.

5.3.1.3.11 Meloland and Holtville Loams, Wet

This nearly level, very deep, calcareous soil forms on flood plains and basin floors within the project area. The representative soil profile is greater than 60 inches. The soil's surface texture is loam. The soil has a moderate to high susceptibility to water erosion and moderate susceptibility to wind erosion. This soil has a seasonal high water table because of irrigation. The permeability is slow and the shrink-swell potential is low to high.

This soil-mapping unit is mapped beneath 0.26 miles of the L-Line Interconnection.

5.3.1.3.12 Niland Gravely Sand, Wet

This nearly level, very deep soil forms on the edges of flood plains and basin floors within the project area. The representative soil profile is greater than 60 inches. The soil's surface texture is gravelly sand. The soil has a moderate susceptibility to water erosion and high susceptibility to wind erosion. This soil has a seasonal high water table because of irrigation. The permeability is slow and the shrink-swell potential is low to high.

This soil-mapping unit is mapped beneath 0.57 miles of the IID Midway Interconnection.

5.3.1.3.13 Torriorthents-Rock Outcrop, 5 to 60 Percent Slopes

A soil-rock complex, which consist of about 20 percent rock outcrop. The soil portion of this soil-mapping unit consists of 15 to 30 percent rock fragments. The surface textures of the soils are loams and loamy sands. No shrink-swell or erosion potential has been assigned to the soil-rock outcrop complex.

This soil-mapping unit is mapped beneath 4.82 acres of well pads and 0.3 miles of pipelines.

5.3.1.3.14 Vint Loamy Very Fine Sand, Wet

This nearly level, very deep, poorly drained soil forms in basin floors and flood plains within the project area. The representative soil profile is greater than 60 inches. The soil's surface texture is loamy very fine sand. The soil has a low to moderate susceptibility to water erosion and moderate susceptibility to wind erosion. This soil has a seasonal high water table because of irrigation. The permeability is moderately rapid and the shrink-swell potential is low.

This soil-mapping unit is mapped beneath 0.75 miles of the L-Line Interconnection.

5.3.1.3.15 Vint and Indio Very Fine Sandy Loams, Wet

This nearly level, deep to very deep soil forms in old lakebed sediments within the project area. The representative soil profile is greater than 60 inches. The soil's surface texture is very fine sandy loam. The soil has a low to high susceptibility to water erosion and moderate

susceptibility to wind erosion. This soil has a seasonal high water table because of irrigation. The permeability is moderately rapid and the shrink-swell potential is low to high.

This soil-mapping unit is mapped beneath 0.12 miles of the L-Line Interconnection.

5.3.1.4 Agricultural and Prime Farmland

5.3.1.4.1 Agriculture

Most of the SSU6 Project is irrigated agricultural land. There are two major agricultural distribution canals near the SSU6 Project that supply water to subsurface irrigation systems. Vale Lateral 5 is adjacent to the west, and Vale Lateral 4A lateral is adjacent to the east of the SSU6 Project plant site. Vegetable crops that have been or could be grown at the SSU6 Project plant site include carrots, wheat, broccoli, lettuce, asparagus, cantaloupes (and other melons), cauliflower, onions, cabbage, sweet corn, and tomatoes. Field crops that have, or could be grown at the SSU6 Project plant site include Bermuda grass, sugar beets, alfalfa, Sudan grass, and field corn. There are typically two crops harvested per year at the SSU6 Project plant site location (Signorotti, 2002). Agricultural water consumption in this area is approximately 5 afy per acre. None of the proposed SSU6 Project components traverse land covered by Williamson Act contracts.

5.3.1.4.2 Prime Farmland

Important farmland areas were assessed using the California Department of Conservation Farmland Mapping and Monitoring Program's Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance for Imperial County (NRCS, 1995). Approximately 199,595 acres of Prime Farmland and 319,272 acres of Farmland of Statewide Importance were surveyed in Imperial County in 2000 (U.S. Department of Agriculture [USDA], 2000). Based on a review of Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance for Imperial County (NRCS, 1995), the proposed SSU6 plant facility, adjacent construction parking and lay-down areas, IID Substation, injection and production well pads (except OB3) and associated pipelines, L-Line Interconnection transmission line, and IID Midway Interconnection transmission line are in or traverse through areas designated Prime Farmland or Farmland of Statewide Importance. Farmland zoning designations for the various SSU6 Project components are listed by acreage or MP in Table 5.3-3 and illustrated on Figures 5.3-2A through 5.3-2E.

The following soil-mapping units within the SSU6 Project meet the criteria for Prime Farmland, if irrigated:

- Glenbar clay loam, wet
- Holtville silty clay, wet
- Indio loam
- Indo loam, wet
- Vint loamy very fine sand, wet
- Vint and Indo very fine sandy loams, wet
- Meloland very fine sandy sandy loam, wet
- Meloland and Holtville loams, wet

The following soil mapping units within the SSU6 Project meet the criteria for Farmland of Statewide Importance, if irrigated:

- Glenbar Complex
- Imperial silty clay
- Imperial silty clay, wet
- Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
- Meloland fine sand
- Niland gravelly sand
- Niland gravelly sand, wet

5.3.2 Environmental Consequences

The environmental consequences of the SSU6 Project with respect to soil and agricultural resources are mainly related to construction and operation of the project components and conversion of agricultural land to non-agricultural uses. Environmental consequences related to soils are presented in Section 5.3.2.1 and environmental consequences related to agricultural resources are presented in Section 5.3.2.2.

5.3.2.1 Soils Resource

Appendix G of California Environmental Quality Act (CEQA) identifies the following criteria for determining significance of impacts to soils resources:

- Project results in substantial soil erosion or loss of topsoil, degradation of soils or farmland, changes in topography, or unstable soil conditions.
- Project is in an unstable soil or soil that would be come unstable because of the project, and potentially result in landslide, lateral spreading, subsidence, liquefaction, or collapse, (criterion was previously addressed in Section 5.2).
- Project is on expansive soil, as defined in Table 18-1 of the Uniform Building Code (International Conference of Building Officials, 1994), creating substantial risks to life or property (criterion was previously addressed in Section 5.2).
- Project would place septic tanks or alternative wastewater disposal systems on soils incapable of adequately supporting these systems where sewers are unavailable for the disposal of wastewater.

The assessment of SSU6 Project impacts to the soil resource is based on soils information presented in the published and unpublished SCS soil survey information covering the project area (SCS, 1981) and consideration of the Applicant committed mitigation measures. The SSU6 Project area soil conditions include nearly level topography and extensive actively farmed agricultural areas under these conditions. The use of erosion control best management practices (BMPs) to control water and wind erosion during construction activities, and placement of impervious surfaces and/or BMPs on disturbed areas within the SSU6 Project area to control soil loss after construction have proven to be very effective. Consequently, quantitative calculations

of potential soil loss were using the Universal Soil Loss and Chepil Wind Erosion Equations, which are typically used to quantify water and wind-induced soil loss for agricultural operations were not considered appropriate. Potential impacts of the proposed project on the soil resources can be divided into those involving construction activities and those related to plant operation.

5.3.2.1.1 SSU6 Project Plant Site

Construction-Related Impacts

Construction-related impacts to the soil resources associated with development of the SSU6 plant facility, including the proposed water supply line along the southern boundary of the site, primarily involve vegetation removal, excavation, grading, and temporary stockpiling. Approximately 80 acres of land will be disturbed during construction activities as shown on Table 3.2-2. The proposed improvements include excavation for several brine ponds approximately 10 feet deep surrounded by 2:1 slopes, the construction of an earthen berm approximately 8 feet high with 2:1 side slopes, a detention basin 5 to 6 feet deep, and minor grading for building pads, utilities, and for drainage of surface water flow.

The existing site topography is generally level, but some cut and fill will be required to provide a level area for the facility at about elevation -228. Approximately 105,000 cubic yards of cut and 167,000 cubic yards of fill will be required to achieve final grade. Typical cut and fill depths of less than 2 to 3 feet are anticipated. Areas to be backfilled will be prepared by removing unsuitable materials and rocks. The bottom of an excavation will be examined for loose or soft areas. Such areas will be excavated fully and backfilled with compacted fill. Ground improvement operations to mitigate the site for settlement sensitive improvements are discussed in Section 5.2-Geological Hazards and Resources.

Impacts during construction of the proposed SSU6 plant site on soil resources can include alteration of the existing soil profile, increased soil erosion and soil compaction. Alteration of the existing soil profiles, including mixing of soils and rock, will alter the physical, chemical and biological characteristics of the native soils and underlying geology. Clearing of the protective vegetative cover and subsequent soil disturbance will likely result in short-term increases in water and wind erosion rates. Soil erosion causes the loss of topsoil and can increase the sediment load in surface receiving waters downstream of the construction site. Soil compaction can decrease infiltration rates, resulting in increased runoff and erosion rates. The magnitude, extent, and duration of construction-related impacts depend on the erodibility of the soil, the proximity of the construction activity to a receiving water, and the construction methodologies, duration, and season. The flat topography and series of berms and levies in the project area would limit soil erosion to minor or moderate. The mitigation measures outlined in Section 5.3.4 would further reduce impacts to soil resources resulting from construction of the SSU6 plant facility, and these impacts are considered less than significant levels.

Operation-Related Impacts

The SSU6 plant facility will be surrounded by an 8-foot high berm as required by the County's flood protection requirement. The SSU6 plant facility area will be covered with the facility building, concrete, asphalt, and/or crushed aggregate. The perimeter drainage berm and interior storm water

detention pond are expected to control potential flooding events at the site. Therefore, no impacts to soil resources are anticipated from operations at the SSU6 plant site.

The SSU6 facility will be equipped with a self-contained septic system that will be periodically pumped out by a qualified contractor. No leach fields will be constructed; therefore, the SSU6 project will not cause any impacts associated with soils incapable of supporting a proposed septic system.

5.3.2.1.2 L-Line Interconnection

Construction-Related Impacts

Construction-related impacts associated with development of the approximately 16-mile-long L-Line Interconnection primarily involve grading operations and ground improvement operations for foundation support. The proposed improvements include minor grading activities for constructing the right-of-way (ROW) and access road construction, and excavation of power pole foundations. A 150-foot-wide ROW will be established along the length of the transmission line adjacent to County roads, IID facilities, and/or private land. A 300-foot-wide ROW will be established through federal lands. Most of the L-Line Interconnection alignment parallels existing County roads.

Transmission line support towers will be constructed along the length of the L-Line Interconnection approximately every 1,000 feet, and at right angle-turn locations, for a total of approximately 92 power pole sites. Approximately 1 acre of land will be temporarily disturbed at each power pole location during construction. An approximately 1,200 square foot foundation area (0.03 acres) will be required to support each of these power poles. Excavations for foundations would be made with drilling equipment. A vehicle-mounted power auger or backhoe would be used to excavate for the structure foundations. Approximately 92 acres of land is anticipated to be disturbed during construction activities, as shown in Table 3.2-2. Staging areas and pull sites would result in an additional 32 acres of temporary disturbance (See Table 3.2-2).

Existing maintenance roads and previously disturbed areas will be used during construction to the maximum extent practical within existing transmission line ROWs. Road improvements may be required to allow passage of construction vehicles. Following construction, disturbed road sections would be restored to original contours. Some permanent road improvements may be left in place where necessary for operation or maintenance, or where the landowner or land managing agency requires. New access roads or spur roads may be constructed into the ROW from existing transmission line maintenance roads where terrain would prevent access over undisturbed surfaces. Wherever possible, new roads would be built at right angles to existing maintenance roads. All existing roads would be left in a condition equal to or better than their condition prior to the construction of the transmission line. Temporary culverts or other drainage structures would be installed to allow passage of heavy equipment across drainages to prevent damage to existing drainage banks.

Ten of the soil-mapping units along the L-Line Interconnection have a high susceptibility to erosion from water and one of the soil types has a high susceptibility to erosion from wind. The shrink-swell potential for nine of the soil units ranges up to a high susceptibility to erosion from wind.

Potential Impacts during construction of the proposed L-Line Interconnection on soil resources will be similar to those identified in Section 5.3.2.1.1 (SSU6 Plant Facility) and include alteration of the existing soil profile, soil erosion, and soil compaction. Construction of the L-Line Interconnection would result in soil impacts because of the erection of foundations and vehicle traffic. Increased soil compaction may decrease the ability of vegetation to reestablish itself within the ROW following disturbance, which may result in increased erosion as well. These impacts would be localized, limited to the disturbed areas in the ROW. The mitigation measures outlined in Section 5.3.4 would reduce impacts to soil resources resulting from construction of the L-Line Interconnection to less than significant levels.

Operation-Related Impacts

Potential impacts during operation of the L-Line Interconnection on soil resources can include increased erosion because of decreased infiltration rates, increased runoff rates, and increased soil compaction. A total of about 2.8 acres of land will be permanently disturbed and covered with concrete foundations for the 92 tower locations during the operational phase as listed in Table 3.2-2. Following construction, the ROW will be allowed to naturally re-vegetate, or be developed as agricultural fields, as applicable. Maintenance vehicle traffic will use existing and new access roads.

The erosion control and post-construction monitoring mitigation measures outlined in Section 5.3.4, would reduce impacts to soil resources from plant operations to a less than significant level.

5.3.2.1.3 IID Midway Interconnection

Construction-Related Impacts

Construction methods and construction-related impacts associated with development of the approximately 15-mile-long IID Midway Interconnection will be similar to those described in Section 5.3.2.1.2 L-Line Interconnection. Approximately 1 acre of land will be temporarily disturbed at each of the 89 power pole locations during construction, as shown in Table 3.2-2. Staging areas and pull site would result in 22 acres of additional temporary disturbance (see Table 3.2-2). Five of the soil-mapping units along the IID Interconnection have a high susceptibility to erosion from water and two of the soil types have a high susceptibility to erosion from wind. The shrink-swell potential of six of the soil-mapping units ranges up to a high susceptibility to erosion from wind. With implementation of the mitigation measures outlined in Section 5.3.3, impacts to soil resources resulting from construction of the IID Midway Interconnection will be reduced to less than significant levels.

Operation-Related Impacts

About 2.7 acres of land will be permanently disturbed for tower foundations during the operational phase, as listed in Table 3.2-2. Potential operation-related impacts to the soil resources from operation of the IID Midway Interconnection and associated mitigation would be the same as those described in Section 5.3.2.1.3.

5.3.2.1.4 Production and Injection Well Pads

Construction-Related Impacts

Construction-related impacts to soil resources associated with development of the five production and three injection well pads primarily involve grading operations and drilling geothermal wells. The proposed improvements include the construction of raised earthen berms, excavation of mud pits, and minor grading for well pads and construction of an access road.

The well pads will range in size from approximately 5 to 7 acres (approximately 41 acres total). The elevation of the well pads will be raised 1 to 1.5 feet above the adjacent grade. Class 2 road base material will be used for an access road to the well pads and for the final surface material at each of the well pads. Wells will be directionally drilled and completed to minimize the well pad size, thereby minimizing disturbance.

The surficial material at the eighth well pad (OB3) is primarily rock. No erosion potential has been assigned to this material. The surficial soils at the other seven well pads have moderate to high susceptibility to water erosion and have moderate susceptibility to wind erosion. These soils have low soil strength and the shrink-swell potential ranges up to a high susceptibility to wind erosion.

Impacts associated with construction and operation of the production and injection well pads will be similar to those described in Section 5.3.2.1.1. With implementation of the mitigation measures outlined in Section 5.3.3, impacts to soil resources resulting from construction of the production and injection well pads will be reduced to less than significant levels.

Operation-Related Impacts

Potential operation-related impacts to the soil resources from operation of the well pads include increased erosion. The well pads and access will be surfaced with Class 2 road base material. The perimeter berm around each well pad will also reduce soil erosion. With implementation of the measures outlined in Section 5.3.3, impacts to soil resources from operation of the well pads will be reduced to a less than significant level.

5.3.2.1.5 Production and Injection Pipelines

Construction-Related Impacts

Construction-related impacts associated with development of the injection well and production well pipelines primarily involve grading operations and ground improvement operations for foundation support. The proposed improvements include minor grading activities for constructing the pipeline ROW and foundation pads.

One hundred-foot-wide ROWs will be required for the length of each production and injection pipeline, except for the portion of ROW accessing Production Well Pad OB3 that passes through wetland areas, which will be narrower. Construction and lay-down areas would be located within the ROWs. Most of the ROWs parallel existing roads. Previously disturbed areas will be used during construction to the maximum extent practical. The expected disturbance related to construction of the proposed pipelines is approximately 53 acres, as shown in Table 3.2-2.

Impacts to soils associated with construction of the pipelines will be similar to those for the transmission line construction described in Sections 5.3.2.1.2 and 5.3.2.1.3. With implementation of the mitigation measures outlined in Section 5.3.3, impacts to soil resources resulting from construction of the production and injection well pipelines will be reduced to less than significant levels.

Operation-Related Impacts

Potential operation-related impacts to the soil resources from the pipelines include increased erosion. With implementation of the measures outlined in Section 5.3.3, impacts to soil resources from operation of the pipelines will be reduced to a less than significant level.

5.3.2.2 Agriculture and Prime Farmland

Appendix G of CEQA identifies the following criteria for determining significance of impacts to agriculture and Prime Farmland:

- Does the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural uses?
- Does the project conflict with existing zoning for agricultural use or a Williamson Act contract?
- Does the project involve other changes in the existing environment that, because of their location or nature, could result in conversion of farmland to nonagricultural use?

Appendix G of CEQA was amended to include the use of the California Agricultural Land Evaluation and Site Assessment (LESA) Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. The LESA Model is composed of six different factors. Two Land Evaluation factors are based on measures of soil resource quality, including capability classifications and Storie Index ratings. Four Site Assessment Factors provide measures of a project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands.

An evaluation of the proposed SSU6 Project using the LESA Model was conducted to evaluate the impacts related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural uses. For this model, a total of approximately 97 acres of contiguous farmland were calculated to be converted from agricultural to non-agricultural use because of the project. This acreage was calculated by assuming the entire 80-acre plant facility, 3-acre IID Unit 6 Substation, and 14 acres for the OB1 and OB2 well pads and pipelines. The area included in the LESA model calculations, including the 0.25-mile zone of influence, is illustrated on Figure 5.3-3. The acreage for the remaining well pads and pipelines were not included in the total acreage, because these areas are either unsuitable for agricultural usage (OB3), are within the plant facility area (OB4), are currently not used for agricultural purposes (OB5), or are isolated in area and extent (OBI-1 through OBI-3). The 1,200 square feet of area that would also be permanently taken out of production for each of the transmission line support poles were not included in this calculation because the pole pads are isolated and adjacent to existing roadways.

For this model, all surrounding land currently in agricultural use was included in calculating the Site Assessment - Surrounding Agricultural Land Rating. This rating is designed to provide a

measurement of the level of agricultural land use for lands within 0.25 miles of the project boundary. The LESA Model rates the potential significance of the conversion of an agricultural parcel that has a large proportion of surrounding land in agricultural production more highly than one that has a relatively small percentage of surrounding land in agricultural production. The LESA Model allows for identifying land that is currently in agricultural production and that has been "committed" to future non-agricultural development; therefore, it would not be included in the percentage calculation. As shown in Appendix S, approximately 168 acres, or 26 percent of the surrounding land within 0.25 miles of the project boundary is currently in agricultural production. All land within 0.25 miles is within the geothermal overlay zone, indicating Imperial County allows for the full development of geothermal resources in a manner consistent with their General Plan within this zone. According to the section 3(a) 4 of the LESA Model, geothermal development within the geothermal overlay zone may qualify this land as "committed" land for future non-agricultural use. Therefore, inclusion of all 168 acres in this rating calculation represents a conservative interpretation of the model.

The results of this model indicated a total LESA score of 38.4 points. The LESA model guidelines indicate that a total score of equal to or less than 39 would not indicate significant impacts to agricultural lands. Therefore, the proposed SSU6 Project would not result in a significant impact. The LESA Model calculations are included in Appendix S.

Evaluation of the additional significance criteria indicates that the proposed SSU6 Project does not conflict with existing zoning. The SSU6 facility, well pads and associated pipelines, and portions of the L-Line Interconnection, and IID Midway Interconnection Line are within a geothermal overlay zone. Geothermal production has been identified as a unique resource that does not conflict with agricultural development. The Imperial County General Plan, Geothermal/Transmission Element establishes that the County of Imperial supports and encourages the full, orderly and efficient development of geothermal resources, while at the same time preserving and enhancing, where possible, agricultural, biological, human and recreational resources. Imperial County evaluated the impacts of geothermal development on agriculture because of the expansion of the geothermal overlay zone in the Master Environmental Impact Report (MEIR) dated December 1981. The MEIR concluded that while enlargement of the geothermal overlay zone would result in a loss of arable land, it would not result in a significant loss of agricultural acreage in production or interfere with agricultural activities if appropriate mitigation was implemented (Westec Services, Inc., 1981). Additionally, no Williamson Act contracts would need to be cancelled.

The proposed SSU6 Project would take approximately 97 acres of Prime Farmland and 75 acres of Farmland of Statewide Importance out of production over the life of the project (See Table 5.3-3). An additional 1.1 acres of farmland of local importance will also be taken out of production. Based on approximately 484,000 acres of farmable area within the IID's water service area (CH2M Hill, 2002), this acreage represents a loss of up to approximately 0.0004 percent of the total net acreage in agricultural production, which is not considered to represent a substantial loss of farmland. The SSU6 Project would not involve other changes in the environment that would result in further conversion of farmland and would not result in indirect impacts to agricultural lands.

In conclusion, although both Prime Farmland and Farmland of Statewide Importance would be converted from agricultural to non-agricultural use, the LESA Model indicates that this would not be a significant impact. Furthermore, the SSU6 Project is consistent with land-use zoning,

and does not represent a significant net loss of farmland. Therefore, development of the proposed SSU6 Project does not represent a significant impact to agricultural resources.

5.3.2.2.1 Potential Impacts of Power Plant Emissions

Operation of the SSU6 plant facility will expose soils and vegetation near the plant facility to slightly increased levels of air pollutants, as discussed in Section 5.1. As presented in Section 5.5, these emissions would not adversely impact plant habitats. Considering that the surrounding agricultural crops are typically rotated at least twice a year, the short residency time of the agricultural crops will decrease the likelihood of significant absorption of air pollutants as compared to native plants. Based on the type of emissions, the short residency time of the surrounding vegetation, and the implementation of the emission control devices, impacts to the soil vegetation system from SSU6 facility emissions are expected to be insignificant.

5.3.3 Cumulative Impacts

The potential cumulative impact of the SSU6 project and other projects is the additive construction and operation of the individual projects. Three potential projects were identified that were considered in this cumulative impact assessment. These projects include:

- State Route 78/111 Expressway (Brawley Bypass) (Project ID 1)
- Solar Evaporation Pond Pilot Project (Project ID 2)
- Imperial Irrigation District Water Conservation and Transfer Project (Project ID 3)

A detailed discussion of each of these projects is presented in Section 7.17. From a soils resources perspective, construction of Project IDs 1 and 2 will not occur in the area as the SSU6 Project (greater than 10 miles), and therefore, cumulative impacts are not anticipated. Project ID 3, the IID's Water Conservation and Transfer Project/Habitat Conservation Plan, could result in permanently fallowing up to 83,000 acres of Prime Farmland or Farmland of Statewide Importance within the IID's water service area, which the draft EIS/EIR identifies as significant. The proposed SSU6 plant facility is within the IID's service area. Additionally, it is within the Geothermal Overlay Zone and within the area designated for geothermal development by the Imperial County General Plan. The proposed SSU6 Project would not significantly contribute to cumulative impacts to agricultural lands.

5.3.4 Mitigation Measures

The development of the SSU6 project is consistent with existing zoning and is compatible with agricultural land uses. No significant agricultural impacts were identified; therefore, no mitigation measures are proposed.

This section describes Applicant-committed mitigation measures that will be implemented to reduce SSU6 Project-related potential impacts to the soil resource.

The following mitigation measures will be implemented to reduce potentially significant soils impacts to insignificant levels. An acceptable level of soil erosion, as used herein, is defined as that amount of soil loss that would not affect (i.e., limit) the potential long-term beneficial uses of the soil as a growth medium or adversely affect water resources because of accelerated erosion

and subsequent sedimentation. Refer to Section 5.2 for additional measures to mitigate slope instability conditions, liquefaction, landslides, subsidence, flooding, and Section 5.4 for mitigation measures related to potential impacts to water quality associated with soil erosion.

- **Soil-1:** Conduct grading operations consistent with the Imperial County Grading Ordinance.
- **Soil-2:** Prepare and implement a detailed Erosion Control Plan prior to construction, which may be a component of the SWPPP (see Mitigation Measure Water-4).
- **Soil-3:** Limit soil erosion/dust generation by wetting active construction areas with water (including roads) or by applying dust palliatives (soil binders).
- **Soil-4:** Stabilize disturbed areas that will not be covered with structures (e.g., buildings) or pavement following grading and/or cut-and-fill operations. Offsite linear facility ROWs will be allowed to naturally re-vegetate, or be developed as agricultural fields, as applicable. Developed areas within well pads will be compacted and covered with Class 2 road base material. Roads will be surfaced with asphalt or Class 2 road base material.
- **Soil-5:** Place transmission line pull stations on previously used pull station sites, or on disturbed lands, wherever possible.
- **Soil-6:** Clear vegetation only to the extent necessary during construction activities.
- **Soil-7:** Segregate and stockpile removed topsoil for reuse if practicable.
- **Soil-8:** Implement other erosion and sediment control measures that may include, but not be limited to, use of mulches, protective coverings (e.g., jute netting), and rip-rap, installation of culverts under roadways at drainage crossings, installation of sediment detention basins, construction of water diversions along roads, and water bars along pipeline ROWS, etc.
- **Soil-9:** Implement drainage control measures, including construction of an 8-foot perimeter berm, around the plant site. Grade plant site to direct surface water into the detention pond.
- **Soil-10:** Conduct post-construction monitoring of areas that were disturbed during the construction phase concentrating on erosion prone areas or areas discharging into sensitive wetlands areas; implement corrective measures in areas that do not respond adequately to initial stabilization techniques or in areas where accelerated erosion is occurring.

With implementation of the mitigation measures listed above, no significant unavoidable adverse impacts to the soils resource are anticipated because of construction and operation of the SSU6 Project.

5.3.5 Applicable Laws, Ordinances, Regulations, and Standards

The following LORS are applicable to protection of soils resource and protection of surface water quality from project induced erosion impacts. Applicable LORS are summarized in Table 5.3-4 and are discussed below. Agency contacts are provided in Table 5.3-5. Required permits are summarized in Table 5.3-6.

5.3.5.1 Federal Authorities and Administering Agencies

The Federal Water Pollution Control Act of 1972; Clean Water Act of 1977 (including its 1987 amendments). These authorities establish requirements for any facility or activity that has or that will discharge wastes (including sediment because of accelerated erosion) that may interfere with the beneficial uses of receiving waters.

The administering agency for the above authority is the Regional Water Quality Control Board (RWQCB), Colorado River Basin, Region 7 under the direction of the State Water Resources Control Board (SWRCB).

A SWPPP would be submitted to the RWQCB to be reviewed and approved. The SWPPP would incorporate all appropriate erosion control measures during construction of SSU6 as well as the associated offsite linear elements.

US Department of Agriculture, Soil Conservation Service, *National Engineering Handbook (1983)*, Sections 2 and 3. The USDA prescribes standards of technical excellence for the SCS (now the NRCS) for the planning, design, and construction of soil conservation practices.

The administering agency for the above authority is the NRCS.

The Applicant would adhere to the appropriate standards associated with the planning, design, and construction of soil conservation practices.

5.3.5.2 State Authorities and Administering Agencies

California Public Resources Code §25523(a); CCR §§1752, 1752.5, 2300-2309, and Chapter 2, Subchapter 5, Article 1, Appendix B, Part (i). The code provides for protection of environmental quality. Regarding SSU6, the code requires submission of information to the CEC concerning potential environmental impacts, and the CEC's decision on the AFC must include consideration of environmental protection.

The administering agency for the above authority is the CEC.

Section 5.3.2 of this Section includes an analysis of impacts to agriculture and soils and Section 5.3.4 provides a discussion of environmental protection measures.

California Environmental Quality Act, California Public Resources Code §21000 *et. seq.*; Guidelines for Implementation of the California Environmental Quality Act of 1970, 14 CCR §15000 - 15387, Appendix G. The CEQA guidelines specify that: "A project will normally have a significant effect on the environment if it will …[¶] (q) Cause substantial flooding, erosion or siltation; …[¶](y) Convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural lands".

The administering agency for the above authority is the CEC.

The project would comply with these CEQA requirements because best management practices would be implemented to mitigate significant erosion, siltation, or flooding effects. The project site would require the conversion of prime agricultural land to non-agricultural use; however, geothermal use is compatible with agricultural use and the project site is within a geothermal overlay zone; the LESA

model does not indicate a significant impact; the Project does not represent a significant net loss of farmland; and no William Act Contracts would need to be cancelled.

California Land Conservation Act (Williamson Act). Cal. Government Code Title 5, Part 1, Chapter 7 Section §§51200-51295. The Williamson Act provides for lowered property taxes for lands maintained in agricultural and certain open space uses. The landowner enters into a contract with the county or city to restrict land uses to those compatible with agriculture, wildlife habitat, scenic corridors, recreational use, or open space. In return, the local authorities calculate the property tax assessment based on the actual use of the land instead of its potential value assuming full commercial development. To be eligible, the land must be designated by a city or county as agricultural preserve, scenic highway corridor, or wildlife habitat area; or it must be actively used for the three years immediately preceding the beginning of the contract as a salt pond, managed wetland, recreational or open space area.

The administering agency for the above authority is the Department of Conservation, Office of Land Conservation.

The SSU6 is not expected to require the cancellation of any Williamson Act contracts.

The California Porter-Cologne Water Quality Control Act of 1972; California Water Code, §13260 - 13269; 23 CCR Chapter 9. The code requires adequate protection of water quality by appropriate design, sizing and construction of erosion and sediment controls. Discharge of waste earthen material into surface waters resulting from land disturbance may require the filing of a report of waste discharge (Water Code §13260(a)), and provides for the issuance of waste discharge requirements regarding the discharge of any waste that can affect the quality of the waters of the state. Regarding potential surface water pollution from project area runoff, the waste discharge requirements may incorporate requirements based on the following sources of recommended methods and procedures:

- State Water Resources Control Board. 1996. *Erosion and Sediment Control Field Manual*.
- USEPA. 1973. *Processes, Procedures and Methods to Control Pollution Resulting From All Construction Activity.* Presents information on processes, procedures, and methods for controlling sediment, storm water, and pollutants from construction activities.
- California Department of Resources Conservation. 1978. *Erosion and Sediment Control Handbook.* Provides procedures by which physical and climatic data and erosion control practices can be considered in making an assessment of a site for determining the need for an erosion control plan and for preparing an erosion control plan.

The administering agencies for the above authority are the CEC and the RWQCB (Colorado Basin, Region 7).

The project would develop an Erosion Control Plan to address surface water pollution from project area runoff.

5.3.5.3 Local Authorities and Administering Agencies

Imperial County Land Use Code, Title 9, Division 3, Chapter 1, Sections 90301.02, 90301.03; Chapter 2, Section 90302.13

This County ordinance establishes development standards. This ordinance requires that dust control measures be implemented during construction and grading activities. It requires submittal of a Plot Plan to the Imperial County Planning/Building Department for approval before obtaining a grading permit. The Plot Plan must include a map showing graded topography. Upon approval of the Plot Plan, a Grading Plan must be submitted that includes a topographic map showing sloped areas. This ordinance also establishes that a Soils Report may be required, which includes soil infiltration, soil texture test, cation exchange capacity, and soil fertility test.

The administering agency is the Imperial County Planning/Building Department.

The project would comply with the grading plan requirements through the CEC review process. The grading and drainage plans for the project would incorporate BMPs and appropriate grading techniques to control fugitive dust emissions and minimize erosion. A soils report would be prepared if necessary, which would present the results of required soil tests.

Imperial County Land Use Code, Title 9, Division 10, Chapter 10.

Imperial County's grading ordinance incorporates regulations pertaining to excavation, grading, and construction. This section of the ordinance also identifies procedures and requirements for applying for a construction permit.

No person, firm, association, corporation or organization except public entities and their officers, employees or contractors who are performing work within publicly owned ROWs, shall, within the unincorporated territories of the County of Imperial, do any grading, excavation or earthwork construction without having first obtained a permit therefore from the County Engineer.

Application for a permit must include drainage systems, protective devices, and existing and proposed elevations. Permit Conditions establish that 1) proposed grading, excavation, or earthwork will not cause said land to be unfit of agricultural use; 2) the depth of grading, excavation, or earthwork will not preclude the use of drain tile in irrigated lands; and 3) the grading, excavation, or earthwork construction cannot extend below the water table of the immediate area.

The administering agency is the Imperial County Planning/Building Department.

The Applicant would comply with the ordinance requirements through the CEC review process. The grading and drainage plans for the project would incorporate BMPs and appropriate grading techniques that would minimize the amount of cut and fill. Grading plans would implement erosion control measures for construction and a permanent storm water drainage plan. A registered engineer would prepare the grading and drainage plans.

Imperial County Land Use Code, Title 9, Division 16, Chapter 3, Section 91603.00, Chapter 4, Section 91604.00; Chapter 5, Section 91605.04

This chapter identifies development permit requirements for special flood hazard areas. Chapter 3, Section 91603.00 establishes that this ordinance applies to all areas of special flood hazards (including lands around the Salton Sea and lying at or below the –220 foot elevation contour) within the

jurisdiction of Imperial County. Chapter 4, Section 91604.00 identifies Development Permit requirements for special flood hazard areas. Application for a Development Permit shall be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage or materials, drainage facilities; and the project location. Chapter 5, Section 91605.04 establishes that areas of special flood hazard are areas designated as flood-ways. This section requires that all a registered engineer must demonstrate that placed fill will not increase flood levels during an occurrence of base flood levels.

The administering agency for the above authority is the Imperial County Planning/Building Department, Floodplain Administrator.

Proposed drainage facilities for storm water runoff and flood overland flow would be submitted for review and approval through the CEC review process.

Imperial County Land Use Code, Title 9, Division 17, Chapter 1, Section 91701.01; Chapter 2, Section 91702.00 -91702.02

This chapter establishes regulations to facilitate the beneficial use of the geothermal resource for the general welfare of the people of Imperial County and California; to protect the resource from wasteful or detrimental uses and to protect people, property, and the environment from detriments that might result from the improper use of the resource. Item "M" of Section 91701.01 requires that geotechnical investigation of soil characteristics affecting a project shall be performed, as determined by the Planning Director. Item "R" of Section 91701.01 establishes that geothermal projects shall provide for the minimum feasible surface land usage of the project, preserve farmland and wildlife habitat according to the General Plan, and be compatible with the existing uses wherever possible.

Chapter 2, Section 91702.00 Specific Standards A) requires that all drilling sites, test facilities, and ponds be as small as possible and in no case larger than 5 acres on farmable land. C) Every site shall be designed to retain the maximum amount of usable agricultural land and the site shall not interfere with the irrigation and drainage pattern, and shall comply with requirements and regulations of the Imperial Irrigation District.

The administering agency for the above authority is the Imperial County Planning/Building Department.

The project would comply with the appropriate requirements set forth in this ordinance through the CEC review process.

5.3.5.3.1 Imperial County General Plan

Open Space and Conservation Element

Conservation of Environmental Resources for Future Generations

Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions.

The administering agency for the above authority is the Imperial County Planning/Building Department.

The SSU6 incorporates engineered grading and drainage plans to minimize grading and assure appropriate drainage of the facility. Additionally, mitigation measures including sediment and erosion control during grading and construction activities would be implemented to minimize environmental impacts related to erosion and sediment transport. Graded areas would be revegetated as needed to minimize erosion. The project, as proposed, complies with the objectives of this goal.

Preservation of Agricultural Lands

Goal 4: The County will actively conserve and maintain contiguous farmlands and prime soil areas to maintain economic vitality and the unique lifestyle of the Imperial Valley.

Objective 4.2 - Control and prevent soil erosion when possible.

The administering agency for the above authority is the Imperial County Planning/Building Department.

The project is in areas designated as agricultural land, within a geothermal overlay zone. Geothermal development is identified as a compatible land use with agricultural development. The SSU6 incorporates engineered grading and drainage plans to minimize grading and assure appropriate drainage of the facility. Additionally, mitigation measures including sediment and erosion control during grading and construction activities would be implemented to minimize environmental impacts related to erosion and sediment transport. The project, as proposed, complies with the objectives of this goal.

Preservation of Water Resources

Goal 8: The County will conserve, protect, and enhance the water resources in the planning area.

The administering agency for the above authority is the Imperial County Planning/Building Department.

The SSU6 incorporates engineered grading and drainage plans to minimize grading and assure appropriate drainage of the facility. Additionally, mitigation measures including sediment and erosion control during grading and construction activities would be implemented to minimize environmental impacts related to erosion and sediment transport. The project, as proposed, complies with the objectives of this goal.

Biological Resource Conservation Preservation

Policy 2 – Landscaping should be required in all developments to prevent erosion on graded sites, and if the area is contiguous with undisturbed wildlife habitat, the plan should include revegetation with native plant species.

The administering agency for the above authority is the Imperial County Planning/Building Department.

The SSU6 incorporates engineered grading and drainage plans to minimize grading and assure appropriate drainage of the facility.

Agricultural Element

Preservation of Important Farmland

Goal 1: All Important Farmland, including the categories of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, as defined by Federal and State agencies, should be reserved for agricultural uses.

The project site is within a Geothermal Overlay Zone, which is compatible with agricultural uses.

Goal 3: Limit the introduction of conflicting uses into farming areas, including residential development of existing parcels, which may create the potential for conflict with continued agricultural use of adjacent property.

The administering agency for the above authority is the Imperial County Planning/Building Department.

The agricultural lands proposed for the project would be removed from agricultural use for geothermal purposes. The project site is zoned for agricultural uses within an identified Geothermal Overlay Zone. Therefore, the proposed project would comply with these standards. Geothermal development is identified as a compatible land use with agricultural uses. The SSU6 incorporates engineered grading and drainage plans to minimize grading and assure appropriate drainage of the facility. Additionally, mitigation measures including sediment and erosion control during grading and construction activities would be implemented to minimize environmental impacts related to erosion and sediment transport. The project, as proposed, complies with the above goals and objectives.

Geothermal/Transmission Element

Goal 1: The County of Imperial supports and encourages the full, orderly, and efficient development of geothermal resources while at the same time preserving and enhancing where possible agricultural, biological, human, and recreational resources

Goal 2: The County will minimize all impacts to agricultural lands and biological resources that could potentially result from the development of geothermal resources.

Goal 5: When planning and designing transmission lines, the County will consider impacts to agricultural lands, wildlife, and the natural desert landscape.

The administering agency for the above authority is the Imperial County Planning/Building Department.

The SSU6 incorporates engineered grading and drainage plans to minimize grading and assure appropriate drainage of the facility. Additionally, mitigation measures including sediment and erosion control during grading and construction activities would be implemented to minimize

environmental impacts related to erosion and sediment transport. The project, as proposed, complies with the goals and objectives of this element.

5.3.6 References

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Websites:

www.energy.ca.gov-

Rules, regulations, policy and procedure

www.consrv.ca.gov-

Division of Land Resource Protection

www.ceimperial.ucdavis.edu-

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Table 5.3-1
SOIL MAPPING UNITS IDENTIFIED FOR THE SSU6 PROJECT[1]

Project Component[2]	Approximate Acreage/ Mileposts	Soil Name
Access Roads and electrical Transmission Lines		
SSU6 Facility Site	47.45 ac.	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	28.41 ac.	Holtville silty clay, wet
	0.19 ac.	Fluvaquents, saline
Construction Parking	0.12 ad.	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	4.5 ac.	Holtville silty clay, wet
Construction Lay-down Area	13.0 ac.	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	7.2 ac.	Holtville silty clay, wet
IID Substation	2.8 ac.	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
Proposed L-Line Interconnection	MP 0.00-0.35	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 0.35-0.62	Holtville, silty clay, wet
	MP 0.62-0.75	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 0.75-0.86	Holtville, silty clay, wet
	MP 0.86-0.87	Indio Loan, wet
	MP 0.87-1.42	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 1.42-1.46	Holtville silty clay, wet
	MP 1.46-2.19	Imperial-Glenbar silty clay loams
	MP 2.19-2.62	Holtville silty clay, wet
	MP 2.62-2.80	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 2.80-4.67	Holtville silty clay, wet
	MP 4.67-5.58	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent
	MP 5.58-5.65	Imperial silty clay, wet
	MP 5.65-5.67	Water Crossing, (New River)
	MP 5.67-5.76	Imperial silty clay
	MP 5.76-6.16	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 6.16-6.34	Holtville silty clay, wet
	MP 6.34-6.51	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent
	MP 6.51-6.77	Meloland very fine sandy loam, wet
	MP 6.77-7.13	Imperial silty clay, wet
	MP 7.13-7.65	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 7.65-8.09	Holtville silty clay, wet
	MP 8.09-8.27	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 8.27-8.33	Holtville silty clay, wet

Table 5.3-1 (continued)
SOIL MAPPING UNITS IDENTIFIED FOR THE SSU6 PROJECT[1]

Project Component[2]	Approximate Acreage/ Mileposts	Soil Name
	MP 8.33-8.56	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 8.56-8.68	Holtville silty clay, wet
	MP 8.68-8.73	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 8.73-8.86	Holtville silty clay, wet
	MP 8.86-8.91	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 8.91-9.13	Holtville silty clay, wet
	MP 9.13-9.23	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 9.23-9.26	Holtville silty clay, wet
	MP 9.26-9.62	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 9.62-10.21	Holtville silty clay, wet
	MP 10.21-10.32	Meloland very fine sandy loam, wet
	MP 10.32-10.47	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 10.47-10.65	Meloland very fine sandy loam, wet
	MP 10.65-10.83	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 10.83-10.95	Imperial silty clay, wet
	MP 10.95-11.22	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 11.22-11.28	Holtville silty clay, wet
	MP 11.28-11.65	Indio loam, wet
	MP 11.65-11.66	Imperial silty clay, wet
	MP 11.66-11.75	Holtville silty clay, wet
	MP 11.75-12.01	Meloland and Holtville loams, wet
	MP 12.01-12.08	Meloland very fine sandy loam, wet
	MP 12.08-12.20	Vint and Indio very fine sandy loams, wet
	MP 12.20-12.95	Vint loamy very fine sand, wet
	MP 12.95-13.54	Meloland very fine sandy loam, wet
	MP 13.54-13.62	Meloland very fine sandy loam, wet
	MP 13.62-13.71	Meloland fine sand
	MP 13.71-13.83	Glenbar complex
	MP 13.83-14.04	Meloland fine sand
	Mp 14.04-14.08	Glenbar complex
	MP 14.08-14.33	Meloland fine sand
	MP 14.33-14.53	Glenbar Complex

Table 5.3-1 (continued)
SOIL MAPPING UNITS IDENTIFIED FOR THE SSU6 PROJECT[1]

Project Component[2]	Approximate Acreage/ Mileposts	Soil Name
Enter BLM Land	MP 14.53-15.98	No soil survey available for the remaining 1.45 miles through BLM Lands Proposed L-Line Interconnection intersects with existing L-Line
Proposed IID Midway Interconnection	MP 0-0.39	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent
	MP 0.39-1.15	Holtville silty clay, wet
	MP 1.15-1.33	Glenbar clay loam, wet
	MP 1.33-4.14	Holtville silty clay, wet
	MP 4.14-4.81	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 4.81-5.36	Imperial silty clay, wet
	MP 5.36–5.65	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent
	MP 5.65–5.98.	Imperial silty clay, wet
	MP 5.98-5.99	Water Crossing (Alamo River)
	MP 5.99–8.56	Imperial silty clay, wet
	MP 8.56–8.80	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 8.80–9.39	Imperial silty clay, wet
	MP 9.39–9.67	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 9.67–11.42	Imperial silty clay, wet
	MP 11.42-11.76	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 11.76-12.02	Imperial silty clay, wet
	MP 12.02-13.02	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 13.02-13.11	Holtville silty clay, wet
	MP 13.11-13.23	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 13.23-13.92	Meloland very fine sandy loam, wet
	MP 13.92-14.10	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent
	MP 14.10-14.37	Meloland very fine sandy loam, wet
	MP 14.37-14.94	Niland gravelly sand, wet
	MP 14.94-14.96	Imperial silty clay, wet
	MP 14.96-14.97	Niland gravelly sand, wet
Production Well Pads and Pipelines		
OB1 Well Pad	2.96 ac 1.81 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes Holtville silty clay, wet
OB1 Pipeline	MP 0.00-0.08	Holtville silty clay, wet

Table 5.3-1 (continued)
SOIL MAPPING UNITS IDENTIFIED FOR THE SSU6 PROJECT[1]

Project Component[2]	Approximate Acreage/ Mileposts	Soil Name
	MP 0.08-0.44	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
OB2 Well Pad	7.19 ac	Holtville silty clay, wet
OB2 Pipeline	MP 0.00-0.04	Fluvaquents, saline
	MP 0.04-0.06	Holtville silty clay, wet
OB3 Well Pad	4.82 ac	Torriorthents – Rock Outcrop complex, 5 to 60 percent slopes
OB3 Pipeline	MP 0.00-0.02	Fluvaquents, saline
	MP 0.02-0.32	Torriorthents – Rock Outcrop complex, 5 to 60 percent slopes
OB4 Well Pad	4.35 ac 0.47 ac	Holtville silty clay, wet Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
OB4 Pipeline	MP 0.00-0.19	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
OB5 Well Pad	4.82 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
OB1 Pipeline	MP 0.00-0.19	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
Injection Well Pads and Pipelines		
OBI-1 Well Pad	4.82 ac	Holtville silty clay, wet
OBI-1 Pipeline	MP 0.00-0.25	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 0.25-0.98	Holtville silty clay, wet
	MP 0.98-1.13	Glenbar clay loam, wet
	MP 1.13-1.32	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes
	MP 1.32-1.96	Holtville silty clay, wet
OB1-2 Well Pad	4.82 ac	Holtville silty clay, wet
OB1-2 Pipeline	MP 1.32-2.00	Holtville silty clay, wet
OB1-3 Well Pad	4.82 ac	Holtville silty clay, wet
OB1-3 Pipeline	MP 0.52-0.62	Holtville silty clay, wet

[1] Soil Conversation Service, 1981

[2] Refer to Figures 5.3-1A through 5.3-1E for location of project components

Table 5.3-2
SOIL MAPPING UNITS – DESCRIPTION AND PROPERTIES [1,2,3]

Soil Map Unit Name	Unit Soil Description	Slope (%)	Depth to Bedrock (inches)	Water Erosion Susceptibility (K Factor)[4]	Wind Erosion Susceptibility[5]	Comments
Fluvaquents, saline	Nearly level, very deep, soils formed in alluvial sediment of flood plains and in alluvial basins. The water table is within a depth of 36 inches most of the year. Soluble salts are concentrated in the surface layer by capillary rise and evaporation of the saline ground water. Soil texture ranges from silty clay to fine sand.	0-2	>60	na	na	Surface runoff is slow to ponded. Strongly saline and poorly drained. High water table. Capability subclass VIIIw (dryland).
Glenbar clay loam, wet	Nearly level, very deep, soils formed in alluvial sediment on flood plains and in alluvial basins within irrigated areas. Irrigation has caused a perched water table at a depth of 36 to 60 inches, and the water can rise to a depth of 18 inches during periods of heavy irrigation. Soil is pinkish gray clay loam from 0 to 13 inches and is stratified, light brown clay loam, and silty clay loam from 13 to 60 inches. Strata of silty clay may occur between 10 and 60 inches; or a thick strata of silt loam or very fine sandy loam may occur between 20 to 36 inches.	0-2	>60	Moderate (0.37)	Moderate (4L)	Moderately slow permeability, with seasonal high water table. Moderate shrink-swell potential. Capability unit IIw-3 (irrigated); Capability subclass VIIIw (dryland).
Glenbar complex	Nearly level, very deep, well-drained, calcareous soils formed in alluvial deposits along the valley edges in non-irrigated areas. Soil is pinkish gray loam from 0 to 13 inches and light brown stratified clay loam and silty clay loam between 13 and 60 inches.	0-2	>60	High (0.43)	Moderate (4L)	Moderately slow permeability. Low to moderate shrink-swell potential. Capability unit IIIs-6,(irrigated), Capability subclass VIIIs (dryland).
Holtville silty clay, wet	Nearly level, very deep, stratified soil formed in alluvial sediment on flood plains and alluvial basin floors. Irrigation has caused a perched water table at a depth of 36 to 60 inches, and the water table can rise to within 18 inches of the surface during periods of heavy irrigation. Soil is light brown silty clay from 0 to 17 inches, light brown to very pale brown silty clay and silt loam from 17 to 18 inches, and very pale brown loamy very fine sand from 18 to 60 inches, with sandy material below 60 inches in some areas.	0-2	>60	Moderate to High (0.28-0.43)	Moderate (4)	Slow to moderately rapid permeability. High to low shrink-swell potential. Capability unit IIw-5 (irrigated), Capability subclass VIIw (dryland).
Imperial silty clay	Nearly level, very deep, moderately well drained soils formed in clayey sediment on flood plains and in basins and lakebeds. Soil is pinkish gray and light brown silty clay from the surface to 60 inches or more. Efflorescence of gypsum and brown stains are common in the cracks and pores. In some places the surface layer has very thin layers of silt or very fine sand.	0-2	>60	High (0.43)	Moderate (4)	Slow permeability. High shrink-swell potential. Capability unit IIIw-6; Capability subclass VIIIs (dryland).

Table 5.3-2 (Continued)
SOIL MAPPING UNITS – DESCRIPTION AND PROPERTIES [1,2,3]

Soil Map Unit Name	Unit Soil Description	Slope (%)	Depth to Bedrock (inches)	Water Erosion Susceptibility (K Factor)[4]	Wind Erosion Susceptibility[5]	Comments
Imperial silty clay, wet	Nearly level, very deep soils formed in clayey sediments on flood plains and in basins and lakebeds. Irrigation has caused a perched water table at a depth of 36 to 60 inches, which can rise to a depth of 18 inches during periods of heavy irrigation. Soil is pinkish gray and light brown silty clay from the surface to 60 inches or more. Efflorescences of gypsum and brown stains are common in the cracks and pores. In some places the surface layer is silty clay loam or clay loam.	0-2	>60	High (0.43)	Moderate (4)	Slow permeability, with seasonal high water table. High shrink-swell potential. Capability unit IIIw-6 (irrigated); Capability subclass VIIIw (dryland).
Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	Nearly level, very deep, calcareous soils formed in alluvial deposits on flood plains and lakebeds within the irrigated areas of Imperial Valley. Irrigation has caused a perched water table commonly at a depth of 36 to 60 inches, but which can rise to a depth of 18 inches during periods of heavy irrigation. This map unit averages about 40% Imperial silty clay loams and 40% Glenbar silty clay loams. The Imperial soil is pinkish gray silty clay loam from 0 to 12 inches, and pinkish gray and light brown silty clay from 12 to 60 inches. The Glenbar soil is pinkish gray silty clay loam from 0 to 13 inches, and stratified light brown clay loam and silty clay loam, with thin lenses of silty clay and sandy clay loam from 13 to 60 inches	0-2	> 60	Moderate to High (0.37 to 0.43)	Moderate (4 and 4L)	Slow to moderately slow permeability, with seasonal high water table. High to moderate shrink-swell potential. Capability unit IIIw-6 (irrigated); Capability subclass VIIIw (dryland).
Indio loam	Nearly level, very deep, well-drained, soils formed in alluvial and eolian sediments on flood plains and basin floors. Soil is pinkish gray loam from 0 to 12 inches. The underlying material is stratified very pale brown and pink light silt loam and loamy very fine sand to a depth of 60 inches or more. The layers below the surface layer have brown stains on the faces of cracks to a depth of about 44 inches. In some places the surface layer is silt loam, fine sandy loam, or loamy fine sand, or there is a layer of silty clay at a depth of 40 to 60 inches.	0-2	> 60	High (0.49 - 0.55)	Moderate (4L)	Moderate permeability. Low shrink-swell potential. Capability class I (irrigated); Capability subclass VIIIc (dryland).

Table 5.3-2 (Continued)
SOIL MAPPING UNITS – DESCRIPTION AND PROPERTIES [1,2,3]

Soil Map Unit Name	Unit Soil Description	Slope (%)	Depth to Bedrock (inches)	Water Erosion Susceptibility (K Factor)[4]	Wind Erosion Susceptibility[5]	Comments
Indio loam, wet	Nearly level, very deep, soils formed in alluvium and eolian sediments on flood plains and basin floors. Irrigation has caused a perched water table commonly at a depth of 36 to 60 inches, but which can rise to a depth of 18 inches during periods of heavy irrigation. Soil is a pinkish gray loam from 0 to 12 inches, and stratified, very pale brown and pink light silt loam and loamy very fine sand from 12 to 60 inches or more. In some places the surface layer is silt loam, very fine sandy loam, or fine sandy loam, or there is silty clay at a depth between 40 and 60 inches.	0-2	> 60	High (0.49 - 0.55)	Moderate (4L)	Moderate permeability, with seasonal high water table. Low shrink-swell potential. Capability unit IIw-1 (irrigated); Capability subclass VIIIw (dryland).
Indio-Vint complex	Nearly level, very deep, well-drained, calcareous soils formed in alluvial deposits and in eolian material on flood plains and alluvial basin floors. The complex is about 35 percent Indio loam and 30 percent Vint loamy fine sand. The Indio soil is pinkish gray loam from 0 to 12 inches, and is stratified very pale brown and pink light silt loam and loamy very fine sand from 12 to 60 inches or more. The Vint soils are stratified light brown and pink loamy fine sand from the surface to 60 inches, with several thin lenses of silt loam between 10 and 40 inches.	0-2	> 60	Moderate (0.24 - 0.29)	High (2)	Moderate to moderately rapid permeability. Low shrink-swell potential. Capability unit IIs-1 (irrigated);Capability subclass VIIIe (dryland).
Meloland fine sand	Nearly level, very deep, well drained, soils formed in alluvial or eolian sediments on flood plains and alluvial basin floors on the valley edges in non- irrigated areas. Soil is reddish yellow fine sand from 0 to 12 inches, stratified very pale brown loamy very fine sand and silt loam from 12 to 26 inches, and pink silty clay from 26 to 60 inches.	0-2	> 60	Moderate to High (0.28 - 0.43)	High (1)	Slow permeability. Low to high shrink-swell potential. Capability unit IIIs-3 (irrigated); Capability subclass VIIIe (dryland).
Meloland very fine sandy loam, wet	Nearly level, very deep, soils formed in alluvial or eolian sediments on flood plains and alluvial basin floors. Irrigation has caused a perched water table at a depth of 24 to 36 inches. Soil is light brown very fine sandy loam from 0 to 12 inches, stratified, very pale brown loamy fine sand and silt loam from 12 to 14 inches, and pink silty clay from 14 to 71 inches. In some places, the surface layer is silt loam, loam, or fine sandy loam.	0-2	> 71	Moderate to High (0.32 - 0.43)	Moderate (4L)	Slow permeability, with seasonal high water table. Low to high shrink-swell potential. Capability unit IIIw-3 (irrigated), Capability subclass VIIIwv,(dryland).

Table 5.3-2 (Continued)
SOIL MAPPING UNITS – DESCRIPTION AND PROPERTIES [1,2,3]

Soil Map Unit Name	Unit Soil Description	Slope (%)	Depth to Bedrock (inches)	Water Erosion Susceptibility (K Factor)[4]	Wind Erosion Susceptibility[5]	Comments
Meloland and Holtville loams, wet	Nearly level, very deep, calcareous soils formed in alluvial deposits or in eolian material on flood plains and alluvial basin floors. Irrigation has caused a perched water table at a depth of 24 to 36 inches that can rise to a depth of 18 inches during periods of heavy irrigation. The Meloland soil is light brown loam from 0 to 12 inches, stratified, very pale brown loamy fine sand and silt loam from 12 to 26 inches, pink silty clay from 26 to 38 inches, and stratified silt loam, very fine sandy loam, and loamy fine sand from 38 to 60 inches. The Holtville soil is light brown loam from 0 to 12 inches, light brown silty clay from 12 to 24 inches, pale brown silt loam from 24 to 36 inches, and very pale brown loamy very fine sand from 36 to 60 inches.	0-2	> 60	Moderate to High (0.28 - 0.43)	Moderate (4L)	Slow permeability, with seasonal high water table. Low to high shrink-swell potential. Capability unit IIIw-3 (irrigated); Capability subclass VIIIw (dryland).
Niland gravelly sand	Nearly level, very deep, moderately well drained, soils formed in alluvial materials on the edges of flood plains and alluvial basins. Soil is stratified, very pale brown gravelly sand from 0 to 23 inches, and pale brown silty clay from 23 to 60 inches. Most areas have a partial surface cover of gravel or soft flat sandstones and flagstones. Small areas have short slopes of 2 to 5 percent.	0-5	> 60	Moderate (0.24 - 0.32)	High (1)	Slow permeability. Low to moderate shrink-swell capacity. Capability unit IVs-3 (irrigated); Capability subclass VIIIe (dryland).
Niland gravelly sand, wet	Nearly level, very deep, soils formed in alluvial materials on the edges of flood plains and alluvial basins. Irrigation has caused a perched water table at a depth of 24 to 36 inches that can rise to a depth of 18 inches during periods of heavy irrigation. Soil is very pale brown, stratified gravelly sand from 0 to 23 inches, and pale brown silty clay from 23 to 60 inches.	0-2	> 60	Moderate (0.24 - 0.32)	High (1)	Slow permeability, with seasonal high water table. Low to high shrink-swell potential. Capability unit IVw-3 (irrigated); Capability subclass VIIIw (dryland).
Rositas fine sand, 0 to 2 percent slopes	Nearly level, very deep, somewhat excessively drained, soils formed in alluvial or eolian sediments on flood plains, basins, and terraces. Soil is reddish yellow fine sand from the surface to a depth of 60 inches. In some places soil colors are less bright.	0-2	> 60	Moderate (0.2)	High (1)	Rapid permeability. Low shrink-swell potential. Capability unit IIIs-4 (irrigated), Capability subclass VIIIe (dryland).
Rositas fine sand, wet, 0 to 2 percent slopes	Nearly level, very deep, soil formed in eolian and alluvial sediments on flood plains and alluvial basin floors. Irrigation or seepage causes a perched water table at a depth of 36 to 60 inches, and the water table may rise to a depth of 18 inches during periods of heavy irrigation. Soil is reddish yellow fine sand to a depth of 60 inches or more. In some areas a fine textured stratum is at a depth of 40 to 60 inches. In some places soil color is less bright.	0-2	> 60	Moderate (0.2)	High (1)	Rapid permeability, with seasonal high water table. Low shrink-swell potential. Capability unit IIIw-4 (irrigated); Capability subclass VIIIw (dryland).

Table 5.3-2 (Continued)
SOIL MAPPING UNITS – DESCRIPTION AND PROPERTIES [1,2,3]

Soil Map Unit Name	Unit Soil Description	Slope (%)	Depth to Bedrock (inches)	Water Erosion Susceptibility (K Factor)[4]	Wind Erosion Susceptibility[5]	Comments
Torriorthents -Rock outcrop complex, 5 to 60 percent slopes	This complex consists of about 20 percent volcanic rock outcrop and 80 percent soil material that has little or no profile development. The Torriorthents are excessively drained, loam to loamy sand soils, with 15 to 35 percent rock fragments, formed in unconsolidated materials. These soils range from very shallow on the upper slopes to many feet deep on the toe slopes. Most of these areas are more than 60 inches deep.	5 - 60	> 60	na	Na	Variable permeability. Capability subclass VIIIe (dryland).
Vint loamy very fine sand, wet	Nearly level, very deep, soils formed in alluvial and eolian sediments, on basin floors and flood plains. Irrigation has caused a perched water table at a depth of 36 to 60 inches. The water table may rise to a depth of 18 inches below the surface during periods of heavy irrigation. Soil is light brown loamy very fine sand from 0 to 10 inches, and is underlain by pink and light brown loamy fine sand to a depth of 60 inches, with several thin lenses of heavy silt loam between depths of 10 and 40 inches. In some places the surface layer is loam, very fine sandy loam, and fine sandy loam.	0-2	>60	Low to Moderate (0.17 - 0.32)	Moderate (3)	Modertely rapid permeability, with seasonal high water table. Low shrink-swell potential. Capability unit IIw-4 (irrigated); Capability subclass VIIIw (dryland).
Vint and Indio very fine sandy loams, wet	This undifferentiated unit consists of deep to very deep, nearly level soils formed in alluvial and eolian sediments on the bed of old Lake Cahuilla. Irrigation has caused a perched water table at a dept of 36 to 60 inches. The water table may rise to a depth of 18 inches below the surface during periods of heavy irrigation. The Vint soil is light brown very fine sandy loam from 0 to 10 inches, stratified light brown and pink loamy fine sand with thin lenses of silt loam from 10 to 40 inches, and pinkish gray and light brown silty clay from 40 to 60 inches. In some places the surface layer is clay loam or sandy clay loam. In other places the silty clay substratum is at a depth of less than 40 inches. The Indo soil is light brown very fine sandy loam from 0 to 12 inches, stratified light brown and pink light silt loam and loamy very fine sand from 10 to 40 inches, and pinkish gray and light brown silty clay from 40 to 60 inches.	0-2	> 60	Low to High (0.17 – 0.55)	Moderate (3-4L)	Moderate to moderately rapid permeability, with seasonal high water table. Low to high shrink-swell potential. Capability unit IIw-3 (irrigated); Capability subclass VIIIw (dryland).

Notes
1 Refer to Figures 5.3-1 through 5.3-6 for location of soil mapping units, by project component.
2 Refer to Table 5.3-2 for the acreages/mileposts of identified soils, by project component.
3 Source: Soil Survey – Imperial Valley Area, California, Parts I and II. USDA, SCS (1981).
4 Based on "K" factor values where: low < 0.2; moderate = 0.2 - 0.39; and high ≥0.4.
Based on WEG classes where: high = 1-2; moderate = 3-4; and low = 5-8.
na – not available.

Table 5.3-3
FARMLAND DESIGNATION FOR THE SSU6 GENERATING PROJECT

Project Component	Approximate Acreage / Mileposts[1]/ Transmission Tower	Soil Name[1,2,3,]	Area/Miles of Potentially Important Farmland[4]	
			Prime[4]	Statewide Importance[4]
SSU6 Plant Facility	47.45 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	47.45 ac
	28.41 ac	Holtville silty clay, wet	28.41 ac	--
	0.19 ac	Fluvaquents, saline	--	--
Construction Parking	0.12 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes		0.12 ac
	4.5 ac	Holtville silty clay, wet	4.5 ac	
Construction Lay-Down	13.0 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes		13.0 ac
	7.2 ac	Holtville silty clay, wet	7.2 ac	
IID Substation	2.8 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes		2.8 ac
Plant Facility Sub-Total (Excluding temporary construction impacts)			**28.41 ac**	**50.25ac**
Proposed L-Line Interconnection	MP 0.00 – 0.35	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.15 miles
	MP 0.35 – 0.62	Holtville silty clay, wet	0.27 miles	--
	MP 0.62 – 0.75	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.13 miles
	MP 0.75 – 0.86	Holtville silty clay, wet	0.11 miles	--
	MP 0.86 – 0.87	Indio loam, wet	0.01 miles	--
	MP 0.87 –1.42	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.55 miles
	MP 1.42 – 1.46	Holtville silty clay, wet	0.04 miles	--
	MP 1.46 – 2.19	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.73 miles
	MP 2.19 – 2.62	Holtville silty clay, wet	0.43 miles	--
	MP 2.62 – 2.80	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.18 miles
	MP 2.80 – 4.67	Holtville silty clay, wet	1.87 miles	--
	MP 4.67 – 5.58	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.91 miles
	MP 5.58 – 5.65	Imperial silty clay, wet	--	0.07 miles
	MP 5.65 – 5.67	Water Crossing, (New River)	--	--

Table 5.3-3 (Continued)
FARMLAND DESIGNATION FOR THE SSU6 GENERATING PROJECT

Project Component	Approximate Acreage / Mileposts[1]/ Transmission Tower	Soil Name[1,2,3,]	Area/Miles of Potentially Important Farmland[4]	
			Prime[4]	Statewide Importance[4]
	MP 5.67 – 5.76	Imperial silty clay	--	--
	MP 5.76 – 6.16	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.4 miles
	MP 6.16 – 6.34	Holtville silty clay, wet	0.18 miles	--
	MP 6.34 – 6.51	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.17 miles
	MP 6.51 – 6.77	Meloland very fine sandy loam, wet	0.26 miles	--
	MP 6.77 – 7.13	Imperial silty clay, wet	--	0.3 miles
	MP 7.13 – 7.65	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.52 miles
	MP 7.65 – 8.09	Holtville silty clay, wet	0.44 miles	--
	MP 8.09 – 8.27	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.18 miles
	MP 8.27 – 8.33	Holtville silty clay, wet	0.06 miles	--
	MP 8.33 – 8.56	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.13 miles
	MP 8.56 – 8.68	Holtville silty clay, wet	0.02 miles	--
	MP 8.68 – 8.73	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.05 miles
	MP 8.73 – 8.86	Holtville silty clay, wet	0.13 miles	--
	MP 8.86 – 8.91	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.05 miles
	MP 8.91 – 9.13	Holtville silty clay, wet	0.22 miles	--
	MP 9.13 – 9.23	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.1 miles
	MP 9.23 – 9.26	Holtville silty clay, wet	0.03 miles	--
	MP 9.26 – 9.62	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.36 miles
	MP 9.62 – 10.21	Holtville silty clay, wet	0.59 miles	--
	MP 10.21–10.32	Meloland very fine sandy loam, wet	0.11 miles	--
	MP 10.32–10.47	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.15 miles
	MP 10.47–10.65	Meloland very fine sandy loam, wet	0.18 miles	--
	MP 10.65–10.83	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.1 miles

Table 5.3-3 (Continued)
FARMLAND DESIGNATION FOR THE SSU6 GENERATING PROJECT

Project Component	Approximate Acreage / Mileposts[1]/ Transmission Tower	Soil Name[1,2,3,]	Area/Miles of Potentially Important Farmland[4]	
			Prime[4]	Statewide Importance[4]
	MP 10.83–10.95	Imperial silty clay, wet	--	0.12 miles
	MP 10.95–11.22	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.27 miles
	MP 11.22–11.28	Holtville silty clay, wet	0.16 miles	--
	MP 11.28–11.65	Indio loam, wet	0.27 miles	--
	MP 11.65–11.66	Imperial silty clay, wet		0.01 miles
	MP 11.66–11.75	Holtville silty clay, wet	0.09 miles	--
	MP 11.75–12.01	Meloland and Holtville loams, wet	0.26 miles	--
	MP 12.01–12.08	Meloland very fine sandy loam, wet	0.07 miles	--
	MP 12.08–12.20	Vint and Indio very fine sandy loams, wet	0.12 miles	--
	MP 12.20–12.95	Vint loamy very fine sand, wet	0.75 miles	--
	MP 12.95–13.54	Meloland very fine sandy loam, wet	0.59 miles	--
	MP 13.54–13.62	Meloland very fine sandy loam, wet	0.11 miles	0.11 miles
	MP 13.62–13.71	Meloland fine sand	--	0.08 miles
	MP 13.71–13.83	Glenbar complex		0.12 miles
	MP 13.83–14.04	Meloland fine sand		0.07 miles
	MP14.04–14.08	Glenbar complex		0.12 miles
	MP 14.08–14.33	Meloland fine sand		0.31 miles
	MP 14.33-14.53	Glenbar complex		0.20 miles
Enter BML Land	MP 14.53–15.98	No soil survey available for the remaining 1.45 miles, through BLM Lands. Proposed L-Line Interconnection intersects with Existing L-Line.	--	--
L-Line Interconnection Sub-total			**7.35 miles**	**6.47 miles**
Proposed IID Midway Interconnection	MP 0 – 0.39	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.39 miles
	MP 0.39 - 1.15	Holtville silty clay, wet	0.76 miles	
	MP 1.15 – 1.33	Glenbar clay loam, wet		0.18 miles
	MP 1.33– 4.14	Holtville silty clay, wet	2.81 miles	--
	MP 4.14 – 4.81	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	---	0.67 miles
	MP 4.81– 5.36	Imperial silty clay, wet	--	0.55 miles

Table 5.3-3 (Continued)
FARMLAND DESIGNATION FOR THE SSU6 GENERATING PROJECT

Project Component	Approximate Acreage / Mileposts[1]/ Transmission Tower	Soil Name[1,2,3,]	Area/Miles of Potentially Important Farmland[4]	
			Prime[4]	Statewide Importance[4]
	MP 5.36– 5.65	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.29 miles
	MP 5.65– 5.98	Imperial silty clay, wet	--	0.33 miles
	MP 5.98– 5.99	Water Crossing, (Alamo River)	--	--
	MP 5.99– 8.56	Imperial silty clay, wet	--	2.57 miles
	MP 8.56 – 8.80	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.24 miles
	MP 8.80 – 9.39	Imperial silty clay, wet	--	0.59 miles
	MP 9.39 – 9.67	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.28 miles
	MP 9.67 – 11.42	Imperial silty clay, wet	--	1.75 miles
	MP 11.42 – 11.76	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.34 miles
	MP 11.76 – 12.02	Imperial silty clay, wet	--	0.26 miles
	MP 12.02–13.02	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	1 miles
	MP 13.02–13.11	Holtville silty clay, wet	--	0.09 miles
	MP 13.11–13.23	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.12 miles
	MP 13.23–13.92	Meloland very fine sandy loam, wet	0.69 miles	
	MP 13.92–14.10	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.18 miles
Begins Northerly direction.	MP 14.10–14.37	Meloland very fine sandy loam, wet	0.27 miles	
	MP 14.37–14.94	Niland gravelly sand, wet	--	0.57 miles
	MP 14.94–14.96	Imperial silty clay, wet		0.02 miles
	MP 14.96–14.97	Niland gravelly sand, wet	--	0.01 miles
IID Midway Interconnection Subtotal:			**4.53 miles**	**10.43 miles**
Subtotal of Permanent Disturbance all Power Pole Locations (both IID Midway and L-Line Interconnections			**2.0 acres**	**2.4 acres**

Table 5.3-3 (Continued)
FARMLAND DESIGNATION FOR THE SSU6 GENERATING PROJECT

Project Component	Approximate Acreage / Mileposts[1]/ Transmission Tower	Soil Name[1,2,3,]	Area/Miles of Potentially Important Farmland[4]	
			Prime[4]	Statewide Importance[4]
Production Well Pads and Pipelines				
OB1 Well Pad	2.96 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	2.96 acres
	1.86 ac	Holtville silty clay, wet	1.86 ac	--
Total:			**1.86 ac**	**2.96 ac**
OB1 Pipeline	MP 0.00 – 0.08	Holtville silty clay, wet	0.08 mi 1.06 ac	--
	MP 0.08 – 0.44	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.36 mi 4.8 ac
Total:			**0.08 mi 1.06 ac**	**0.36 mi 4.8 ac**
OB2 Well Pad	7.19 ac	Holtville silty clay, wet	7.19 ac	--
Total			**7.19 ac**	**--**
OB2 Pipeline	MP 0.00 – 0.04	Fluvaquents, saline	--	--
	MP 0.04-0.06	Holtville silty clay, wet	0.02 mi	--
Total:			**0.02 mi 0.27 ac**	**--**
OB3 Well Pad	4.82 ac	Torriorthents - Rock Outcrop complex, 5 to 60 percent slopes	--	--
Total			**--**	**--**
OB3 Pipeline	MP 0.00-0.02	Fluvaquents, saline	--	--
	MP 0.02- – 0.32	Torriorthents - Rock Outcrop complex, 5 to 60 percent slopes	--	--
Total			**--**	**--**
OB4 Well Pad	4.35 ac	Holtville silty clay, wet	4.35 ac	--
	0.47 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.47 ac
Total:			**4.35 ac**	**0.47 ac**
OB4 Pipeline	MP 0.00-0.19	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes		0.19 mi 2.5 ac
Total				**0.19 mi 2.5 ac**

Table 5.3-3 (Continued)
FARMLAND DESIGNATION FOR THE SSU6 GENERATING PROJECT

Project Component	Approximate Acreage / Mileposts[1]/ Transmission Tower	Soil Name[1,2,3,]	Area/Miles of Potentially Important Farmland[4]	
			Prime[4]	Statewide Importance[4]
OB5 Well Pad (note 1.7 acres is currently disturbed land)	4.82 ac	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes		3.1 ac
Total:			**--**	**3.1 ac**
OB5 pipeline	MP 0.00-0.19	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes		0.19 mi 2.5 ac
Total:			**--**	**0.19 mi** **2.5 ac**
Injection Well Pads and Pipelines				
OBI-1 Well Pad	4.82 ac	Holtville silty clay, wet	4.82 ac	--
Total:			**4.82 ac**	**--**
OBI-1 Pipeline	MP 0.00 – 0.25	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes		0.25 mi 3.03 ac
	MP 0.25 – 0.98	Holtville silty clay, wet	0.73 mi 9.7 ac	--
	MP 0.98 – 1.13	Glenbar clay loam, wet	0.15 2.0 ac	--
	MP 1.13 – 1.32	Imperial-Glenbar silty clay loams, wet, 0 to 2 percent slopes	--	0.19 mi 2.5 ac
	MP 1.32-1.96	Holtville silty clay, wet	0.64 mi 8.5 ac	--
Total:			**1.52 mi** **20.2 ac**	**0.44 mi** **5.53 ac**
OBI-2 Well Pad	4.82 ac	Holtville silty clay, wet	4.82 ac	
Total:			**4.82 ac**	**--**
OBI-2 Pipeline	MP 1.32 – 2.00	Holtville silty clay, wet	0.68 mi 9.1 ac	
Total:			**0.68 mi** **9.1 ac**	**--**
OBI-3 Well Pad	4.82 ac.	Holtville silty clay, wet	4.82 ac	--
Total:			**4.82 ac**	**--**

Table 5.3-3 (Continued)
FARMLAND DESIGNATION FOR THE SSU6 GENERATING PROJECT

Project Component	Approximate Acreage / Mileposts[1]/ Transmission Tower	Soil Name[1,2,3,]	Area/Miles of Potentially Important Farmland[4]	
			Prime[4]	Statewide Importance[4]
OBI-3 Pipeline	MP 0.52-0.62	Holtville silty clay, wet	0.62 8.3 ac	
Total:			**0.62 mi 8.3 ac**	**--**
			97.2 acres(5)	**74.5 acres(5)**

[1]Refer to Figures 5.3-2A through 5.3-2E for mapped locations. Number of power poles is estimated based on 1,000 feet between towers.

[2]Source: Soil Survey Imperial County, California, USDA, SCS (1981).

[3] Refer to Table 5.3-2 for soil descriptions and interpretations.

[4]Source: Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Imperial County, California Department of Conservation, 1995.

[5] Total acreage does not include temporary disturbance because of construction parking or construction lay-down areas.

Table 5.3-4
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
5.3 Agriculture and Soils					
Federal					
	Federal Water Pollution Control Act of 1972; Clean Water Act of 1977 (including 1987 amendments).	Meet discharge requirements relative to sediment because of accelerated erosion.	Section 5.3.4.1	RWQCB; Colorado River Basin Region 7, under the direction of the State Water Resources Control Board	4, 5
	U.S. Department of Agriculture, Soil Conservation Service (SCS), National Engineering Handbook (1983), Sections 2 and 3.	Implement standards for the planning, design, and conservation of soil conservation practices.	Section 5.3.4.1	USDA NRCS.	1
State					
	Cal. Pub. Res. Code § 25523(a)	Provisions relating to the manner in which the proposed facility is to be designed, sited, and operated to protect environmental quality and assure public health and safety.	Section 5.3.4.2	CEC	2
	Cal. Pub. Res. Code §21000 *et. seq*.; Guidelines for Implementation of CEQA, Appendix G	Environmental checklist form, evaluation of erosion or siltation and conversion of agricultural lands.	Section 5.3.4.2	CEC	2
	Williamson Act	Provides for lowered property taxes for lands maintained in agricultural and certain open space uses.	Section 5.3.4.2	Department of Conservation, Office of Land Conservation	3
	California Porter-Cologne Water Quality Control Act; Cal. Water Code, Division 7, § 13260–13269	Adequate protection of water quality by appropriate design, sizing and construction of erosion and sediment controls; obtain waste discharge requirements concerning potential surface water pollution from project area runoff.	Section 5.3.4.2	CEC, RWQCB Colorado River Basin Region 7	2, 4

Table 5.3-4 (Continued)
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
5.3 Agriculture and Soils					
Local					
Imperial County Codified Ordinance Site Design Standards					
	Imperial County Land Use Code, Title 9, Division 3, Chapter 1, Sections 90301.02; 90301.03; Chapter 2, Section 90302.13	Regulations pertaining to fugitive dust control during grading. Regulations describing submittal requirements related to grading projects; description of soil test required for grading permit.	Section 5.3.4.3	Imperial County Planning/Building Department	6
Imperial County Codified Ordinance Grading Regulations					
	Imperial County Land Use Code, Title 9, Division 10, Chapter 10	Regulations pertaining to construction permits.	Section 5.3.4.3	Imperial County Planning/Building Department	6
Imperial County Codified Ordinance Flood Damage Regulations					
	Imperial County Land Use Code, Title 9, Division 16, Chapter 3, Section 91603.00; Chapter 4, Section 91604.00; Chapter 5, Section 91605.04.	Permit required for development within the floodplain	Section 5.3.4.3	Imperial County Planning/Building Department	6
Imperial County Codified Ordinance Geothermal					
	Imperial County Land Use Code, Title 9, Division 17, Chapter 1, Section 91701.01; Chapter 2, Sections 91702.00.	Requirements pertaining to soil investigations. Specific standards regulations regarding protection of usable agricultural land and erosion control measures. Grading permit required.	Section 5.3.4.3	Imperial County Planning/Building Department	6
Imperial County General Plan, Open Space and Conservation Element					
	Policy	Landscaping should be required in all developments to prevent erosion on graded sites and, if the area is contiguous with undisturbed wildlife habitat, the plan should include revegetation with native plant species.	Section 5.3.4.3	Imperial County Planning/Building Department	6

Table 5.3-4 (Continued)
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
5.3 Agriculture and Soils					
	Goal 1	Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions.	Section 5.3.4.3	Imperial County Planning/Building Department	6
	Goal 4; Objective 4.2	The County will actively conserve and maintain contiguous farmlands and prime soil areas to maintain economic vitality and the unique lifestyle of the Imperial Valley. Control and prevent soil erosion when possible.	Section 5.3.4.3	Imperial County Planning/Building Department	6
	Goal 8	The County will conserve, protect, and enhance the water resources in the planning area.	Section 5.3.4.3	Imperial County Planning/Building Department	6
Imperial County General Plan, Agricultural Element					
	Goal 1	Preservation of Important Farmland.	Section 5.3.4.3	Imperial County Planning/Building Department	6
	Goal 3	Limit the introduction of conflicting uses into farming areas, including residential development of existing parcels, which may create the potential for conflict with continued agricultural use of adjacent property.	Section 5.3.4.3	Imperial County Planning/Building Department	6
Imperial County General Plan, Geothermal/Transmission Element					
	Goal 1	The County of Imperial supports and encourages the full, orderly, and efficient development of geothermal resources while at the same time preserving and enhancing where possible agricultural, biological, human, and recreational resources.	Section 5.3.4.3	Imperial County Planning/Building Department	6
	Goal 2	The County will minimize all impacts to agricultural lands and biological resources that could potentially result from the development of geothermal resources.	Section 5.3.4.3	Imperial County Planning/Building Department	6

Table 5.3-4 (Continued)
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
5.3 Agriculture and Soils					
	Goal 5	When planning and designing transmission lines, the County will consider impacts to agricultural lands, wildlife, and the natural desert landscape.	Section 5.3.4.3	Imperial County Planning/Building Department	6

Table 5.3-5
AGENCY CONTACTS LIST FOR
LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

FEDERAL					
1	U.S. Department of Agriculture, Natural Resources Conservation Services Raul Ramirez 1601 New Stine Rd. Suite 290 Bakersfield, CA 93309 661.861.4129 X 3				
STATE					
2	California Energy Commission Mr. Paul Richins 1516 9th Ave. Sacramento, CA 95814 916.654.4074	3	California Department of Conservation Luree Stetson, Acting Chief Division of Land Resource Protection 801 K Street M.S. 24-01 Sacramento, CA 95814 916.324.0850	4	Water Quality Control Board, Colorado River Basin Region 7 BASIN PLANNING Supervisor - Joan Stormo 573-720 Fred Waring Drive, Suite 100 Palm Desert, CA 92260 Phone: (760) 346-7491.
5	California Department of Water Resources 1001 I St. Sacramento, CA 95814 Connie Anderson (916) 341-5800.				
LOCAL					
6	Imperial County Planning/Building Department 939 Main Street El Centro, CA Jurg Heuberger 760.482.4236				

Table 5.3-6
REQUIRED PERMITS

Issuing Agency	Type of Permit Required	Schedule
RWQCB-Colorado River Basin Region 7	Notice of Intent (NOI)	Prior to construction
	NPDES General Construction Storm Water Permit	Prior to construction
	NPDES Industrial Storm Water Permit	Prior to construction
	Waste Management Unit (WMU) Permit (Brine Pond)	Prior to construction
Imperial County	Grading Permit, Construction Permit	Prior to construction
	Development Permit Requirements to be met	Prior to construction