

CHAPTER 3 – ENVIRONMENTAL IMPACTS ASSESSMENT SUMMARY

The CEQA Initial Study Checklist summarizes the impacts anticipated to result from the Seventh Standard Substation project (Table 3).

TABLE 3 CEQA INITIAL STUDY CHECKLIST				
Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?			X	

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III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or US Fish and Wildlife Service (USFWS)?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS?			X	

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c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	

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Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

**TABLE 3
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Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
VIII. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?				X

**TABLE 3
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Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

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Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
X. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

**TABLE 3
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e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIII. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				X
Fire protection?				X
Police protection?				X
Schools?				X

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Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
Parks?				X
Other public facilities?				X
XIV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
XV. TRANSPORTATION/TRAFFIC – Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

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Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
XVII. MANDATORY FINDINGS OF SIGNIFICANCE:				

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Description	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?			X	

3.1 BIOLOGY RESOURCES

3.1.1 Methodology

A reconnaissance level site visit for the entire project area was completed in March 2008. During the visit vegetation and habitat information was gathered. Suitable habitat for plant and wildlife species was determined by the presence of diagnostic habitat elements. Special status species in the area were queried using the California Natural Diversity Database (CNDDDB).

3.1.2 Existing Conditions

Disturbance throughout the project area is high. Native habitat is absent from the area due to various forms of disturbance, such as agriculture lands (orchards, fields, etc.), Seventh Standard Road, irrigation canals, oil fields, and electric distribution and transmission lines. Habitat types observed at the proposed substation site are limited to agricultural lands. The substation will be constructed entirely within an almond orchard.

Federal and State Listed Endangered Species and California Native Plant Society Plants

Federal and State listed threatened or endangered species and California Native Plant Society (CNPS) listed plants potentially occurring within the project area were identified using information from the Federal and State resource agencies. Specifically, a target list was generated using the US Fish and Wildlife Service (USFWS), Sacramento Region website, and a query was performed for the Rosedale and Oildale quadrangle maps and eight surrounding maps (Wasco, Famoso, North of Oildale, Knob Hill, Oil Center, Lamont, Gosford, Stevens, Tupman, and Rio Bravo) using the CNDDDB. A total of fourteen Federally-listed threatened or endangered species and nine state species with the potential to occur within the proposed project area were identified. A total of 13 CNPS plants were identified. A table is included in Appendix B that details species information, along with an assessment of the probability of encountering these species on the project site, and to help determine if further study is warranted. Based on this review, one species, the San Joaquin kit fox (SJKF), has the potential to occur within the project area. A brief discussion of this species is found below.

San Joaquin Kit Fox

The SJKF was listed as endangered under the Federal Endangered Species Act (ESA) on March 11, 1967, and as threatened under the California ESA on June 27, 1971. No critical habitat has been designated for the species. A Recovery Plan for the SJKF was prepared in 1998.

Prior to 1930, the SJKF's range extended from southern Kern County north to Tracy, San Joaquin County, on the west side, and near La Grange, Stanislaus County, on the east side (Grinnell et al. 1937; USFWS 1998). The SJKF is often associated with open grasslands and oak savannas. Agricultural areas (irrigated row crops, orchards, vineyards) are used for foraging. Orchards may support prey species, if the grounds are not manicured, but typically denning potential among orchards is low due to increased predatory potential. Kit foxes often den in suitable habitat located adjacent to agricultural areas where they can forage (Bell 1994; Scott-Graham 1994).

The City of Bakersfield and Kern County have a Habitat Conservation Plan called the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) (1994), and associated Section 10 (a)(1)(b) and Section 2081 permits issued by the USFWS and California Department of Fish and Game, which cover the project area and address impacts to the SJKF. The MBHCP is further discussed below.

Metropolitan Bakersfield Habitat Conservation Plan

The MBHCP is a comprehensive species conservation plan for the Metropolitan Bakersfield area designed to mitigate development impacts on covered species. The Plan was prepared under Federal ESA Section 10(a) as well as the State ESA and allows the incidental "take" of ESA protected species. The plan was established to provide a means to account for development in the Metropolitan Bakersfield region while minimizing and mitigating for the loss of protected species habitat by purchasing habitat elsewhere and preserving that habitat.

Non-Native Invasive Species

Noxious weeds are non-native or invasive pests that grow and spread rapidly and out-compete native species. The California Department of Food and Agriculture maintains a list of noxious weeds. Weeds that occur on this list were given special attention during the field review. No noxious weeds were identified during the field review.

Migratory Birds

With the exception of domestic pigeons, house sparrows, and European starlings, all birds in the project vicinity are protected under the Migratory Bird Treaty Act of 1918, as amended (16 USC 703-712). The Migratory Bird Treaty Act states it is unlawful to take, kill, or possess migratory birds that are listed

under its protection. Biological field reviews identified no nests in areas impacted by the project. The project is in areas disturbed by agricultural and is not highly conducive to nesting birds.

3.1.3 Impacts

The proposed project will result in the conversion of approximately 4.9 acres of agricultural lands. Generally, wildlife value among the habitat occurring in the project area is low.

Construction activities will have minor, short-term impacts on wildlife habitat, resulting in localized minor impacts to wildlife populations. Direct impacts will typically occur when species come into contact with equipment and construction workers. Given the low potential for wildlife to occur in the project area, impacts are expected to be low. Upon completion of construction activities, impacts are expected to be low and to occur infrequently.

Federal and State Listed Endangered Species and California Native Plant Society Plants

Based upon the analysis of species information within Appendix B, the SJKF has the potential to occur within the project area. The species and potential project-related impacts are discussed below.

San Joaquin Kit Fox

There is potential for the SJKF to occur within the project area as agricultural lands are considered potential migration and foraging habitat. The proposed substation will result in the loss of approximately 4.9 acres of potential kit fox migration and foraging habitat. Construction related impacts (e.g., elevated noise, human activity, and ground vibrations, and increased light) as well as post-construction maintenance activities may have an impact on the kit fox. It is unlikely that a direct “take” of a SJKF through habitat loss or modification is possible. No dens were observed among the project area and dens are unlikely due to the poor denning habitat. Project-related impacts will be less than significant.

The project area is within the boundaries of the MBHCP. PG&E will pay habitat mitigation fees according to the requirements set forth by the City of Bakersfield for impacts to kit fox habitat and will adhere to the terms set forth by the MBHCP. Additionally, conservation measures will be employed to further minimize impacts to the SJKF. Conservation measures are outlined in Chapter 5.

Metropolitan Bakersfield Habitat Conservation Plan

PG&E will comply with the MBHCP. Mitigation fees will be paid per the requirements of the MBHCP for loss of SJKF habitat as a result of the substation construction.

Non-native Invasive Species

Ground disturbing construction activities have the potential to introduce and spread existing noxious weeds. Weed seed or other propagules can be transported on construction equipment. To reduce the potential spread of noxious weeds, all equipment must be clean (washed) prior to coming onsite for the first time to reduce the likelihood that seed or other propagules are introduced. Only weed free straw will be used for erosion control.

Migratory Birds

No nests were observed during the field review. Electrical line towers and orchard trees may provide suitable nesting areas for migratory birds. However, agricultural activities and harvesting often disrupt nesting habitat. A preconstruction survey for migratory nesting birds will be performed if construction occurs during the avian nesting period.

3.2 LAND USE AND PLANNING, RECREATION, AND AGRICULTURAL RESOURCES

3.2.1 Methodology

The CPUC has sole and exclusive jurisdiction over the siting and design of the project because it authorizes the construction and maintenance of investor-owned public utility (IOU) facilities. Although such projects are exempt from local land use and zoning regulations and permitting, PG&E has considered local and state land use plans and policies, and local land use priorities and concerns, as part of its environmental review process.

Information about the land use, recreation, and agricultural resources of the project area was gathered during a site visit in March 2008 and analysis of applicable planning documents prepared by Kern County, City of Bakersfield, and City of Shafter. Land use, recreation, and agricultural resources are described for the project area, within one mile of the proposed project.

3.2.2 Existing Conditions

Land Use and Planning

Land Ownership and Jurisdiction

The entire project area is within Kern County, California. Jurisdiction over the project area is divided between three governmental entities including Kern County, City of Bakersfield, and City of Shafter. The proposed project is located entirely on private lands under the jurisdiction of the City of Bakersfield or within its sphere of influence.

The proposed substation site was recently annexed into the City of Bakersfield. No federal or state lands are located within the project area (Figure 6).

Existing Land Use

Existing land uses within the project area include privately held lands primarily used for agriculture, industrial, and residential uses. Existing land uses are described below and are illustrated in Figure 7.

Agricultural

The majority of existing land use in the project area can be characterized as agricultural. Agricultural uses include the cultivation of almonds and field crops. In addition, agricultural uses include accessory buildings used directly as part of the agricultural operation.

Industrial

Kern County is home to the largest known oil reserves in California. Oil extraction is very important to the economy of the region. Located to the south and west of the proposed project is a large expanse of active oil fields. The oil fields include wells, storage tanks, and pipelines. A set of five oil storage tanks is located immediately to the south of the proposed substation site. A communications tower is located approximately 0.75 miles to the southwest of the project site within existing oil fields.

Residential

Residential uses within the project area can generally be classified as rural or low density residential, with medium density neighborhoods encroaching into the area. Rural or low density residential areas are generally located adjacent to, or scattered throughout, agricultural areas and include homes on large lots.

Medium density residential areas have only been constructed recently in the project area. The North Pointe subdivision is a medium density residential neighborhood located approximately one half mile south of Seventh Standard Road and to the west of Calloway Drive, more than 4,000 feet, at its closest

point, from the proposed substation site. Additional subdivisions are located south of the project area along Snow Road.

Linear Facilities

Linear facilities within the study area consist of utility and ground transportation features. The Rio Bravo-Kern Oil 115kV electrical power line, operated by PG&E, currently parallels the south side of Seventh Standard Road. The power line is being relocated (shifted to the south) to accommodate the City of Shafter's widening of Seventh Standard Road from a two-lane road into a four-lane divided road (ultimate six-lane divided road), which is scheduled to begin construction in spring or summer of 2009. The single-circuit power line will be rebuilt as a double-circuit line when the line is relocated to avoid duplicative construction efforts. Relocation and modification of the Rio Bravo-Kern Oil 115kV Power Line was included in the environmental review for the City's road-widening project and will be noticed shortly under the Commission's GO 131-D notice requirements. One circuit on this power line will be looped into and out of the substation as part of the substation project.

In addition to the existing power line, three high pressure gas pipelines parallel Seventh Standard Road along either side. Two of the pipelines are operated by Shell and the third is operated by Chevron. A fourth high pressure gas pipeline runs parallel to Snow Road in the southern portion of the project vicinity. This fourth pipeline is operated by Southern California Gas Company.

Two major irrigation canals, the Calloway Canal and the Friant-Kern Canal bisect the project area. The Calloway Canal passes immediately to the east of the proposed substation site.

The only major east-west trending road within the project area is Seventh Standard Road. Major north-south trending crossroads are limited to Snow Road.

Zoning

Land use activities are subject to the zoning ordinance of the corresponding jurisdiction in which they occur. As described earlier, public utility facilities are exempt from local zoning regulations, but such regulations have been considered as part of the environmental review process.

The project is located within the City of Bakersfield. Surrounding areas within the project vicinity are located within Kern County, City of Bakersfield, and City of Shafter. Each area is subject to the zoning ordinance of the corresponding jurisdiction. The City of Bakersfield zoning ordinance designates the project site as R-2 Limited Multi-Family Dwelling Zone. Other zones within the project vicinity are depicted in Figure 8.

The R-2 Limited Multi-Family Dwelling Zone generally allows for single-family dwellings and other facilities typically found within a residential area. An electrical substation will be an allowed use under a conditional use permit from the City of Bakersfield.

Planned Land Use

Planned land use information was obtained from General and Specific Area Plans adopted by each of the three jurisdictions within the project area and is depicted in Figure 9. The Metropolitan Bakersfield General Plan accounts for areas currently annexed into the city as well as lands within the city's sphere of influence.

The Metropolitan Bakersfield General Plan reflects the agreement between the City and County granting the City of Bakersfield responsibility over planning within the City's sphere of influence. The proposed substation is completely within the area covered by this General Plan.

The proposed substation will be located on land designated as Low Medium Density Residential. Low Medium Density Residential is planned for single-family residential densities between four and ten dwelling units per acre.

Proposed Land Use

Proposed projects within the project area include three master planned communities, one commercial development, one residential development, and the widening of Seventh Standard Road. The proposed land uses are described below and are depicted in Figure 10.

Coberly West is proposed as a planned community to the north of the project area within the City of Shafter. The proposed development is located on approximately 950 acres. The community has been designed as a mixed-use development incorporating residential, commercial, public, and recreation uses. The development is expected to ultimately contain approximately 3,500 dwelling units.

Heritage Ranch is proposed as a master planned community to the north of the project area within the City of Shafter. The proposed development is located on approximately 260 acres. The community has been designed as a mixed-use development incorporating residential, commercial, public, and recreation uses. The development is expected to ultimately contain approximately 800 dwelling units.

Mission Lakes is also proposed as a planned community to the north of the project area within the City of Shafter. The proposed development is located on approximately 1,350 acres. The community has been designed as a mixed-use development incorporating residential, commercial, public, and recreation uses. The development is expected to ultimately contain over 5,000 dwelling units.

A commercial development has been proposed to the east of the proposed substation site. Construction on the project is underway. The designated parcel has been cleared of vegetation and infrastructure is under construction.

Additional residential development is proposed to the immediate west and north of the proposed substation site. The property was recently annexed into the City of Bakersfield. The development is expected to contain approximately 300 dwelling units.

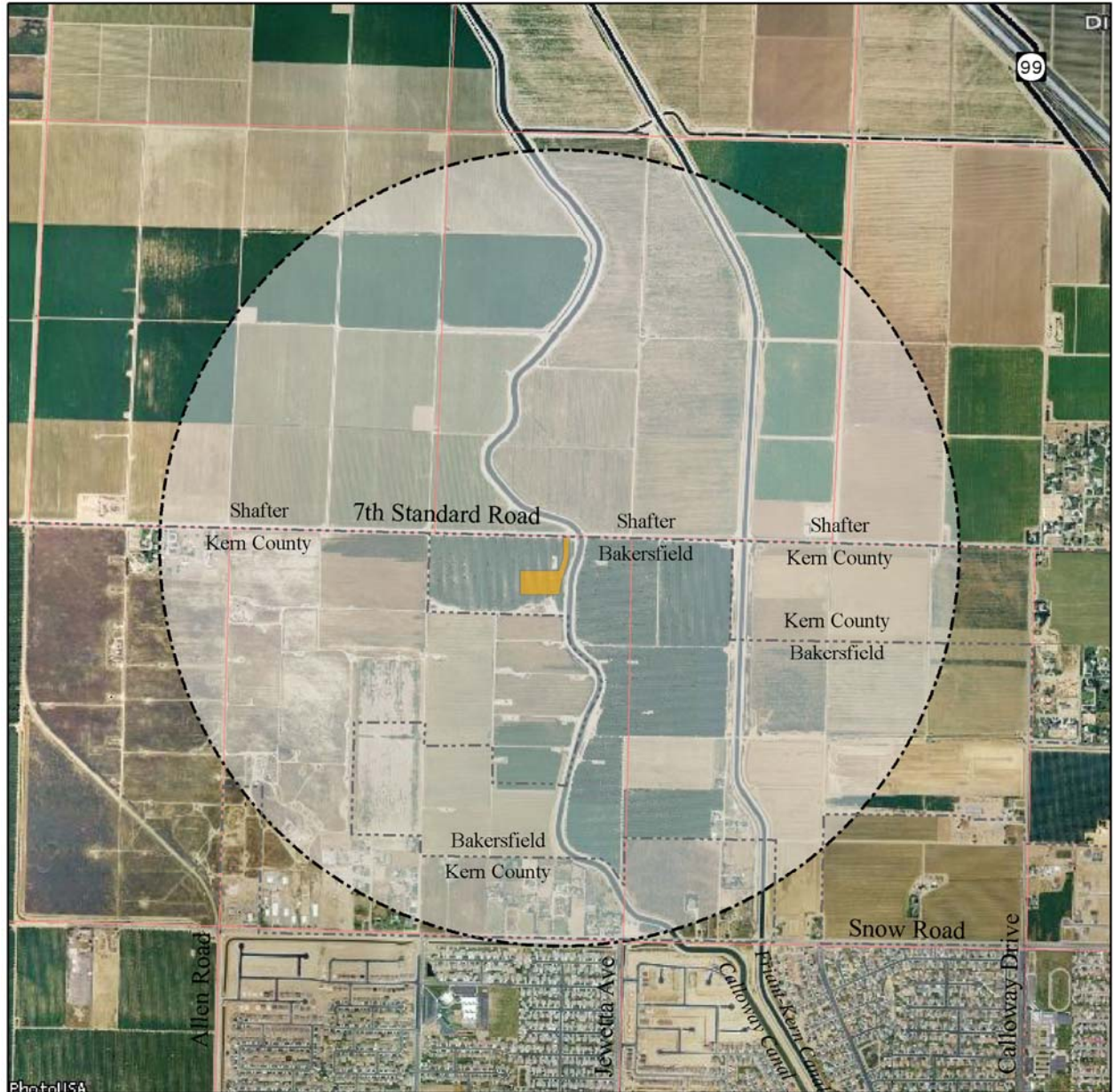
Seventh Standard Road has been proposed as an interconnection between SR 99 and SR 43. Seventh Standard Road will serve as a north beltway for the metropolitan area surrounding Bakersfield. The City of Shafter's proposed project, scheduled to begin construction in spring 2009, will widen Seventh Standard Road from a two-lane road into a four-lane divided road (ultimate six-lane road).

Recreation

There are no existing public parks, trails, or other recreational facilities located within the project area. Several neighborhood parks, both public and private, are proposed as part of the Mission Lakes, Heritage Ranch, and Coberly West developments.

Agriculture

The project area is predominantly agriculture. Almonds are currently being cultivated on the land where the substation is proposed. Surrounding lands are used for the cultivation of almonds and field crops. The soils located at the proposed substation site and the majority of the surrounding lands are considered prime agricultural soils as classified by the Natural Resources Conservation Service (NRCS) and categorized by the State of California: Department of Conservation (CDOC).

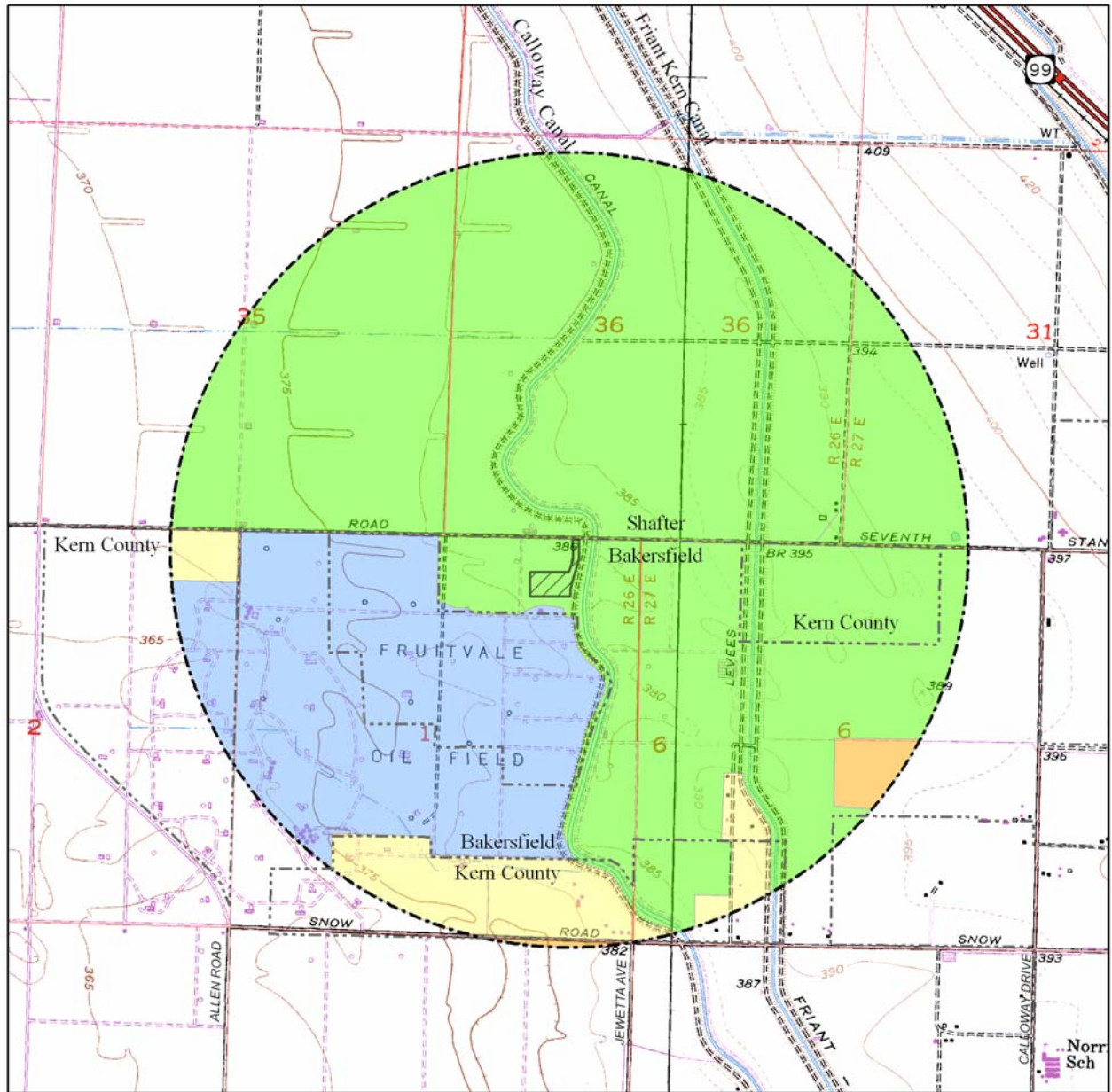







- Legend**
- Seventh Standard Substation Location
 - Private Land

Land Ownership
 Seventh Standard Substation Project
 Pacific Gas and Electric Company

FIGURE 6

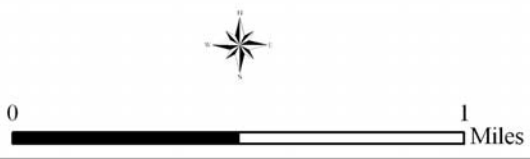


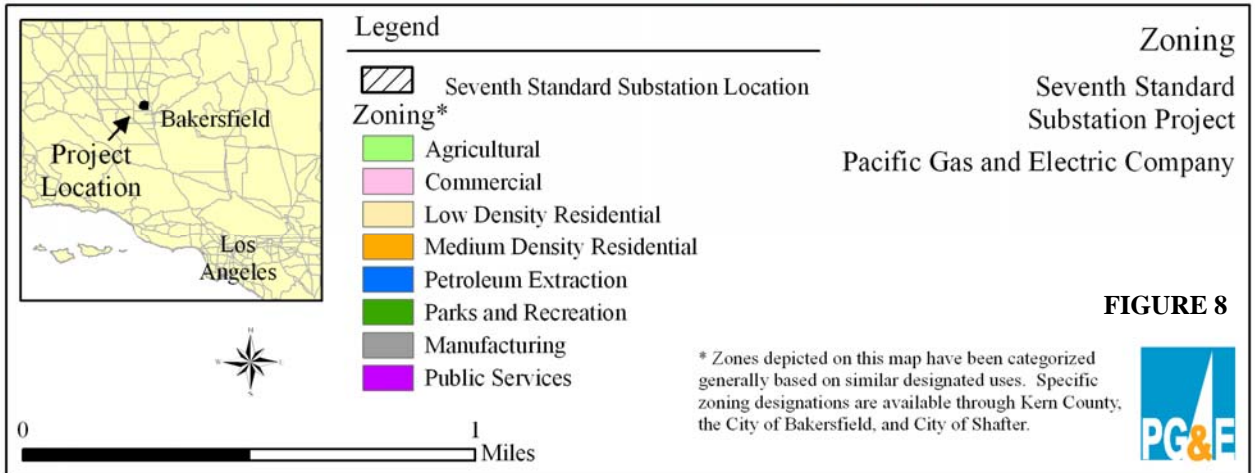
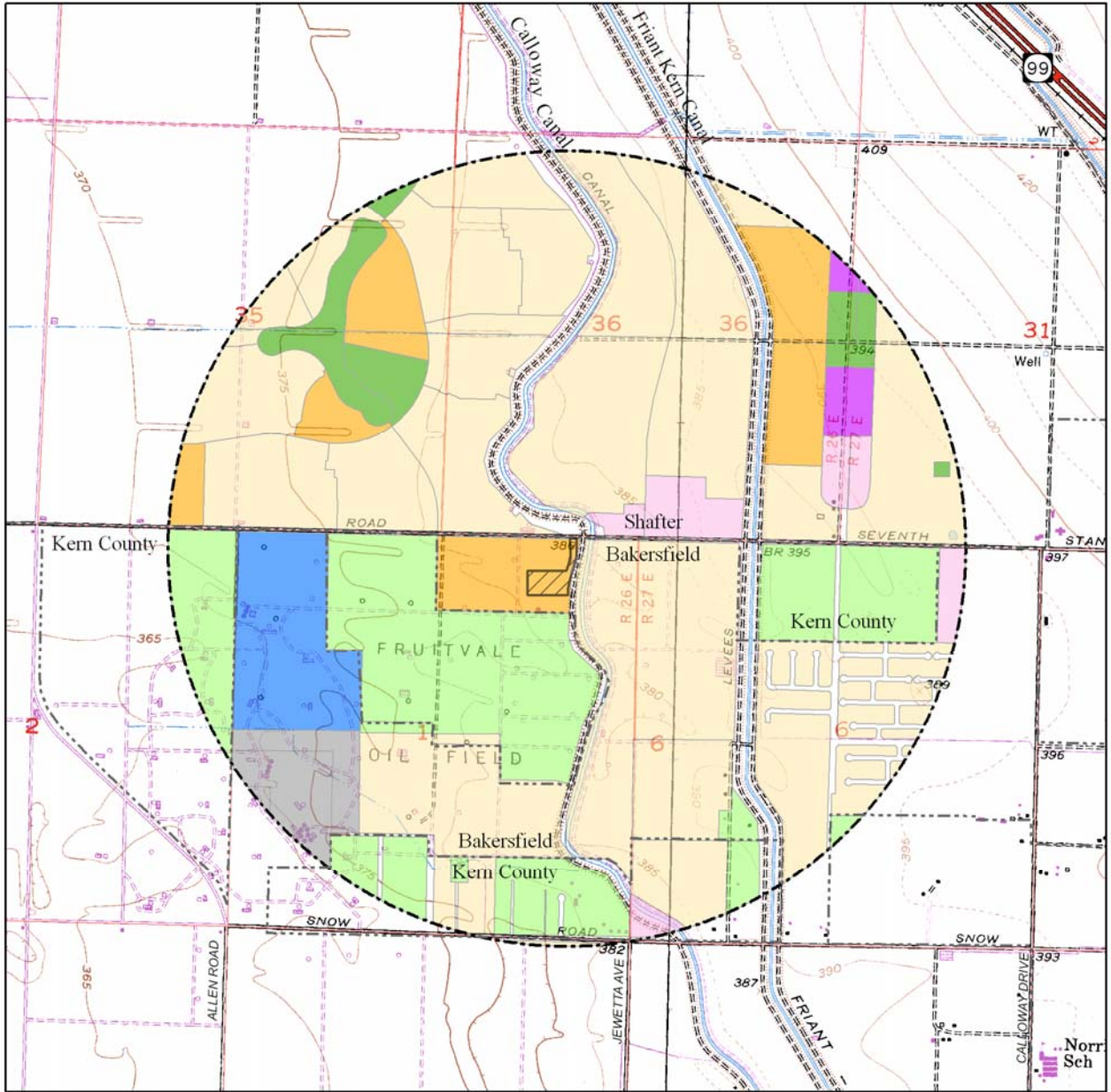


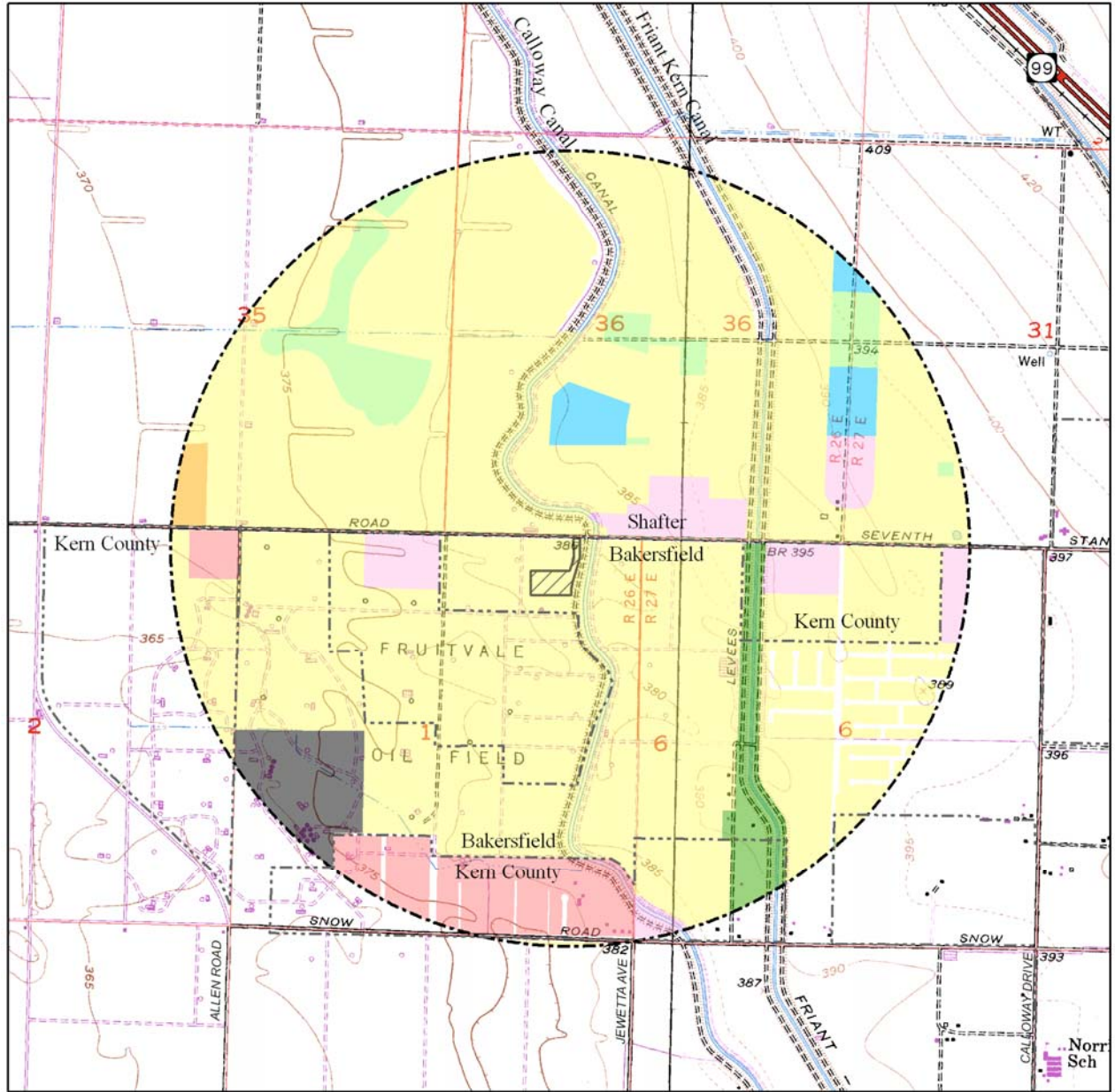
- Legend**
-  Seventh Standard Substation Location
 -  Agriculture
 -  Industrial
 -  Medium Density Residential
 -  Rural Residential

Existing Land Use
 Seventh Standard Substation Project
 Pacific Gas and Electric Company

FIGURE 7







- Legend**
- Seventh Standard Substation Location
 - Planned Land Use***
 - Agriculture
 - General Commercial
 - General Industrial
 - Low Density Residential
 - Medium Density Residential
 - Rural Residential
 - Parks and Recreation
 - Public Services

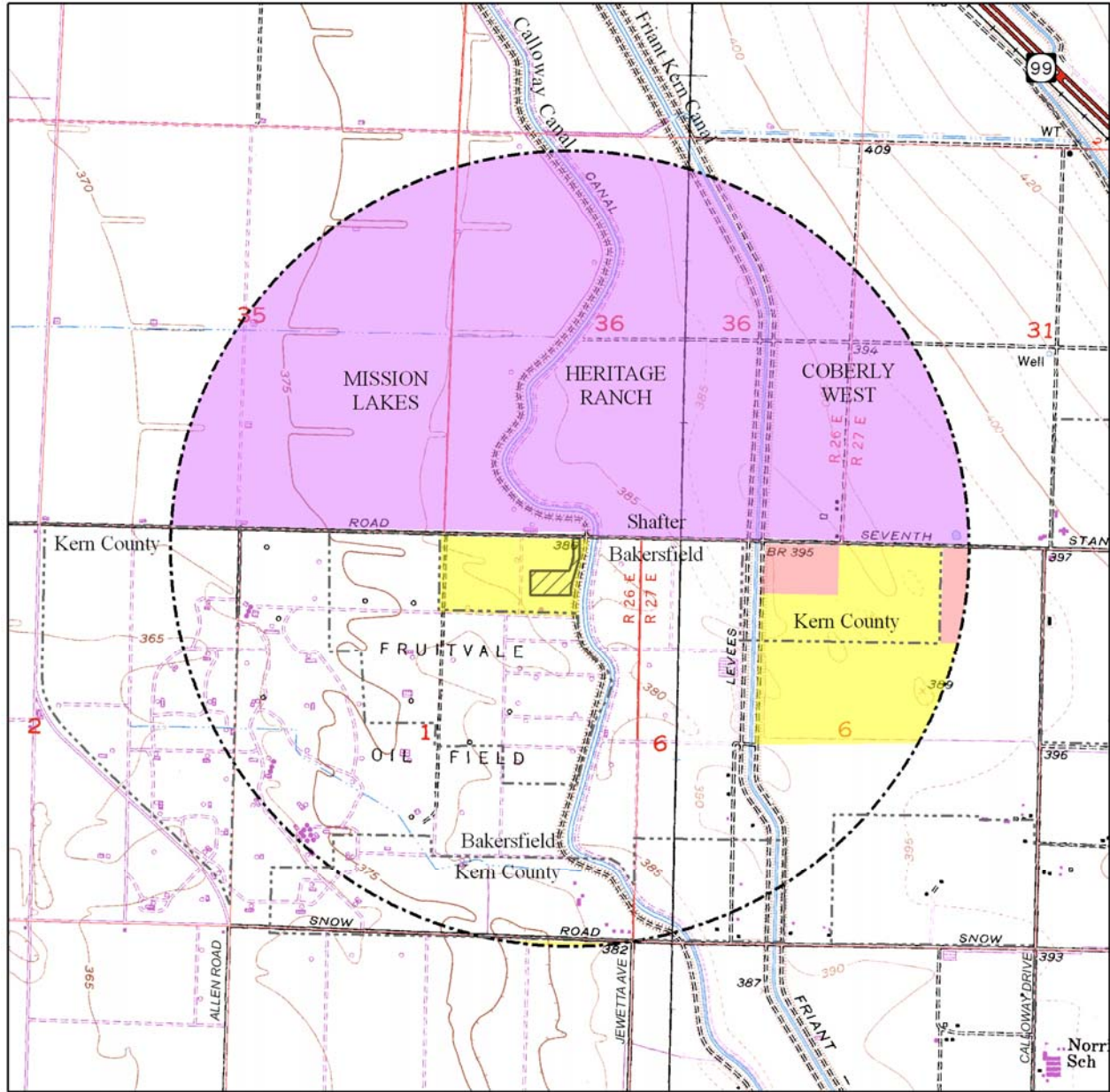
Planned Land Use
 Seventh Standard Substation Project
 Pacific Gas and Electric Company







* Land use classifications depicted on this map have been categorized generally based on similar goals and objectives. Specific land use classifications are available through Kern County, the City of Bakersfield, and the City of Shafter.



FIGURE 9



- Legend**
-  Seventh Standard Substation Location
 - Proposed Land Use**
 -  Commercial
 -  Residential
 -  Mixed Use

Proposed Land Use
 Seventh Standard Substation Project
 Pacific Gas and Electric Company

FIGURE 10



3.2.3 Impacts

Land Use and Planning

The proposed substation site is private land and will transfer from one private landowner to PG&E. The land acquisition will not result in significant impacts to land ownership and jurisdiction.

As a result of project implementation, no existing residences or businesses will be displaced, and no established community or subdivision will be divided. Therefore, the project will not have a significant impact on existing land uses. Impacts to agricultural uses are discussed in this section under the subheading Agriculture.

Although not subject to local zoning and land use regulations, the proposed substation is nevertheless compatible as a conditional use under the Metropolitan Bakersfield General Plan and Zoning Ordinance.

Proposed land uses within the project vicinity include several residential, mixed use, and commercial developments. The proposed developments and growth in the area have resulted in the need for the proposed substation to serve the expected electrical load. Therefore, the project will not have an adverse impact on proposed land uses.

Recreation

No recreation facilities exist in close proximity to the project location, and therefore no impacts will occur.

Agriculture

The minimum mapping unit used by the CDOC in mapping CDOC farmlands is ten acres. Ten acres is also the minimum acreage requirement for individual parcels to enter into Williamson Act contracts (Section 51222 of the California Government Code). Thus, ten acres of converted agricultural land is considered the threshold that will constitute a significant impact. The project will not have a significant impact upon prime farmlands, since only 4.9 acres of prime farmland will be converted. Continued farming on adjacent farmland will not be impacted by operation of the substation.

3.3 AIR QUALITY

3.3.1 Existing Conditions

The project is within the San Joaquin Valley Air Basin, which has one of the most severe ozone air pollution problems in the state. This air basin is unique in that not one major urban area is the source of air pollutants, but rather there are sources from locations across the basin.

The climate of the San Joaquin Valley is characterized by long, hot summers and stagnant, foggy, winters. Precipitation is low. Temperature inversions are common. These characteristics are conducive to the formation and retention of air pollutants. These characteristics are in part influenced by the surrounding mountains, which give the valley a bowl shape. The mountains intercept precipitation and also act as a barrier to the passage of cold air and air pollutants.

The U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) have established standards for air quality where attainment and nonattainment of various pollutants status is measured. Attainment occurs when air quality is meeting standards; nonattainment occurs when air quality is not meeting standards. Table 4 summarizes the EPA and CARB air quality attainment information for the project area.

**TABLE 4
FEDERAL AND STATE AMBIENT AIR QUALITY ATTAINMENT**

Pollutant	Federal (EPA) Standards	California (CARB) Standards
Ozone	Non-attainment	Non-attainment
PM-10	Attainment	Non-attainment
PM-2.5	Non-attainment	Non-attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Sulfates	No Federal Standards	Attainment
Lead	No Federal Standards	Attainment
Hydrogen Sulfide	No Federal Standards	Unclassified
Visibility Reducing Particles	No Federal Standards	Unclassified
Sources: EPA 2008; CARB 2006		

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the local air pollution control district responsible for developing air quality plans and implementing air quality control measures for the eight counties, including Kern County.

3.3.3 Construction and Operation Impacts

The CPUC requires a quantitative approach for analyzing Green House Gas (GHG) emissions. The CPUC requires that every project quantify GHG emissions from a business-as-usual condition as well as after mitigation measures have been implemented. Emission rates for project construction were estimated using URBEMIS 2007 9.2.4 software (Table 5). Daily emissions vary throughout the construction period depending on the equipment and duration the equipment is used. Emissions displayed in Table 5 are calculated on project construction activities. The substation is an unmanned facility and emissions from periodic maintenance are negligible.

**TABLE 5
ESTIMATED PROJECT CONSTRUCTION EMISSIONS**

Air Pollutant	Construction Emission (lbs/day)
VOC	4.1
NO _x	26.5
PM ₁₀	25.7
CO	15.1
CO ₂	2,349.6
SO ₂	0.0

PG&E will adhere to control measures recommended by the CPUC (Chapter 5). Conservation measures were applied when calculations were performed (Table 6). The emissions displayed in Table 6 are a conservative estimate and constitute a small contribution of pollutants to the air basin. The conservative estimate was used because the URBEMIS software does not allow for many of the conservation measures identified in Chapter 5 to be entered. Mitigation measures applied include applying soil stabilizers, replacing ground cover in disturbed areas, watering exposed surfaces, and reducing equipment idling times. It was assumed that requiring equipment to be shut-off rather than idling unnecessarily will reduce daily vehicle operation times by five percent.

Air Pollutant	Construction Emission (lbs/day)
VOC	3.76
NO _x	25.2
PM ₁₀	7.7
CO	13.5
CO ₂	2,235.1
SO ₂	0.0

There are no established CEQA thresholds of significance for GHG emissions. Generally, GHG emissions will be a product of using construction equipment, which will cease following construction. Once construction is complete, there will be negligible impacts resulting from equipment periodically used in operation and maintenance of the facilities, which are usually vehicles for transportation. The substation facilities require no CO₂ generating equipment. Sulfur Hexafluoride (SF₆), a potent GHG, is the only potential emission that may occur from the operation of the substation. The new substation breakers, designed by Mitsubishi, will contain only 260 lbs of SF₆ each, as compared to older SF₆ breakers that contained 350 lbs each. The new breakers are designed and guaranteed to leak a maximum of one-half of one percent annually. In contrast, the average SF₆ leak rate for PG&E's breakers in 1999 was 12 percent. PG&E has also instituted new rules for more accurately monitoring its equipment for SF₆ leaks and immediately repairing leaks that are discovered. New SF₆-specific handling procedures have been created to address issues such as transfers of SF₆ gas from cylinders and evacuation of SF₆ from circuit breakers.

Impacts associated with other emissions are also anticipated to be minor and short-term in nature. Increased emissions will occur as a result of soil disturbance associated with construction activities (i.e., site grading) and the operation of construction equipment. A short-term and small increase in localized emissions of PM₁₀, VOC's, CO, CO₂, and NO_x will result from these construction activities.

The SJVAPCD uses a three tiered approach to determine the appropriate level of project analysis. The three levels are the Small Project Analysis Level (SPAL), Cursory Analysis Level (CAL), and Full Analysis Level (FAL) The SPAL is the screening level and projects under this level require no further analysis. To verify a project is under SPAL, the project size or trip volume must be verified to be less than a pre-calculated amount established by the SJVAPCD and found in the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (2002). The Seventh Standard Substation is under the pre-calculated project size for light industrial land uses. For projects at the SPAL project level, the Guide for Assessing and Mitigating Air Quality Impacts (2002) highlights the fact that many pollutants may be produced during project construction, but that the main pollutant of concern is PM-10. The SJVAPCD requires implementation of control measures, rather than to require detailed quantification of emissions.

The SJVAPCD has determined that compliance with implementation of their recommended control measures constitute sufficient mitigation to reduce PM-10 impacts to a level considered less than significant. PG&E will adhere to control measures recommended by the SJVAPCD (Chapter 5).

During project construction the exhaust of diesel engines may produce temporary odors. Odors will be temporary and sensitive noise receptors are not found in proximity to the substation site and are not expected to be significant.

In addition to measures applied specifically to this project, PG&E is active in reducing GHG emissions on a system-wide level. In 2007, PG&E implemented the voluntary ClimateSmart program whereby customers can offset the greenhouse gas emissions they produce each month by contributing to the program. One hundred percent of these funds are used for new greenhouse gas emissions reduction projects in California. PG&E itself actively participates in the ClimateSmart program to offset emissions associated with energy used in its buildings.

PG&E is the leader in plug-in hybrid technology. In addition to the hybrid vehicles PG&E currently has on the road, they have the largest fleet of natural gas vehicles owned and operated by any utility in the country, and was the first utility to include liquefied natural gas heavy-duty vehicles. PG&E also owns and operates 37 compressed natural gas fueling stations for its customers.

PG&E is an active member of the SF₆ Emission Reduction Partnership, which focuses on reducing emissions of SF₆ from transmission and distribution sources. Since 1998, PG&E has reduced its SF₆ leak rate by 89 percent.

Project-related impacts from GHG and other emissions will be less than significant with incorporation of these various measures, procedures and policies.

3.4 VISUAL RESOURCES

3.4.1 Existing Conditions

No aesthetically pleasing or interesting features (trees, mountains, rock outcroppings, historic structures) exist within the project vicinity. There are also no scenic vistas or specially designated scenic areas (scenic byway, scenic corridor, etc.) located within the project vicinity. The landscape is extremely flat from the project site to the horizon in all directions. The lack of topography provides views to the horizon when unobstructed; however, the most minimal vertical disturbance limits the view beyond. Almond orchards, field crops, numerous active oil fields, and the Rio Bravo-Kern Oil 115-kV power line dominate the immediate landscape. Views from Seventh Standard Road towards the project site are screened by an almond orchard in the immediate foreground. Figure 11 is a photograph of the existing conditions (before) and a visual simulation of the proposed 115 kV power line and substation site (after) from Seventh Standard Road.

3.4.2 Impacts

The project will not result in significant impacts to the visual quality of the area. The proposed substation is similar in nature to existing visual disturbances, including electrical transmission structures and oil wells which contain similar elements of line, color, shape, and texture. The most frequent observers of the project will be travelers on Seventh Standard Road. Views of the project will be fleeting as vehicles pass by at approximately 50 miles per hour (mph), and the substation is set back from the road with intervening land uses in between. Initially, the proposed substation will be screened from Seventh Standard Road by an almond orchard (Figure 11). No changes in the basic elements of the landscape will be obvious or evident to the observer. The changes will not measurably alter the landscape's original appearance. The potential to degrade the visual setting or contrast with the visual elements is low.



View to West along Seventh Standard Road
Seventh Standard Substation Project



FIGURE 11

3.5 GEOLOGY AND SOILS

3.5.1 Existing Conditions

The project area is within the San Joaquin Valley, which is part of the Central Valley, a long valley approximately 430 miles long and 75 miles wide. The Central Valley is composed of two valleys, the Sacramento Valley to the north and the San Joaquin Valley to the south. The valley floor is composed of thousands of feet of sediments. Marine sediments accumulated during the Jurassic period, but with the retreat of the sea that covered the valley millions of years ago and the coinciding rise of the Coastal Ranges, deposition and accumulation of sediments transitioned to deposits washed from mountains.

Faults

There are no known active faults or Alquist-Priolo earthquake fault zones within the project area. The regional Bakersfield area is a seismically active area. Major regional active faults include the San Andreas, Breckenridge-Kern County, Garlock, Pond Poso, and White Wolf faults. The nearest active fault is located approximately four miles northeast of the project area. The fault generally extends north from the intersection of James Road and SR 65 to just north of Poso Creek. The next closest fault is located approximately 13 miles east of the project area. This fault extends in a southeast direction from the Kern River to the SR 58 (California Division of Mines and Geology 2000).

Ground Shaking

Ground shaking is the primary concern among the Bakersfield municipal area, which could result from any of the major faults in the region (City of Bakersfield 2007b).

Liquefaction and Landslides

Groundwater depth is generally low within the Bakersfield municipal area (City of Bakersfield 2007b).

Landslides are not likely due to the gently sloping (0 to 5 percent) topography and distance from hills, mountains, or slopes.

Subsidence

Subsidence is not a significant hazard within the Bakersfield municipal area (City of Bakersfield 2007b).

Soils

The soil of the project area is Kimberlina fine, sandy, loam (NRCS 2008). A summary of the soil properties is included in Table 7.

TABLE 7 KIMBERLINA, FINE, SANDY, LOAM SOIL PROPERTIES	
Category	Rating
Gravel Source	Poor
Sand Source	Fair
Prime or Unique Farmland	Prime if Irrigated
Erosion Factor	Moderate (K-factor = 0.24)*
Slope	0 to 2 percent
Shrink/Swell Potential	No limitations on construction
* K-factor indicates the susceptibility of a soil to sheet and rill erosion by water. Values range from 0.02 to 0.69 with the higher value more susceptible to erosion. Source: NRCS 2008	

Mineral Resources

The project area is largely used for agriculture and residential housing. Sand and gravel extraction, as well as oil/gas production, are the predominant mineral resources within the region. The project area is within the Rosedale Ranch Oilfield. An oil well is located immediately north of the proposed substation site, and oil storage tanks are located immediately to the south.

Paleontology

The majority of the project area is located on alluvial fan and fluvial deposits of Pleistocene age (2 million to 11,000 years old) (Smith 1964). The University of California Museum of Paleontology (UCMP) database of known paleontological sites in Kern County was reviewed to identify the Pleistocene formations to determine the likelihood that paleontological resources might be impacted during excavation and grading of the substation site and the relocation of the power line. The search returned the results of 1,245 Pleistocene fossils within Pleistocene alluvial sediments in the County. A majority of the records are for vertebrate fossils (mammals, birds, and reptiles). Most of the vertebrate fossils collected from these sites are from asphalt pits. The only known unique paleontological resource within metropolitan Bakersfield is in the northeast Bakersfield area (City of Bakersfield 2007c).

3.5.2 Impacts

Faults

There are no known Alquist-Priolo earthquake fault zones or active faults within the project area, so potential surface-fault rupture is not expected. There are no occupied structures proposed for the substation.

Ground Shaking

Faults in surrounding areas could result in ground shaking within the project area. The project facilities will be engineered to withstand potential ground shaking in accordance with the CPUC's General Order 95 and will meet or exceed the relevant seismic requirements.

Liquefaction and Landslides

Impacts to the substation resulting from liquefaction or landslides are not expected. The depth to groundwater within the project area will reduce the likelihood of liquefaction. No slopes exist within the area where landslides will be anticipated.

Subsidence

The project area will have no impact on subsidence, since there is no proposed groundwater pumping or oil and gas removal associated with the project that could contribute to subsidence.

Soils

Soils will be temporarily impacted during construction activities. However, soils will be stabilized following construction using temporary methods, such as laying down straw, and long-term methods such as laying down gravel within the substation yard to limit the potential for soil erosion. Impacts to prime farmland are discussed within the land use section of this PEA.

Mineral Resources

The proposed project will not interfere with the continued operation of the Rosedale Ranch Oilfield.

Paleontology

Construction of the proposed substation is not likely to have significant impacts to paleontological resources, since surface and subsurface disturbance associated with the Seventh Standard Substation project is limited. Significant impacts will occur if construction practices were likely to impact rare fossils important to stratigraphic or paleoenvironmental interpretation, or fossils important to the paleobiology or evolutionary history of plants and animals. Generally, rare fossils are those of vertebrates.

Although vertebrate fossils have been found in similar formations, the fossils were largely recovered from asphalt pits. Given the low likelihood of encountering an asphalt pit, lack of a known paleontological resource, and the limited disturbance associated with the project, the likelihood of encountering rare fossils is low. If paleontological remains are discovered during construction, construction will cease or be directed away from the discovery, and the potential resource will be evaluated by a qualified paleontologist. The paleontologist will recommend appropriate procedure methods.

3.6 NOISE

3.6.1 Existing Conditions

Noise levels are measured in decibels (dB). The higher the decibel level, the louder the noise. Sounds louder than 80 dB are considered potentially hazardous. The amount of noise, exposure, distance from source to receptor, and existing noise levels determine its ability to have an impact. Table 8 displays average decibel levels for everyday sounds.

Type	Description	Decibel
Painful	Firearms, air raid siren, jet engine	140 dB
	Jet take-off, amplified rock music at 4-6 feet, car stereo, band practice	120 dB
Extremely Loud	Snowmobile, chain saw, pneumatic drill	100 dB
	Lawnmower, shop tools, truck traffic, subway	90 dB
Very Loud	Alarm clock, busy street	80 dB
	Conversation, dishwasher	60 dB
Moderate	Moderate rainfall	50 dB
	Quiet room	40 dB
Faint	Whisper, quiet library	30 dB

Source: American Speech-Language-Hearing Association 2007

Noise that currently exists within the project area generally comes from vehicles using Seventh Standard Road and agricultural equipment used to maintain adjacent orchards and fields. The nearest sensitive noise receptors are residences located approximately 0.4 miles from the proposed substation site.

3.6.2 Impacts

Noise levels within the project area will temporarily and incrementally increase during construction. Heavy equipment such as front-end loaders, dozers, and graders will produce intermittent noise levels between 72 and 84 dB at a distance of 50 feet and 40 to 61 dB at a distance of 0.4 miles (Magrab 1975).

Construction noise will be temporary and is not expected to impact sensitive noise receptors as sensitive noise receptors are not located near the project site. Construction activity will normally take place during daylight hours (between 7 a.m. and 6 p.m.) when background noise levels are generally the highest and tolerance to noise is generally the highest. The use of proper muffling devices on equipment will reduce the potential impact of noise.

Operation of the substation may result in minor noise increases. Generally, noise from a substation is limited to cooling fans, a slight “hum” resulting from substation transformer and power line operation, and a periodic switching noise as substation transformers are energized or de-energized. Noise generated from the substation will be minor and is not expected to be significant.

3.7 CULTURAL RESOURCES

3.7.1 Background

The prehistory of the western San Joaquin Valley has been overviewed by Schiffman and Garfinkel (1981), Moratto (1984), and more recently by Riddell (2002). Human occupation of the area likely has its origins in the late Pleistocene, dating from as early as 12,000 years ago. The Tranquility and Witt sites may be the earliest known examples of human activity within the Central Valley (Hewes 1946). Sizable populations first appeared in the region with the Western Pluvial Lake Tradition, especially around Tulare and Buena Vista lakes, dating from between 11,000 and 7,000 BP.

Subsequent occupation of the region is typically divided into the Early (8,000-4,000 BP.), Middle (4,000-1,500 BP), and Late (1,500 BP-historic) horizons; these horizons are mainly differentiated on the basis of technology, trade items, and burial patterns. These populations were oriented to an acorn gathering and hunting way of life. Trade relationships were maintained with peoples of the Delta and the southern coasts. During the later horizon, structures included very large, circular ceremonial houses and small dwellings.

The project area passes through the region of the ethnohistoric Southern Valley Yokuts, probably the *Yowlumne* (Latta 1977). Although smaller Yokut villages were present in the region, the main village existed on the old channels of the Kern River within the city limits of Bakersfield. At this location, tule roots often substituted for acorns and provided reeds to construct watercraft. During the early 19th century, the Yokuts became increasingly under the control of the Spanish mission system and later, Spanish and Mexican ranching operations.

Prehistoric and ethnographic archaeological resources in the region tend to be located on benches, terraced areas, areas of exposed bedrock or lithic sources, and near water sources. Lack of these within the project area, as well as intensive past and current cultivation, diminish the potential presence of resources. Riddle (2002) has suggested that up to 90 percent of all archaeological sites in the region have been largely destroyed.

The southern San Joaquin Valley was first utilized by the Spanish around 1800, and the first Americans entered the area in the 1820s and 1830s. Farms were established during the 1850s to support regional mining booms, and Bakersfield was first settled in 1863. Ranching, cotton, and potatoes were important early crops. In later years, alfalfa and orchard crops were planted. Numerous irrigation canals were constructed, including in 1875, the adjacent Calloway Canal. The section that includes the project area was granted to the Southern Pacific Railroad in 1876 and has probably been under cultivation since that time. Oil field development in the region was initiated during the 1870s, and the Fruitvale oil field that

surrounds the project area was located in 1928. The period of greatest oil production was between the 1920s and 1950s, although exploration and production continues to the present day.

A review of archaeological and historic records at the Southern San Joaquin Valley Information Center (Bakersfield) indicates that, although numerous cultural resources surveys have been conducted in the area, the only recorded sites within a one-mile radius are historic structures associated with the Calloway Canal (P15-007233). The project area is within parcels previously surveyed by Schiffman (1993, KE-01456) and Schiffman and Gold (2005, KE-03127). Tribal scoping letters were sent to all tribes identified through correspondence with the Native American Heritage Commission. No tribes responded.

A letter was sent to the Native American Heritage Commission (NAHC) on March 28, 2008, requesting information about the project area and a listing of Native American groups and individuals who should be consulted regarding construction of the Seventh Standard Substation Project. A representative of the NAHC responded with a list of Native American individuals/groups to contact. Letters were sent to all persons/groups on the list, requesting further information about sensitive or significant cultural resources in the project area. No responses were received. Copies of the correspondence with the NAHC, and the letters to Native American individuals/groups, are included in Appendix C.

3.7.2 Survey Results

An archaeological survey was conducted on March 28, 2008 by Everett Bassett of Transcon. The project area, along with a 100 foot buffer area, was surveyed utilizing ten meter transects. The project area is entirely planted in an almond orchard; the orchard had been disked and surface visibility was excellent. No archaeological sites or isolated occurrences of archaeological materials were identified.

3.7.3 Impacts

Based upon a review of archaeological and historic records at the Southern San Joaquin Valley Information Center (Bakersfield) and an archaeological survey, there are no archaeological sites or isolated occurrences of archaeological materials that will be impacted as a result of the proposed project. The Seventh Standard Substation project will result in no effect to historic properties.

Should previously unknown cultural resources be encountered during project-related subsurface disturbances, work will be stopped in the area of the find pending consultation with PG&E's Cultural Resource Specialist. If human remains are discovered within the project area during any phase of construction, work within 50 feet of the remains will be suspended immediately and PG&E and/or their representative will immediately notify the respective county coroner. If the remains are determined by the coroner to be Native American, the NAHC will be notified within 24 hours, and the guidelines of the NAHC will be adhered to in the treatment and disposition of the remains. PG&E will also retain a professional archaeological consultant with Native American burial experience who will conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD) identified by the NAHC. As necessary, the archaeological consultant may provide professional assistance to the MLD including the excavation and removal of human remains. PG&E or its appointed representative will implement any mitigation before the resumption of activities at the site where the remains were discovered.

3.8 HEALTH AND SAFETY

3.8.1 Existing Conditions

There are no known hazardous sites listed for the project area (CDTSC 2008). Hazardous materials anticipated to be used during construction of the project are small volumes of petroleum hydrocarbons and their derivatives (e.g., fuels, oils, lubricants, and solvents) required to operate the installation and construction equipment. These materials are those routinely associated with the operation and

maintenance of heavy construction equipment or other support vehicles, including gasoline, diesel fuels, and hydraulic fluids.

Potential wildland fire hazard will be low at the construction site due to the limited fuel load present. If necessary, a water truck will be used to wet the area to reduce the potential for wildland fire ignition.

During substation operation, there will be potential for release of mineral oil used as a coolant in transformers and other substation equipment. When insulators are taken out of service, the mineral oil must be disposed of as hazardous waste. The mineral oil that will be used at the substation does not contain PCB's and is non-toxic. In the event of an accidental spill, the substation is equipped with a pond that meets SPCC Guidelines (40 CFR 112). The substation will also be equipped with lead-acid batteries to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages. Containment will be constructed around and under the battery racks, and the SPCC will address containment from a battery leak.

There is a potential for electric shock at the substation. The potential for electric shock will only exist for trespassers, since there is no potential outside of the substation. An eight foot high fence will be erected around the perimeter of the substation, and signs will be posted warning of potential electrical shock hazards.

Electric and Magnetic Fields

Recognizing that there is public interest and concern regarding potential health effects from exposure to electric and magnetic fields (EMF) from transmission lines, this document provides some general background information regarding EMF associated with electric utility facilities in Appendix D. However, EMF is not addressed here as an environmental impact under CEQA. The CPUC has repeatedly recognized that EMF is not an environmental impact to be analyzed in the context of CEQA because (1) there is no agreement among scientists that EMF does create a potential health risk, and (2) there are no defined or adopted CEQA standards for defining health risks from EMF.

3.8.2 Impacts

No impacts are anticipated to health and human safety as a result of implementation of the project. It is not anticipated that wildfires will result from the construction or continued operation of this project. The limited vegetation on the site creates a small fuel load for potential wildfires. If necessary, water trucks will be onsite during construction activities to wet the work area.

Use of fuels and fluids for project construction equipment will not impact the human environment. These materials will be handled and controlled in such a manner as to avoid impact to the environment. Spill clean-up kits will be available onsite to clean up any accidental spills. Preconstruction environmental and construction safety training will be conducted prior to construction to educate workers of potential safety issues. The operation of the substation will be in accordance with the SPCC Guidelines and is not likely to result in any significant impacts to health and safety.

3.9 WATER RESOURCES AND HYDROLOGY

3.9.1 Existing Conditions

The project area contains no natural surface water features (streams, springs, ponds, lakes, wetlands, etc.). The Calloway Canal exists immediately to the east of the proposed substation. The canal is a man-made cement canal. Federal Emergency Management Agency (FEMA) floodplain map panel 06029C1800E was reviewed for the project area to determine if there was a potential designated 100-year floodplain among the project area (FEMA 2008). The proposed substation is not located within a floodplain.

3.9.2 Impacts

No impacts to water resources are anticipated. No natural surface waters are located within the project area. The only waterway in the project area is the Calloway Canal, which will not be impacted. The proposed substation is not within the designated floodplain of any waterway. No increase in groundwater pumping will occur at the project site as a result of the proposed project. The project will not interfere with the regional hydrology.

3.10 TRANSPORTATION

3.10.1 Existing Conditions

In Kern County, Seventh Standard Road is a major east-west arterial running between Interstate-5 and SR 99, providing local access to northern Bakersfield. Seventh Standard Road is a two lane undivided road. The speed limit on the road is 55 mph. Access along the road is unrestricted, with private landowners, commercial, and industrial areas gaining access via interconnecting driveways.

The acceptable service standards for Seventh Standard Road were reviewed on Kern County's website. Acceptable service standards for roads in Kern County are evaluated based on a ranking system of Level of Service (LOS) from A to F. A LOS rank of C or better is considered acceptable. Currently, during peak hours Seventh Standard Road has a LOS rank of C, except from Calloway Drive to Coffee Road which has a ranking of D. There are currently plans for widening Seventh Standard Road from Coffee Road west to approximately the Burlington Northern and Santa Fe Railroad and Santa Fe Way. The plans are to make the road a four lane divided road. This is anticipated to improve Seventh Standard Road to an LOS of A, and result in acceptable traffic conditions until approximately 2030.

3.10.2 Impacts

No pedestrian or bicycle paths, commuter rails, freight rails or airports are located near the project area, thus there will be no impact. The immediate project area is expected to experience a small increase in traffic load during construction of the project. On average, approximately four to eight laborers will commute to the project area from surrounding areas during construction. The main corridor of travel will be along SR 99, with direct travel to the project area along Seventh Standard Road. During operation, the substation will not have permanent onsite employees. Temporary and periodic visits to the substation will be required for operations and maintenance.

All roads to be used for commuting to the project area are expected to be able to handle the increase in traffic without modification or constraints. No lane closures are anticipated, but if required emergency services and transit/bus authorities will be notified concerning the project and lane closures/detours. The project is not expected to result in a significant increase in traffic congestion.

3.11 POPULATION/HOUSING, PUBLIC SERVICES, AND UTILITIES/SERVICE SYSTEMS

3.11.1 Existing Conditions

Population and Housing

The estimated population of Bakersfield in 2007 was 323,213 (State of California, Department of Finance 2007). By 2010, the population for Bakersfield is projected to reach 353,800, and by 2015, population is projected to reach 413,200 (City of Bakersfield 2007).

Employment and Income

Within the City of Bakersfield, the Government sector employs the largest amount of the labor force at 22.2 percent, followed by the Trade, Transportation, and Utilities industry at 16.8 percent, and the Agriculture industry at 13.7 percent (State of California, Employment Development Department 2008).

Table 9 displays employment and income information for Kern County and the State of California. No data was available for the City of Bakersfield.

TABLE 9 EMPLOYMENT AND INCOME DATA FOR KERN COUNTY AND CALIFORNIA		
Category	Kern County	California
Unemployment Rate	9.9%	6.3%
Median Household Income	\$24,335	\$35,219
Source: State of California, Employment Development Department		

Public Services

Fire protection services for Bakersfield are provided by a joint fire protection agreement between Kern County and the City of Bakersfield. The project area is serviced by the Bakersfield Fire Department, Station 61. The station is located along Fruitvale Avenue, south of Norris Road.

The substation site is provided police patrol coverage by the City of Bakersfield Police Department. The nearest Bakersfield Police Department is located at 1301 Buena Vista Road, approximately 10 miles from the proposed substation.

The nearest hospital is Good Samaritan Hospital, located in Bakersfield approximately seven miles from the project area at 901 Olive Drive. Six other hospitals are located 8 to 12 miles from the proposed substation location.

Local school districts serve students of the project area.

No parks or recreational facilities are located within the project area or in the project vicinity.

Utilities and Service Systems

PG&E provides electricity and natural gas for the immediate area. Southern California Gas Company also provides service to this area. No potable water or garbage services will be provided to the substation.

3.11.2 Impacts

Population and Housing

The proposed substation project will have no lasting impact upon local population or housing. Laborers employed during the construction of the project will commute to the area or stay in nearby hotels for the duration of the project. No new workers will be hired specifically for this project, so there will be no increase in the local population and no need for increased local housing.

No residences, businesses, or people will be displaced as a result of the project.

The project will meet the needs of projected future energy loads, and as such, is responsive to future energy loads that will not be growth inducing. The project is being constructed to fulfill PG&E's projected future energy loads, specifically for peak demands, to meet the projected growth within PG&E's service territory. PG&E is responsible for providing adequate energy to customers.

Public Services

The proposed project is not likely to result in an increase in demand, nor alter the level of any public service. The proposed substation location will not interfere with emergency routes to local medical facilities. Although not anticipated emergency personnel will be notified if lane closures on Seventh Standard Road are required. There will be no increase in population, which will require new or expanded police, fire, or medical facilities as a result of the project.

No schools, parks, or recreational facilities will be impacted as a result of the proposed project. There will not be an increase in population, which will create the need for any new or expanded schools, parks, or recreational facilities.

Utilities and Service Systems

The project will result in a beneficial impact to the electrical system. There will be no impact to the telephone, wastewater, water, landfill, garbage service, or natural gas systems.