



Cabrillo-Santa Ynez 115 kV Reconductoring Project Initial Study/Mitigated Negative Declaration Draft

January 2010

Prepared for:
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Prepared by:
RMT Inc.
4 West Fourth Avenue, Suite 303
San Mateo, California 94402

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PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

DRAFT MITIGATED NEGATIVE DECLARATION

CABRILLO-SANTA YNEZ 115kV POWER LINE RECONDUCTORING PROJECT

Lead Agency: California Public Utilities Commission
Energy Division
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Contact: Billie Blanchard, Project Manager
(415) 703-2068 or bcb@cpuc.ca.gov

PROJECT INFORMATION

Project: Cabrillo-Santa Ynez 115kV Power Line Reconductoring Project
Santa Barbara County, California

Proponent: Pacific Gas and Electric Company
77 Beale Street
San Francisco, California 94105
(800) 743-5000

DESCRIPTION OF PROJECT

The proposed project includes reconductoring the Cabrillo-Santa Ynez 115 kV power line and replacing existing wood utility poles with light-duty steel poles. The upgrade of the power line would improve the reliability of electric service to the Lompoc-Santa Ynez area.

REQUIRED APPROVALS

The proposed project would require federal and state permits for ground-disturbing work in seasonal wetlands located within the project area. State and local permits would also be required for construction work and actions required to reconductor the power line over the highway, as well as several Santa Barbara County and City of Lompoc roads.

Table 1 below lists the potential permits and approvals necessary for carrying pole replacement and reconductoring activities.

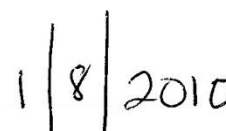
Table 1: Permits and Approvals Necessary for the Proposed Project		
Permit, Approval, or Exemption	Purpose	Regulating Agency
<i>Federal</i>		
Clean Water Act 404 Nationwide Permit	Discharge of dredged and fill material into waters of the United States	U.S. Army Corps of Engineers
<i>State</i>		
Storm Water Pollution Prevention Plan; enrollment under General Construction National Pollution Discharge Elimination System permit	Road grading and ground disturbance for pole installation	Central Coast Regional Water Quality Control Board
Section 401 certification	Discharge of dredged and fill material into waters of the United States.	Central Coast Regional Water Quality Control Board
Encroachment Permits	For any work conducted within the ROW for US 101, SR 1, and SR 246	California Department of Transportation
<i>Local</i>		
Traffic Control Permit	Required for any work within the ROW for County roadways	Santa Barbara County Department of Public Works
Encroachment Permits	Required for any work within the ROW for City roadways	City of Lompoc

ENVIRONMENTAL DETERMINATION

Based upon an Initial Study, it is determined that the proposed project WOULD NOT HAVE a significant effect on the environment with the incorporation of the proposed Applicant Proposed Measures (APMs) and mitigation measures (attached). The Initial Study is available for review at the CPUC, 505 Van Ness Avenue San Francisco, California 94102.



Billie Blanchard
Project Manager



Date

MITIGATION MEASURES AND FINDINGS

Pursuant to the Public Resources Code and the State CEQA Guidelines, the Lead Agency (CPUC) has prepared an Initial Study for the proposed project to evaluate the project's potential effects on the environment. The Initial Study has identified potential impacts associated with project implementation, applicant proposed measures (APMs) (except for APMs GM-1, GM-4, and TT-2 which have been deemed unnecessary), and recommended mitigation measures that would be implemented to reduce those potential impacts to less than significant levels.

Aesthetics

APM AE-1: New source of substantial light or glare avoidance. PG&E would replace the existing conductor with a non-specular conductor to minimize the reflectivity of any new project facilities.

Agricultural Resources

APM Land Use (LU)-1: Agriculture impacts avoidance. To avoid potential impacts to agriculture, PG&E will work with farmers and ranchers to conduct its work between their harvest and planting periods where and whenever possible. In areas containing permanent crops (i.e., grape vines, tree orchard, etc.) that must be removed and replaced to gain access to poles sites for construction purposes, PG&E will provide compensation to landowners for crop loss and other reasonable and associated costs as soon as practicable after completion of construction. Access across active crop areas will be negotiated with the owners in advance of any construction activities.

Air Quality

Mitigation Measure AQ-1 (Proposed to supersede APM AQ-1): The following fugitive dust control measures would be implemented unless otherwise approved by the SBCAPCD. Copies of the finalized dust control measures would be submitted to the CPUC for recordkeeping.

- PG&E would use water trucks or sprinkler systems during construction on all active construction and disturbed areas to keep areas of vehicle and equipment movement sufficiently damp to prevent dust from leaving the site. At a minimum, this would include wetting down these areas in the late morning and after work is completed for the day. Watering frequency would increase whenever the wind speed exceeds 15 miles per hour (mph).
- Reclaimed water will be used whenever possible; however, reclaimed water will not be used in or around crops for human consumption.
- Construction equipment and related vehicles, including personal vehicles, would be limited to a maximum speed of 15 mph on unpaved roads
- All exposed soil stockpiles (e.g., soil and sand) would be covered.
- Gravel pads, bamboo mats, or a suitable equivalent would be installed at all access points to prevent tracking mud on to public roads, as discussed in the project's Stormwater Pollution Prevention Plan (SWPPP)

- PG&E would designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent dust transport off site. Monitor duties would include holiday and weekend periods when work may be in progress. The name and telephone number of the monitor would be provided to the SBCAPCD prior to project construction.

Greenhouse Gases

APM Greenhouse Gas (GHG)-1: GHG emissions minimization. The following measures will be implemented during construction to minimize GHG emissions.

- Park-and-ride facilities in the Project vicinity will be identified and construction workers will be encouraged to carpool to the job staging area to the extent feasible. The ability to develop an effective carpool program for the Proposed Project will depend upon the proximity of carpool facilities to the staging area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the Project's construction schedule. Crew transportation to the Project site is discussed in Section 4.10, Traffic and Transportation.

- Unnecessary construction vehicle idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.

Construction equipment will be maintained in good working order, per manufacturing specifications. Low-emission construction equipment will be used where feasible to further minimize the minimal short-term increase in GHG emissions. With implementation of APM GHG-1, the entire construction effort for this project is forecasted to create 379 metric tons of CO₂ which represents a small fraction of the emissions limit set by AB322020 (427 million metric tons CO₂e).

Biological Resources

APM Biological Resources (BO)-1: General avoidance of biological resources impacts.

- **Litter and trash management.** All food scraps, wrappers, food containers, cans, bottles, and other trash from the Project area will be deposited in closed trash containers. Trash containers will be removed from the Project area at the end of each working day.
- **Parking.** Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed or developed areas or work areas as identified in this

document. Off-road parking shall only be permitted in previously identified and designated work areas.

- **Route and speed limitations.** Vehicles will be confined to established roadways and pre-approved access roads, overland routes and access areas. Access routes and temporary work areas will be limited to the minimum necessary to achieve the Project goals. Routes and boundaries of work areas, including access roads, will be clearly mapped prior to initiating Project construction. Vehicular speeds will be kept to 15 mph on unpaved roads.
- **Maintenance and refueling.** All equipment will be maintained such that there will be no leaks of automotive fluids such as fuels, solvents, or oils. All refueling and maintenance of vehicles and other construction equipment will be restricted to designated staging areas located at least 100 feet from any down gradient aquatic habitat unless otherwise isolated from habitat. Proper spill prevention and cleanup equipment shall be maintained in all refueling areas.
- **Minimization of fire hazard.** During fire season in designated State Responsibility Areas, all motorized equipment driving off paved or maintained gravel/dirt roads will have federal or state approved spark arrestors. All off-road vehicles will be equipped with a backpack pump filled with water and a shovel. All fuel trucks will carry a large fire extinguisher with a minimum rating of 40 B:C, and all equipment parking and storage areas will be cleared of all flammable materials.
- **Pets and firearms:** No pets or firearms will be permitted at the Project site.

APM BO-2: Avoidance of impacts to natural habitats

- **Minimization of grading and vegetation removal along access roads and pole work areas.** Clearing and grading will be limited to previous access roads that have become overgrown with vegetation. Overland access routes and work areas around pole locations will not require any grading or vegetation removal other than minimal tree trimming as described in the Project description.
- **Tree removal.** A single tree, a Leland Cypress, is planned for removal as described in the Project description. No other tree removal is planned.
- **Re-vegetation.** Since clearing and grading is limited to re-establishment of existing roads, no re-vegetation is needed for the Project. Temporarily disturbed vegetation is expected to recover without the need for reseeding.

APM BO-4: General avoidance and minimization of impacts to aquatic or wetland habitat.

Timing and extent of work in aquatic or wetland habitat. Work in aquatic or wetland habitat is limited to the removal of two poles and replacement of one pole in the wetland northeast of SR 246. All ground-disturbing work at this location will take place in dry conditions. The timing is dependant on seasonal rainfall; in winter 2008-2009, ground was dry even in January.

APM BO-9: Avoidance of and minimization of potential impacts to wetlands and water resources.

Stormwater Pollution Prevention Plan and erosion control measures. As described in Section 4.8, APMs WQ-1 and WQ-3, a Stormwater Pollution Prevention Plan (SWPPP) will be developed that describes sediment and hazardous materials control, fueling and equipment management practices, and other factors deemed necessary for the Project. Erosion control measures will be implemented where necessary to reduce erosion and sedimentation in wetlands, waters of the United States, and waters of the state, as well as aquatic habitat occupied by sensitive species. Erosion control measures will be monitored on a regularly scheduled basis, particularly during times of heavy rainfall. Corrective measures will be implemented in the event erosion control strategies are inadequate. Sediment/erosion control measures will be continued at the Project site until such time that soil stabilization is deemed adequate. Brush or other similar debris material will not be placed within any stream channel or on its banks. No Project work activity is planned within the limits of any stream channel.

Mitigation Measure Bio-1 (Proposed to supersede APM BO-1 “Development and implementation of a Worker Environmental Awareness Program”): A qualified biologist would conduct an environmental awareness program for all construction and on-site personnel prior to the beginning of construction activities. Training would include a discussion of avoidance and minimization measures being implemented to protect biological resources as well as the terms and conditions of the Biological Opinion and other permits. Training would include information on the federal and state Endangered Species Acts and the consequences of noncompliance with these acts. Under this program, workers would be informed about the presence, life history, and habitat requirements of all special-status species with a potential to be affected within the project area. Training would include information on state and federal laws protecting nesting birds, wetlands, and other water resources.

An educational brochure would be produced for construction crews working on the project. The brochure would include color photos of sensitive species as well as a discussion of mitigation measures.

Mitigation Measure Bio-2 (Proposed to supersede APM BO-1 “Biological monitor on-site during construction activities in sensitive areas” and “Reporting and communication”): A qualified biological monitor would be on site during all ground-disturbing construction activities in or near sensitive habitats previously identified by a qualified biologist. The monitor would ensure implementation of and compliance with all avoidance and mitigation measures. The monitor would have the authority to stop work or determine alternative work practices in consultation with agencies and construction personnel as appropriate if construction activities are likely to impact sensitive biological resources. The biological monitor would document monitoring activities in daily logs to document construction

activities and environmental compliance. The daily logs would be included in the project report submitted to the appropriate agencies following completion of construction.

The biological monitor would be responsible for reporting any capture and relocation, harm, entrapment, or death of a listed species to the USFWS and/or the CDFG and for reporting any permit violations in a timely manner and as indicated in their respective permits. Weekly monitoring reports would be submitted to CPUC, and to any resource agencies (upon request), throughout construction. A final project summary report would be submitted to the CPUC 90 days after the completion of construction activities.

Mitigation Measure Bio-3 (Proposed to supersede APM BO-1 “Identification and marking of sensitive resource areas”): Sensitive resources identified during pre-construction surveys in the project vicinity would be mapped and clearly marked in the field. Such areas would be avoided during construction to the extent practicable and/or additional measures specific to sensitive species types as described herein and that may be required by the USACE, FWS, CDFG, and RWQCB permits, would be implemented to avoid or minimize impacts.

Mitigation Measure Bio-4 (Proposed to supersede APM BO-2 “Weed management”): All project vehicles would be washed before arrival on site at PG&E’s Santa Maria, Lompoc, or Buellton PG&E wash facilities or otherwise approved wash-down location. Vehicles will also be cleaned at the completion of the project or when off-road use for that vehicle has been completed.

Mitigation Measure Bio-5 (Proposed to supersede APM BO-3 “Avoidance of and minimization of potential impacts to special-status plants”): A pre-construction survey would be conducted by a qualified botanist or biologist prior to commencement of construction in each area. All rare plant populations would be appropriately marked or flagged for exclusion, or as appropriate, the limits of construction will be marked between the population and the work area. Surveys and marking or flagging must be completed no more than 30 days prior to construction. In the event that any previously unidentified listed plants, or CNPS List 1-3 plants cannot be avoided, PG&E would consult with the USFWS and/or the CDFG (depending on whether the species is on the federal or state list of sensitive species) to determine appropriate measures to minimize effects to the species and its habitat during construction of the project, as well as during operation and maintenance. The CPUC would be informed of the results of any agency consultations.

Mitigation Measure Bio-6 (Proposed to supersede APM BO-5 “Pre-construction surveys and relocation of species”): Pre-construction surveys for special-status amphibians and aquatic reptiles would be conducted no more than two weeks prior to the commencement of construction. Surveys would include work areas within 600 feet of suitable CTS breeding habitat and work areas within 300 feet of suitable CRLF aquatic habitat. Surveys would be conducted by a qualified, agency-approved biologist. Potential habitat for western spadefoot toad and western pond turtle exists in similar locations to those for CRLF and CTS. The biologist would relocate any special-status species to a location previously agreed upon by the USFWS and the CDFG. Before the start of work each morning, the biologist would check

under any equipment and stored construction supplies left in the work area overnight within 600 feet of suitable habitat. All pole holes would be backfilled or covered at the end of the work day to prevent entrapment of special-status species.

Mitigation Measure Bio-7 (Proposed to supersede APM BO-5 “Seasonal timing restrictions”): All ground-disturbing construction activities within 600 feet of suitable habitat for CFLF, CTS, western spadefoot frog, and western pond turtle would be limited to May 1 through October 31, to the greatest extent feasible. For work in these areas, a qualified biologist would conduct a pre-construction survey of the work area immediately preceding construction activities. All potential habitat areas including burrows, woody debris piles, wetlands, riparian areas, and edges of ponds within the work area would be thoroughly checked. Any special-status species found would be captured and relocated to a FWS and CDFG approved location type (e.g., a small mammal burrow) and area, prior to the start of construction.

Mitigation Measure Bio-8 (Proposed to supersede APM BO-5 “Minimization of burrow disturbance”): Plywood sheets would be used to temporarily cover potentially active burrows in work areas within 600 feet of suitable breeding habitat. Burrows would be covered after re-location has taken place, if necessary, or otherwise specified in the Biological Opinion.

Mitigation Measure Bio-9 (Proposed to supersede APM BO-6 “Avoidance of and minimization of potential impacts to southwestern willow flycatcher and least Bell’s vireo”): Work anticipated within 300 feet of the potential nesting habitat for these species and the designated critical habitat for southwestern willow flycatcher includes the use of pull site P1 and insulator replacement at Poles 4, 5, and 6. Insulator replacement and use of the pull site would be restricted to the non-nesting season. For the purposes of this measure, the nesting season for these species is considered to be March 15 to September 15. Additionally, the raptor nesting season extends from February 1 through August 15. Work within the period of February 1 to September 15 in this area would only occur if pre-construction surveys determine these species are not actively nesting within 300 feet of the work areas, or a qualified biologist is present during all activities to monitor for potential nest disturbance per an Avian Protection Plan as described in Avoidance and Minimization Measures (AMM) BO-8

Mitigation Measure Bio-10 (Proposed to supersede APM BO-7 “Avoidance of and minimization of potential impacts to western burrowing owl”): Pre-construction surveys would be conducted by a qualified biologist for burrowing owls for all project work areas that provide suitable nesting or wintering habitat (annual grasslands and pastures). Although burrowing owls are no longer known to nest in Santa Barbara County, the potential for nesting owls cannot be precluded. The work area surveys would take place within the ROW, covering the work area and surrounding areas visible from the ROW. The survey would include checking for the burrowing owl and owl signs (e.g., white wash at burrow entrances). If ground-disturbing activities in suitable habitat are delayed or

suspended for more than 30 days after the pre-construction surveys, the site would be resurveyed. If no burrowing owls are detected, no further mitigation is necessary.

If active burrows are found near a work area, work in the vicinity of the burrows would be limited as follows:

- No disturbance would occur within approximately 160 feet (50 meters) of occupied burrows during the non-breeding season of September 1 through January 31, or within approximately 250 feet (75 meters) during the breeding season of February 1 through August 31
- The limits of the exclusion zone in the project work area will be clearly marked with signs, flagging and/or fencing

If work within these limits is unavoidable while burrows are active, work would only take place within the presence of a qualified monitor who would monitor to determine if the owls show signs of disturbance or, upon prior approval from CDFG a passive relocation effort (displacing the owls from the work area) may be conducted as described below, and subject to the approval of the CDFG.

Passive relocation of owls may occur during the non-breeding season (September 1 through January 31) with prior approval from CDFG. Passive relocation would include installing one-way doors on the entrances of burrows. The one-way doors would be left in place for 48 hours to ensure the owls have vacated the nest site. Owls would not be relocated during the breeding season.

Mitigation Measure Bio-11: The open ends of light-duty steel poles would be covered during storage to prevent burrowing owls or any other sensitive species from inhabiting the pole openings.

Mitigation Measure Bio-12 (Proposed to supersede APM BO-8 “Avoidance of and minimization of potential impacts to song birds, raptors and other migratory bird species”): Pre-construction bird nesting surveys for pull sites or locations of pole replacement or clearing and grading activities would be conducted before work performed between February 1 and August 15. See Avoidance and Minimization Measure (AMM) BO-5 for pre-construction survey requirements near the Santa Ynez River. Pre-construction surveys would be conducted within the ROW and from the ROW of areas visible from the ROW. To the extent possible, working in the vicinity of active nests would be avoided; however, if avoidance is not practicable, a buffer zone, as determined by a qualified biologist, would be maintained around the active nest to prevent nest abandonment. In the event that work would take place within 50 feet (300 feet for raptors) of an active nest, a biological monitor would monitor the activity of the nesting birds during work to determine if construction activities are resulting in significant disturbance to the birds. If the qualified biologist determines that work is disrupting nesting, then work in that area would be halted until nesting is completed and the young have fledged. Monitoring guidelines would be provided in an Avian Protection Plan to be submitted to the USFWS and CDFG for review

and approval prior to construction. Documentation of Plan approval would be submitted to the CPUC for recordkeeping.

Installation of the replacement power lines would conform to PG&E's most current version of Bird and Wildlife Protection Standards, and would include the use of bird guards.

Cultural Resources

APM Cultural Resources (CR)-1: Archaeological site avoidance. To ensure that AE-1857-3H is not inadvertently damaged during implementation of the Project, the limits of the work areas listed in Potential Impact CR-1 will be marked with readily visible flagging tape and the construction crews will be instructed that there will be no vehicle access, travel, equipment staging and storage, or other construction-related work outside of the flagged work areas when working at Pole 13.

APM CR-2: Pre-construction Worker Education Program. PG&E will design and implement a Worker Education Program that will be provided to all Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. No construction worker will be involved in field operations without having participated in the Worker Education Program. The Worker Education Program shall include, at a minimum:

- A review of archaeology, history, prehistory and Native American cultures associated with historical resources in the Project vicinity.
- A review of applicable local, state and federal ordinances, laws and regulations pertaining to historic preservation.
- A discussion of site avoidance requirements and procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Project.
- A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and PG&E policies.
- A statement by the construction company or applicable employer agreeing to abide by the Worker Education Program, PG&E policies and other applicable laws and regulations.

The Worker Education Program may be conducted in concert with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified instructor meeting applicable professional qualifications standards.

APM CR-3: Unanticipated discoveries management. In the unlikely event that previously unidentified cultural resources are uncovered during implementation of the Project, all work within 165 feet (50 meters) of the discovery will be halted and redirected to another location. PG&E's cultural resources specialist or his/her designated representative will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, the resource will be documented on State of

California Department of Parks and Recreation cultural resource records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, PG&E will evaluate the significance and CRHR eligibility of the resources, and implement data recovery excavation or other appropriate treatment measures if warranted.

Mitigation Measure Cultural-1: Environmental training would be provided to workers regarding the protection of paleontological resources and procedures to be implemented in the event fossil remains are encountered by ground-disturbing activities. This training may be combined with other environmental training for the project, provided that the program elements pertaining to cultural resources are provided by a qualified instructor meeting applicable professional qualification standards.

In the unlikely event that previously unidentified paleontological resources are uncovered during implementation of the project, all ground disturbing work would be temporarily halted or diverted away from the discovery to another location. PG&E's paleontological resources specialist or his/her designated representative would inspect the discovery and determine whether further investigation is required. If the discovery is significant, but can be avoided and no further impacts would occur, the resource would be documented in the appropriate paleontological resource records and no further effort would be required. If the resource is significant, but cannot be avoided and may be subject to further impact, PG&E would evaluate the significance of the resources, and implement data recovery excavation or other appropriate treatment measures as recommended by a qualified paleontologist.

Geology, Soils, and Mineral Resources

APM GM-2: Soft or loose soils during construction minimization. Where soft or loose soils are encountered during construction, appropriate measures will be implemented to avoid, accommodate, replace, or improve soft or loose soils encountered during construction. Such measures may include:

- Locating construction facilities and operations away from areas of soft and loose soil.
- Over-excavating soft or loose soils and replacing them with engineered backfill materials.
- Increasing the density and strength of soft or loose soils through mechanical vibration and/or compaction.
- Treating soft or loose soils in place with binding or cementing agents. Construction activities in areas where soft or loose soils are encountered will be scheduled for the dry season to allow safe and reliable equipment access.

Hazards and Hazardous Materials

APM HM-2/WQ-2: Environmental Training and Monitoring Program (ETMP) development and implementation. An environmental training program will be established to communicate to all field personnel any environmental concerns and appropriate work practices, including spill prevention and response measures and Best Management Practices

(BMPs). The training program will emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of flow paths to nearest waterbodies) and will include a review of all site-specific plans, including but not limited to the Project's SWPPP, Erosion Control and Sediment Transport Plan, Health and Safety Plan, and Hazardous Substances Control and Emergency Response Plan.

A monitoring program will also be implemented to ensure that the plans are followed throughout the construction period. BMPs, as identified in the Project SWPPP and Erosion Control and Sediment Transport Plan, will also be implemented during the Project to

Mitigation Measure Haz-1 (Proposed to supersede APM HM-1): PG&E would submit a Hazardous Substance Control and Emergency Response Plan to the CPUC for recordkeeping at least 30 days prior to project construction. The plan would identify methods and techniques to minimize the exposure of the public to potentially hazardous materials during all phases of project construction through operation. The plan would require implementing appropriate control methods and approved containment and spill-control practices (i.e., spill control plan) for construction and materials stored on-site.

All hazardous materials and hazardous wastes would be handled, stored, and disposed of, in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. With the exception of the poles, all hazardous materials would be collected in project-specific containers at the site, and transported to a PG&E service center designated as a PG&E consolidation site. Poles would be scheduled for transportation to the appropriate licensed Class 1 or a composite-lined portion of a solid waste landfill. The plan would include, but not be limited to, the following:

- Proper disposal of potentially contaminated soils
- Vehicles and equipment parking near sensitive resource areas during construction
- Emergency response and reporting procedures to address hazardous material spills

Mitigation Measure Haz-2 (Proposed to supplement APM HM-2/WQ-2): PG&E would prepare a site-specific Health and Safety Plan (HSP) to ensure that potential safety hazards would be kept at a minimum. The HSP would include elements that establish worker training and emergency response procedures relevant to project activities. The plan would be submitted to the CPUC at least 30 days prior to construction for CPUC recordkeeping.

Mitigation Measure Haz-3: If it is necessary to store any chemicals on-site, they would be managed in accordance with all applicable regulations. Material Safety Data Sheets would be maintained and kept available on-site, as applicable.

Mitigation Measure Haz-4: In the event that soils suspected of being contaminated (based on evidence from visual, olfactory, or other means) are removed during excavation activities along the power line corridor, the excavated soil would be tested and, if contaminated above hazardous levels, would be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil would require testing and investigation

procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.

Mitigation Measure Haz-5 (Proposed to supersede APM HM-3): PG&E would prepare and submit a Fire Prevention and Response Plan to the CPUC and to local fire protection authorities for notification at least 30 days prior to construction. The plan would include fire protection and prevention methods for all components of the project during construction. The plan would include procedures to reduce the potential for igniting combustible materials by preventing electrical hazards, use of flammable materials, and smoking onsite during construction and maintenance procedures. Project personnel would be directed to park away from dry vegetation; to equip vehicles with fire extinguishers; not to smoke; and to carry water, shovels, and fire extinguishers in times of high fire hazard.

Hydrology and Water Quality

APM WQ-2/HM-2: Environmental Training and Monitoring Program (ETMP) development and implementation. Worker environmental awareness will communicate environmental issues and appropriate work practices specific to this Project. This awareness will include spill prevention and response measures and proper BMP implementation. The SWPPP training will emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of flow paths to nearest waterbodies) and will include a review of all site-specific water quality requirements, including applicable portions of , the Erosion Control and Sediment Transport Plan, Health and Safety Plan, and PG&E's Hazardous Substances Control and Emergency Response program.

A monitoring program will also be implemented to ensure that the plans are followed throughout the construction period. BMPs, as identified in the Project SWPPP and Erosion Control and Sediment Transport Plan, will also be implemented during the Project to minimize the risk of an accidental release and to provide the necessary information for emergency response.

Mitigation Measure Hydro-1 (Proposed to supersede APM WQ-1): Following project approval, PG&E would prepare and implement a SWPPP to minimize construction impacts on surface and groundwater quality. Implementation of the SWPPP would help stabilize graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be adhered to during construction activities. Erosion and sediment control measures, such as straw wattles, water bars, covers, silt fences, and sensitive area access restrictions (e.g., flagging) would be installed before the onset of winter rains or any anticipated storm events. .Mulching, seeding, or other suitable stabilization measures would be used to protect exposed areas during construction activities, as necessary. During construction, measures would be in place to ensure that contaminants are not discharged from the construction sites.

Mitigation Measure Hydro-2 (Proposed to supersede APM WQ-3/GM-2): PG&E would prepare an Erosion Control and Sediment Transport Plan (ECSTP) as an element of the SWPPP describing BMPs, to be used during construction. The plan would address

construction in or near sensitive areas described in Section 3.5 Biological Resources. BMPs, where applicable would be designed based on specific criteria from recognized BMP design guidance manuals. Erosion-minimizing efforts may include measures such as:

- Avoiding excessive disturbance of steep slopes
- Defining ingress and egress within the project area
- Implementing a dust control program during construction
- Restricting access to sensitive areas
- Using vehicle mats in wet areas
- Revegetating disturbed areas where applicable following construction
- Proper containment of stockpiled soils (including construction of berms in areas near water bodies, wetlands, or drainage channels)

Erosion control measures identified in the ECSTP would be installed in an area before clearing begins during the wet season in that area and before the onset of winter rains or any anticipated storm events. Temporary measures such as silt fences or wattles, intended to minimize sediment transport from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.

The ECSTP would be submitted to the CPUC for review at least 30 days prior to the commencement of construction. The plan would be revised and updated as needed, and re-submitted to the CPUC if construction activities evolve to the point that the existing approved ECSTP does not adequately address the project.

Noise

APM Noise NO-1: Noise minimization with portable barriers. Compressors and other small stationary equipment used in proximity to residential areas would be shielded with portable barriers

APM NO-2: Noise minimization with “quiet” equipment. “Quiet” equipment (i.e., equipment that incorporates noise control elements into the design-compressors have “quiet” models) would be used during construction whenever possible.

APM NO-3: Noise minimization through direction of exhaust. Equipment exhaust stacks and vents would be directed away from buildings.

APM NO-4: Noise minimization through truck traffic routing. Truck traffic would be routed away from noise-sensitive areas where feasible.

APM NO-5: Noise disruption minimization through residential notification. PG&E would coordinate with the City of Lompoc and Santa Barbara County to notify residents who are located near the power line of the timeframe for construction activities.

Traffic and Transportation

Mitigation Measure Traffic-1 (Proposed to supersede APM TT-1): PG&E would develop a project-specific TMP, which would be submitted to the CPUC for review at least 30 days prior to construction. The TMP would conform to the California Joint Utility Traffic Control Committee's *Work Area Protection and Traffic Control Manual*. The TMP would include the following:

- Standard safety practices, including installation of appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices.
- Flaggers and/or signage would be used to guide vehicles through or around construction zones using proper construction techniques.
- Provision that all equipment and materials would be stored in designated staging areas on or adjacent to the work sites in a manner that minimizes traffic obstructions and maximizes sign visibility.

Acceptable vehicle speeds on project roadways. Vehicle speeds would be limited to safe levels as appropriate for all roads, including access roads and overland routes without existing, posted speed limits.

Findings

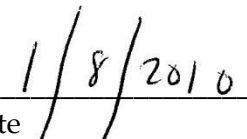
The Initial Study was prepared to identify the potential effects on the environment from the reconductoring of the Cabrillo-Santa Ynez 115 kV power line and to evaluate the significance of these effects. Based on the Initial Study and the Findings listed below, the Lead Agency (CPUC) has determined that the proposed project would not have a significant effect on the environment.

- With the implementation of the above APMs and mitigation measures, the proposed project would not significantly degrade the quality of the environment.
- With the implementation of the above mitigation measures, both short-term and long term environmental effects associated with the proposed project would be less than significant.
- When potential impacts associated with implementing the proposed project are considered cumulatively, the incremental contribution of the project-related impacts are insignificant.
- Based on the Initial Study, there is no evidence that implementing the proposed project would have any adverse impacts on people.



For the Lead Agency

Energy Div.
Project Manager



Date

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INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM

1. PROJECT TITLE

Cabrillo – Santa Ynez 115 kV Reconductoring Project
Pacific Gas and Electric Company (PG&E) Application No. A.09-07-010

2. LEAD AGENCY NAME AND ADDRESS

California Public Utilities Commission (CPUC)
Energy Division
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

3. CONTACT PERSON AND PHONE NUMBER

Billie Blanchard, Project Manager
Energy Division
Phone: (415) 703-2068
E-mail: bcb@cpuc.ca.gov

4. PROJECT LOCATION

The project is located in Santa Barbara County, California between the cities of Lompoc and Buellton. The project right-of-way (ROW) runs roughly east to west, paralleling State Route (SR) 246 between SR 1 in Lompoc and US 101, north of Buellton. The power line connects Cabrillo Substation (12th Street and Industrial Street in Lompoc, CA) to Santa Ynez Switching Station (1811 Jonata Park Road in Buellton, CA), west of US 101.

5. PROJECT SPONSOR'S NAME AND ADDRESS

Pacific Gas and Electric
77 Beale Street
San Francisco, California 94105

6. GENERAL PLAN DESIGNATION

The proposed project passes through portions of unincorporated Santa Barbara County and the City of Lompoc. In Santa Barbara County the project is contained within the 40-foot wide PG&E ROW. The PG&E ROW runs through agricultural land, as designated by the Santa Barbara County General Plan. In the City of Lompoc, the project traverses land designated "Industrial" by the City of Lompoc General Plan.

7. ZONING

The project area is located within unincorporated Santa Barbara County and zoned "Agricultural I" and "Agricultural II". The county has three zoning designations for agricultural land, two of which are in the project area. Land zoned as Agricultural I (Ag-I) is prime and non-prime agricultural land located within urban, inner rural, and rural neighborhoods. The Agricultural II (Ag-II) designation applies to farm lands and agricultural uses located outside of urban and rural neighborhood areas. It allows for livestock operations, grazing, and beef production. A portion of the project area falls within the City of Lompoc and is zoned "Industrial".

8. DESCRIPTION OF THE PROJECT

PG&E is proposing to upgrade an existing deteriorating segment of a 115 kV power line. The main elements of this project include:

- Replacing the existing single-circuit 4/0 AAC with a 715 Multi-Chip Model (MCM), non-specular AAC along approximately 14.1 miles of an existing 14.6-mile power line
- Replacing approximately 125 existing wood poles (currently holding the 4/0 AAC) with new light-duty steel poles along the power line

9. SURROUNDING LAND USES AND SETTING

The existing power line traverses rolling hills and valleys on land designated and zoned for agricultural use. Several parcels along the alignment are used for rotational agriculture, such as pepper and strawberry farms. The power line also traverses privately owned vineyards. A residential subdivision, known as Bluebird Glen Road, is located in the project vicinity, approximately 0.6 miles from the Santa Ynez Switching Station.

10. OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

The Applicants must obtain permits listed in Table IS-1.

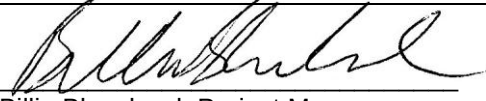
Table IS-1: Permits and Approvals Necessary for the Proposed Project		
Permit, Approval, or Exemption	Purpose	Regulating Agency
Federal		
Clean Water Act 404 Nationwide Permit	Discharge of dredged and fill material into waters of the United States	U.S. Army Corps of Engineers
State		
Storm Water Pollution Prevention Plan; enrollment under General Construction National Pollution Discharge Elimination System permit	Road grading and ground disturbance for pole installation	Central Coast Regional Water Quality Control Board
Section 401 Certification	Discharge of dredged and fill material into waters of the United States.	Central Coast Regional Water Quality Control Board
Encroachment Permits	For any work to take place within ROW for US 101, SR 1, and SR 246	California Department of Transportation
Local		
Traffic Control Permit	Required for any work within the ROW for County roadways	Santa Barbara County Department of Public Works
Encroachment Permits	Required for any work within the ROW for City roadways	City of Lompoc

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| ☐ Aesthetics | ☐ Agricultural Resources | ☐ Air Quality |
| ☐ Greenhouse Gasses | ☐ Biological Resources | ☐ Cultural Resources |
| ☐ Geology and Soils | ☐ Hazards and Hazardous Materials | ☐ Hydrology and Water Quality |
| ☐ Land Use | ☐ Mineral Resources | ☐ Noise |
| ☐ Population and Housing | ☐ Public Services | ☐ Recreation |
| ☐ Transportation and Traffic | ☐ Utilities and Service Systems | ☐ Mandatory Findings of Significance |

ENVIRONMENTAL DETERMINATION

On the basis of this initial evaluation:	
I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	☐
I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.	☒
I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.	☐
I find that the Proposed Project MAY have a "potentially significant impact" or "potentially significant impact unless mitigated" on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An EIR is required, but it must analyze only the effects that remain to be addressed.	☐
I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.	☐
 Billie Blanchard, Project Manager Energy Division California Public Utilities Commission 1/8/2010 Date	

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List of Acronyms

µg/m ³	Micrograms per Cubic Meter
AAC	All Aluminum Conductor
AB	Assembly Bill
AFB	Air Force Base
AMR	American Medical Response
amsl	Above Mean Sea Level
APM	Applicant Proposed Measure
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CAP	Clean Air Program
CARB	California Air Resources Board
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CGS	California Geologic Survey
CH ₄	Methane
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CPUC	California Public Utilities Commission
CRFL	California Red-Legged Frog
CRHR	California Register of Historic Resources
CSC	California “Species of Concern”

LIST OF ACRONYMS

CTS	California Tiger Salamander
dB	Decibels
dBA	A-weighted Sound Level
DTSC	Department of Toxic Substances Control
ECSTP	Erosion Control and Sediment Transportation Plan
EIR	Environmental Impact Report
EMF	Electromagnetic Field
EPA	U. S. Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHA	Federal Highway Administration
g	Acceleration Due to Gravity
GHG	Greenhouse Gases
GIS	Geographical Information System
GO	General Order
HCP	Habitat Conservation Plan
HSP	Health and Safety Plan
IS	Initial Study
KOP	Key Observation Point
kV	Kilovolt
L _{dn}	Day/Night Noise Level
L _{eq}	Equivalent Noise Level
LOS	Level of Service
LUST	Leaking Underground Storage Tank
MCM	Multi-Chip Model
MND	Mitigated Negative Declaration
mph	Miles per Hour
N ₂ O	Nitrous Oxide

NCCP	Natural Community Conservation Plan
NO _x	Nitrogen Oxides
NO ₂	Nitrogen Dioxide
NRHP	National Register of Historic Places
PCE	Passenger Car Equivalent
PG&E	Pacific Gas and Electric Company
PGA	Peak Ground Acceleration
PM ₁₀	Particulate Matter Less than 10 Microns
PM _{2.5}	Fine Particulates
ppm	Parts per Million
PTC	Permit to Construct
ROCs	Reactive Organic Compounds
ROW	Right-of-Way
RTA-SCAT	Regional Transit Authority South County Area Transit
S _a	Spectral Acceleration
RWQCB	Regional Water Quality Control Board
SBCAG	Santa Barbara County Association of Governments
SBCAPCD	Santa Barbara County Air Pollution Control District
SBCFD	Santa Barbara County Fire Department
SBCSD	Santa Barbara County Sheriff's Department
SCAQMD	South Coast Air Quality Management District
SF ₆	Sulfur Hexafluoride
SFHA	Special Flood Hazard Areas
SHP	State Historic Park
SO ₂	Sulfur Dioxide
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMP	Traffic Management Plan

LIST OF ACRONYMS

tpy	Tons per Year
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
V/C	Volume to Capacity Ratio
VAFB	Vandenberg Air Force Base
VdB	Vibration Decibels
VOCs	Volatile Organic Compounds
WWTP	Wastewater Treatment Plant

Chapter 1: Introduction

1.1 Proposed Project Overview

Pacific Gas and Electric Company (PG&E), a regulated California utility, filed an application with the California Public Utilities Commission (CPUC) for a Permit to Construct (PTC) on July 9, 2009, for the Cabrillo-Santa Ynez 115 kilovolt (kV) Reconductoring Project (project). PG&E is proposing to replace the existing deteriorating conductors and supporting wood poles with new light-duty steel poles along an existing segment of a 115 kV power line. The objective of the project is to improve transmission system reliability and provide sufficient peak-period transmission voltage support for the Lompoc, Solvang, Buellton, and Santa Ynez areas.

The project is located in Santa Barbara County, California between the cities of Lompoc and Buellton. The project right-of-way (ROW) runs roughly east to west, paralleling State Route (SR) 246 between SR 1 in Lompoc and US 101 north of Buellton. This line connects the Cabrillo Substation (12th Street and Industrial Street in Lompoc, CA) to the Santa Ynez Switching Station (1811 Jonata Park Road in Buellton, CA) a short distance west of US 101. The project region is shown in Figure 1.1-1.

1.2 Environmental Analysis

1.2.1 CEQA PROCESS

This Initial Study (IS) has been prepared pursuant to the California Environmental Quality Act (CEQA), the amended State CEQA Guidelines (14 CCR 15000 *et seq.*), and the CPUC CEQA rules (Rule 2.4). The purpose of the IS is to inform the decision-makers, responsible agencies, and the public about the proposed project, the existing environment that would be affected by the project, the environmental effects that would occur if the project is approved, and proposed mitigation measures that would avoid or reduce environmental effects.

A Mitigated Negative Declaration (MND) has been prepared based on the assessment of potential environmental impacts outlined in this IS. All potentially significant impacts associated with the project can be mitigated to a level below significance; therefore, an MND can be adopted by the CPUC in accordance with Section 21080 of the CEQA Public Resources Code.

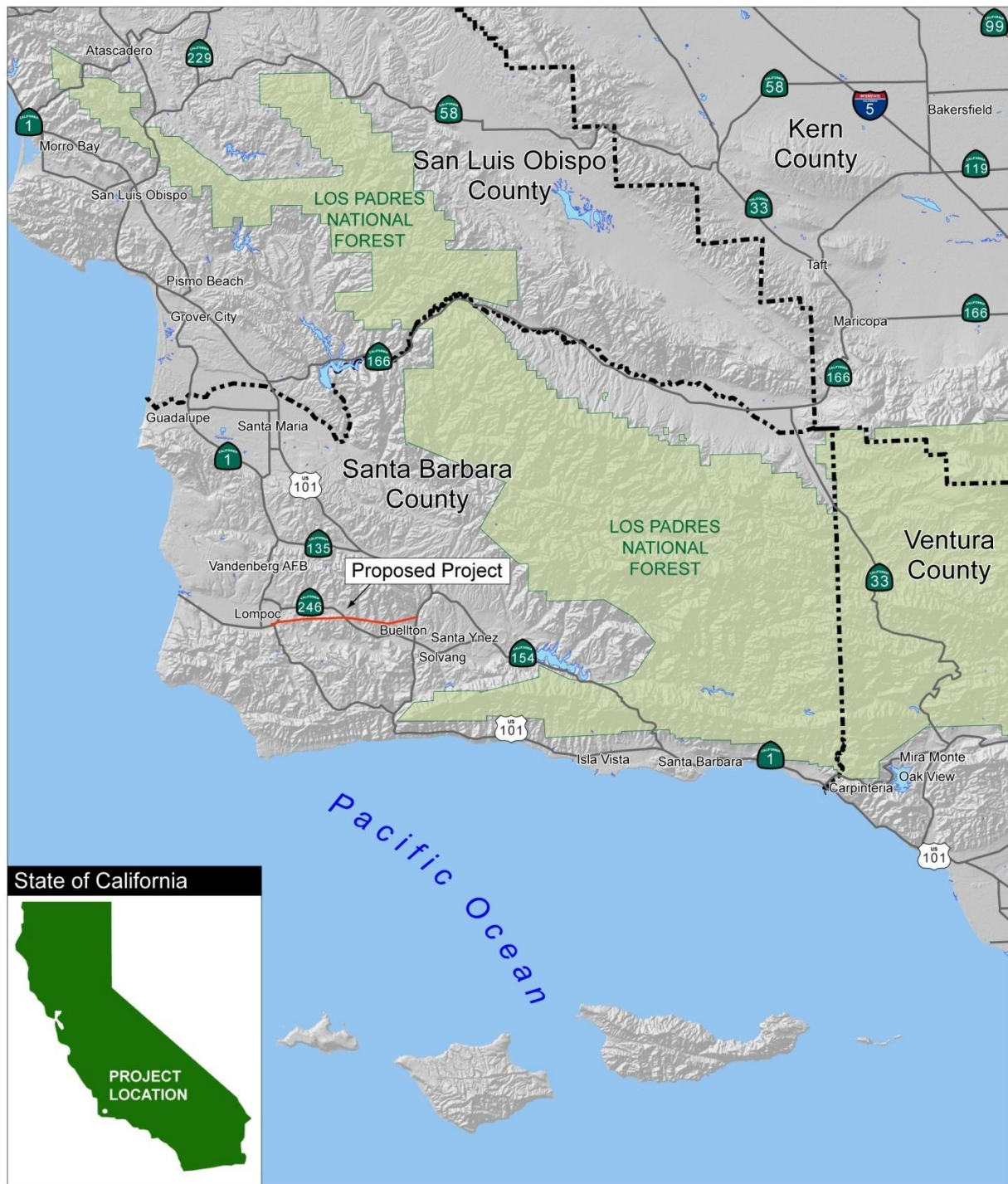
1.2.2 CEQA LEAD AGENCY

The CPUC is the lead agency for review of the project under CEQA because it must make a decision whether to adopt the MND and to approve or deny the PTC.

1.2.3 INITIAL STUDY

This IS presents an analysis of potential effects of the proposed project on the environment. The IS is based on information from PG&E's Proponent's Environmental Assessment (PEA) and associated submittals, site visits, CPUC data requests, and additional research.

Figure 1.1-1: Project Region



SOURCE: ESRI 2006 and RMT Inc. 2009

LEGEND



Reconductoring activities could have direct and indirect impacts on the environment. The following environmental parameters are addressed based on the potential effects of the proposed project and potential growth-inducing or cumulative effects of the project in combination with other projects:

- Aesthetics
- Agricultural Resources
- Air Quality
- Greenhouse Gases
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Material
- Hydrology and Water Quality
- Land Use
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Traffic and Transportation
- Utilities and Service Systems
- Mandatory Findings of Significance
- Corona and Induced Current Effects

The IS has been organized into the following sections:

- **Chapter 1: Introduction:** Provides an introduction and overview describing the proposed project and the CEQA process, and identifies key areas of environmental concern.
- **Chapter 2: Project Description:** Presents the project objectives and provides an in depth description of the proposed project, including construction details and methods.
- **Chapter 3: Environmental Setting and Environmental Impacts:** Includes a description of the existing conditions and analysis of the proposed project's potential environmental impacts, and identifies mitigation measures to reduce potentially significant impacts to less than significant levels.
- **Chapter 4: Mitigation Monitoring Plan:** Includes APMs and mitigation measures that PG&E must implement as part of the project, actions required to implement these measures, monitoring requirements, and timing of implementation for each measure.
- **Chapter 5: References:** Lists the sources of information used to prepare the IS.
- **Chapter 6: Report Preparation:** Lists the preparers of the IS and identifies public agencies that were consulted during preparation.

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Chapter 2:

Project Description

2.1 Project Purpose and Need

2.1.1 PURPOSE

The purpose of the project is to improve the electrical reliability of the Cabrillo-Santa Ynez 115 kV power line by reconductoring. The power line experienced six line outages due to equipment failure in 2008. Five of these outages were due to deteriorated conductors or insulator failures. The existing 4/0 All Aluminum Conductor (AAC) and connectors located along 14.1 miles of the single-circuit power line are corroding, making the line brittle and prone to failure. The purpose of the power line upgrade is to prevent future power line failures.

2.1.2 NEED

The Cabrillo-Santa Ynez 115 kV Reconductoring Project is necessary to improve transmission reliability and provide sufficient peak period transmission voltage for the Lompoc-Santa Ynez areas. PG&E would continue to provide safe and reliable electric service to customers in this area by reconductoring this line. The reconductoring work would increase reliability, maintain compliance with applicable grid reliability criteria, and provide for sufficient transmission voltage to the area during peak and abnormal operating conditions. Reconductoring is expected to provide long-term stability to the power line.

2.2 Proposed Project

2.2.1 OVERVIEW

The 14.6-mile Cabrillo-Santa Ynez 115 kV power line connects the Cabrillo Substation to the Santa Ynez Switching Station and comprises one segment of an approximately 80-mile 115 kV transmission loop for the Lompoc-Santa Ynez areas. The loop serves over 71,000 customers in the general area between Santa Maria, Lompoc, Santa Ynez, and Solvang.

This project would require the following to reduce instances of line failure:

- Replacement of the existing single-circuit 4/0 AAC with a 715 Multi-Chip Model (MCM), non-specular AAC on approximately 14.1 miles of an existing 14.6-mile power line
- Replacement of approximately 125 existing wood poles (currently holding the 4/0 AAC) with new light-duty steel poles along the power line

The existing segment of the power line between Cabrillo Substation and Santa Ynez Switching Station was upgraded from 70 kV to 115 kV with distribution-style dead-end shoes in 1988. The upgrade cost-effectively provided strength to meet tensioning requirements for this line. Subsequent investigation has determined this style of distribution design causes excessive bending

of the conductor. The sharp bends, when exposed to the frequent local winds, create cyclic fatigue in the conductor, resulting in increased failures.

The coastal climate produces foggy and windy conditions throughout the year, which has contributed to the accelerated deterioration of the existing conductors and associated hardware, causing frequent failures. The project would replace aging wood poles with new light-duty steel poles, and outdated or deteriorated hardware with an upgraded conductor (a heavier 715 MCM AAC), new insulators, and other required hardware along 14.1 miles of the existing power line. The remainder of the 80-mile power line extending into Cabrillo Substation does not require reconductoring because it currently uses the new MCM AAC.

2.2.2 PROJECT COMPONENTS

The components of the proposed project are described in detail below. Figures 2.2-1 through 2.2-17 illustrate the locations of these components.

Power Line

The existing line is a 115 kV, single-circuit, 14.6-mile-long power line. The proposed reconductoring on approximately 14.1 miles of the line would not change the capacity or the length of the line. Other lines, equipment, and utilities such as communications lines that are collocated on the existing poles would be transferred to the new poles.

Poles

The project includes replacing 125 wood poles along the route with new direct-buried, light-duty steel poles designed to meet General Order 95 (G.O. 95) clearance requirements for the new 715 MCM AAC. Direct-buried poles would not require the installation of foundations. New steel poles would have a surface treatment designed to mimic the appearance of natural weathering similar to that of the current wood poles. Steel poles also would provide superior protection from wildfires, rotting, and woodpecker damage compared to the existing wood poles. The new poles would be installed consistent with PG&E standard raptor-safe design criteria, which provide 8.5 feet of clearance between conductors and lower voltage lines located underneath the transmission line (i.e., underbuild). Triangular raptor perch deterrents would be installed per PG&E guidelines in areas supporting 12 kV underbuilds (Figure 2.2-18). Eight existing wood poles along the route (Poles 1 through 6, 11, and 17) would not be replaced with new steel poles. These poles were recently replaced during routine or emergency maintenance and are in good condition. Insulator replacement and reconductoring activities would still be performed in these areas.

The new poles are designed to accommodate sway associated with the new conductor and suspension-style insulators. The new poles would be buried deeper (11 to 13.5 feet) than existing poles (7 to 10 feet). Aboveground pole heights would not change significantly, ranging from 49 to 64 feet, except at two locations (i.e., at the SR 246 crossing and in the proximity of a residential development on the east end of the power line), where poles would be 5 to 12 feet taller than existing poles to provide adequate ground clearance and reduce electromagnetic fields (EMF) near residences.

Figure 2.2-1: Power Line Segment (1 of 17)

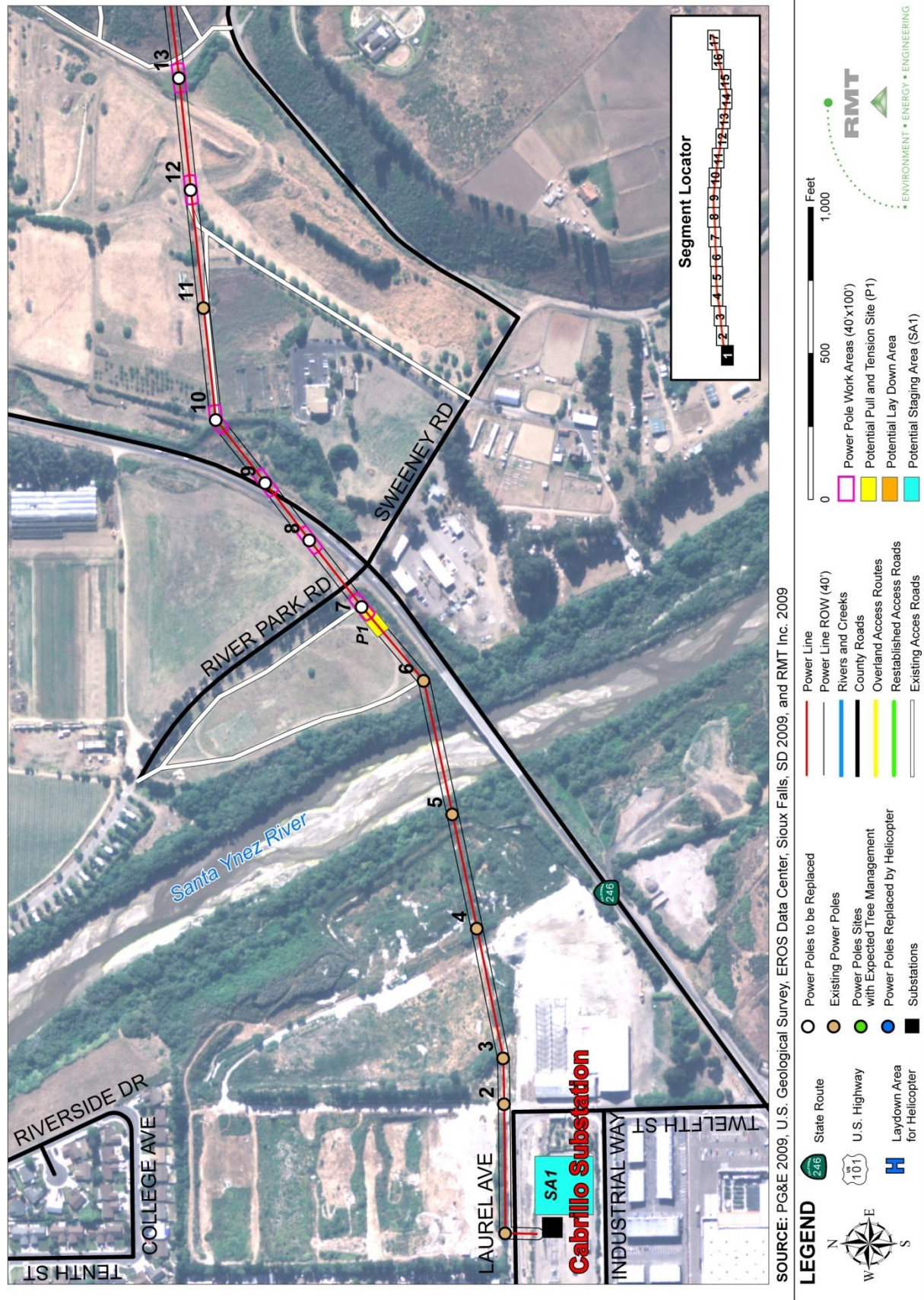


Figure 2.2-2: Power Line Segment (2 of 17)

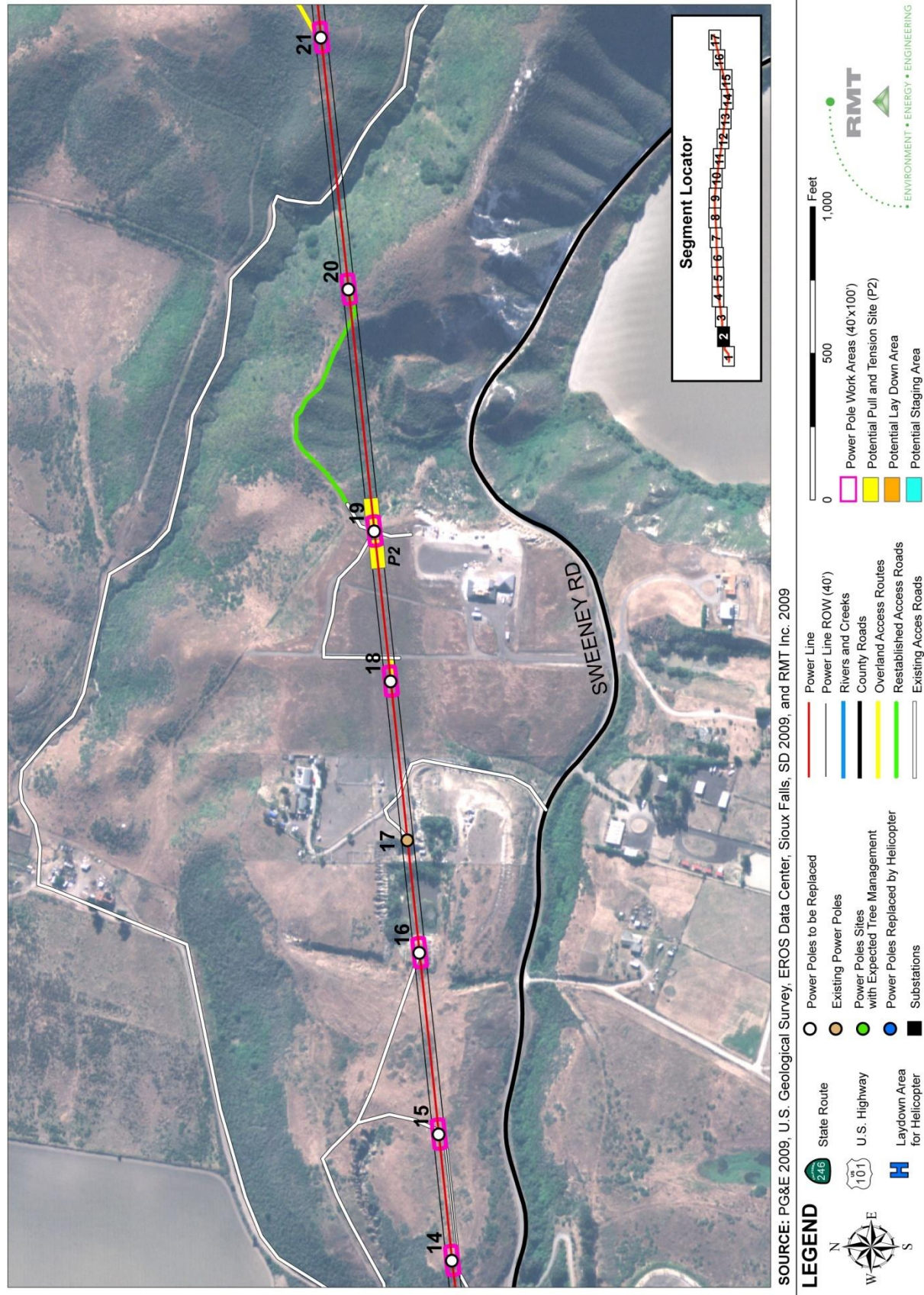


Figure 2.2-3: Power Line Segment (3 of 17)

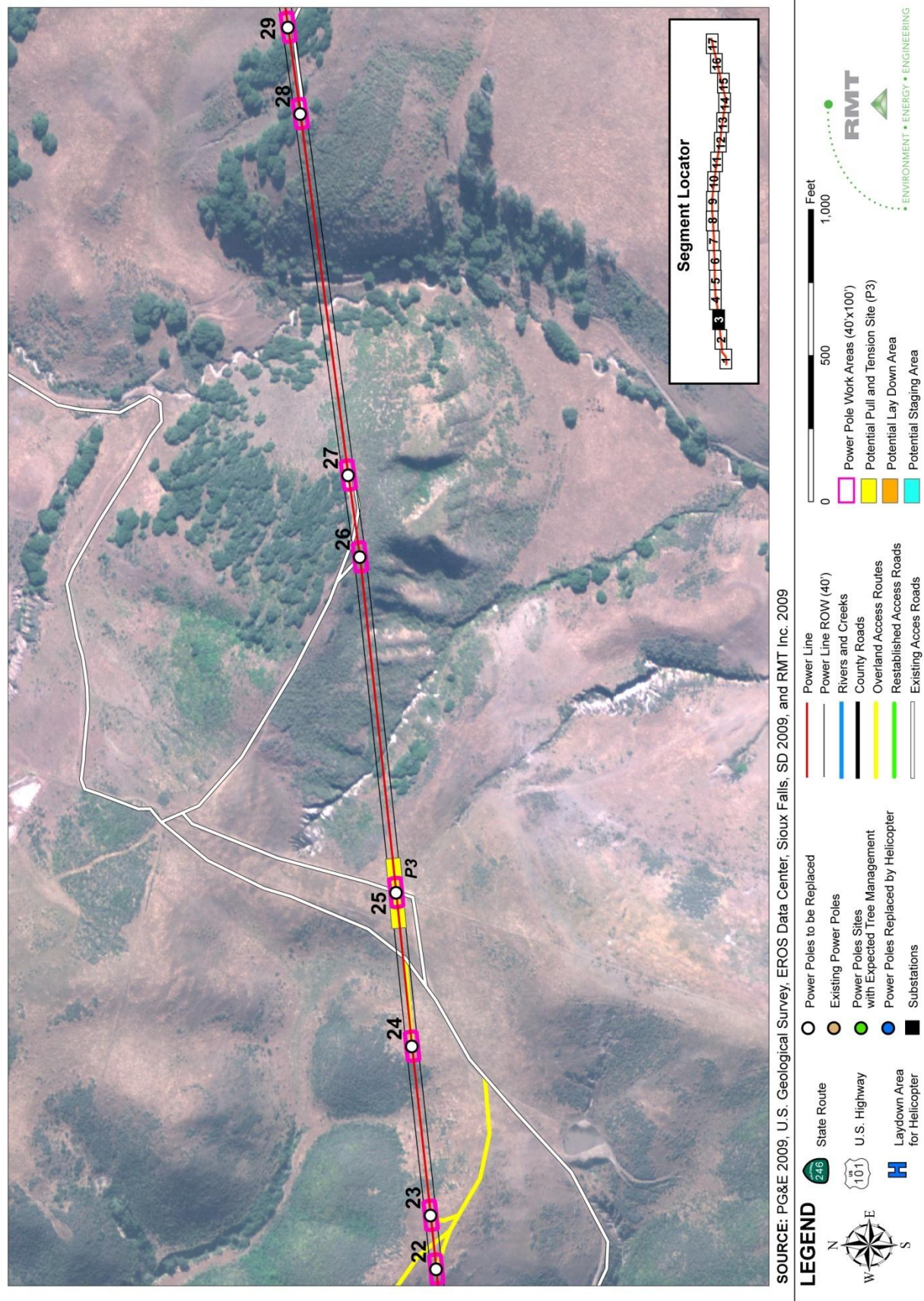


Figure 2.2-4: Power Line Segment (4 of 17)

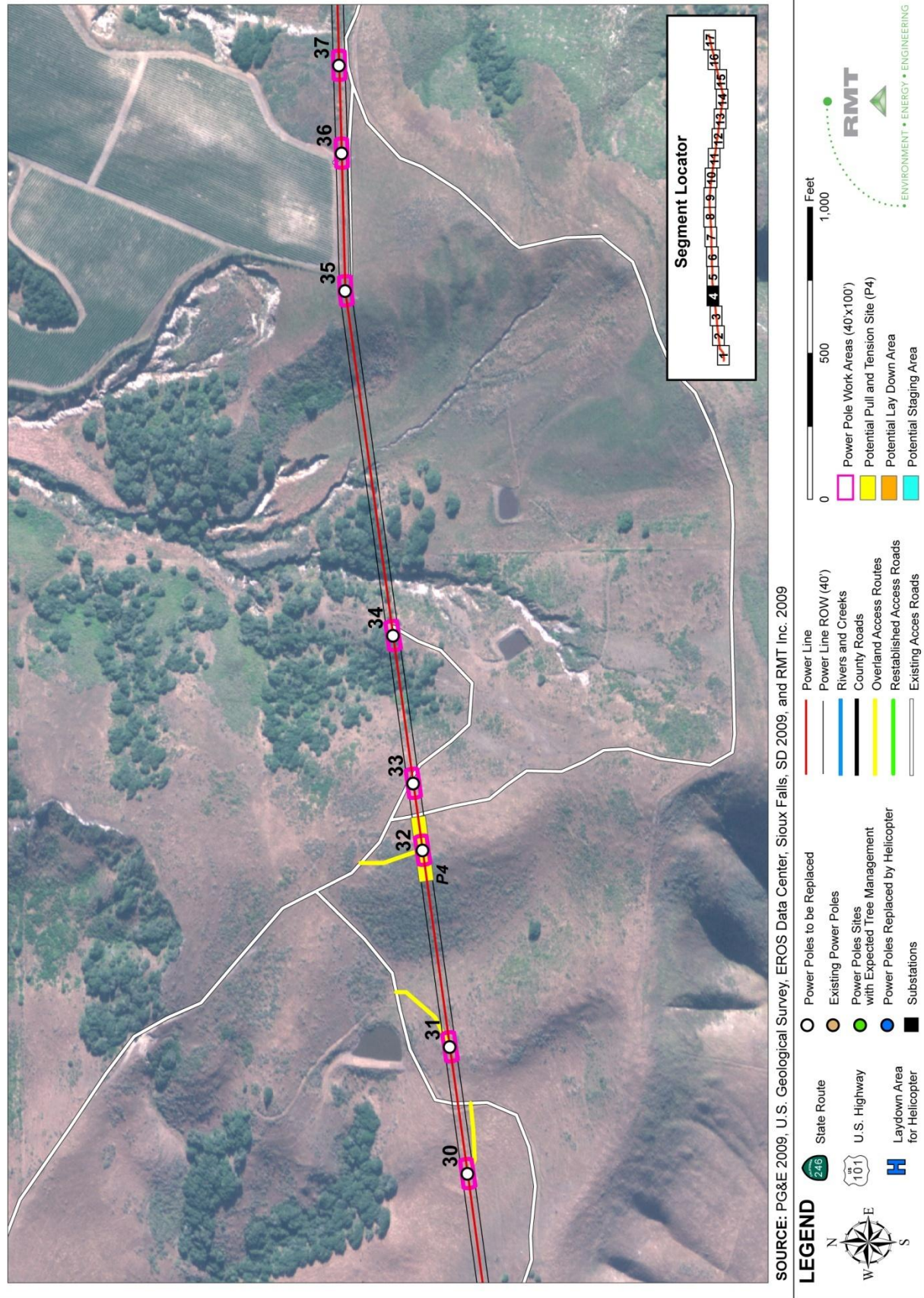


Figure 2.2-5: Power Line Segment (5 of 17)

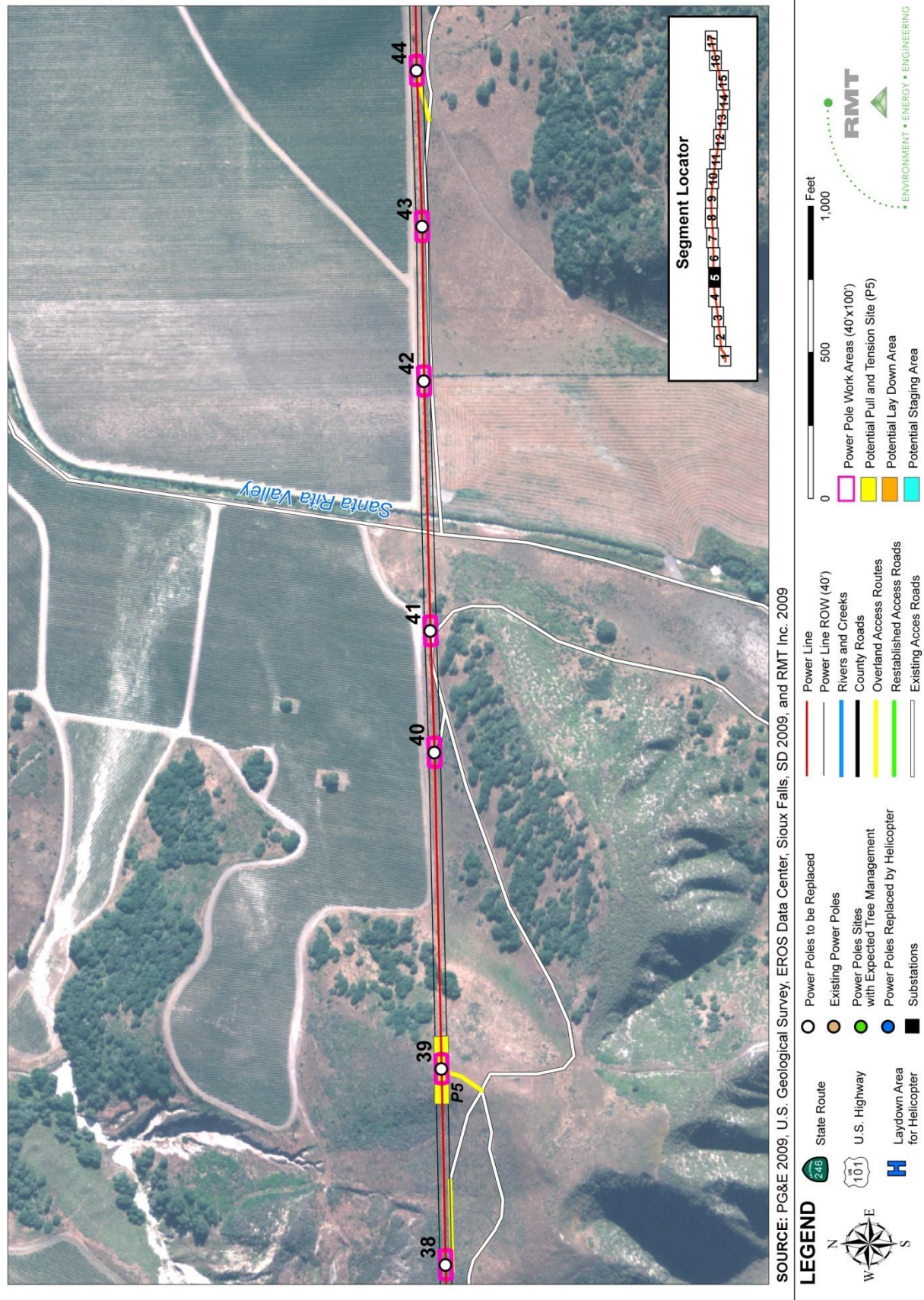


Figure 2.2-6: Power Line Segment (6 of 17)

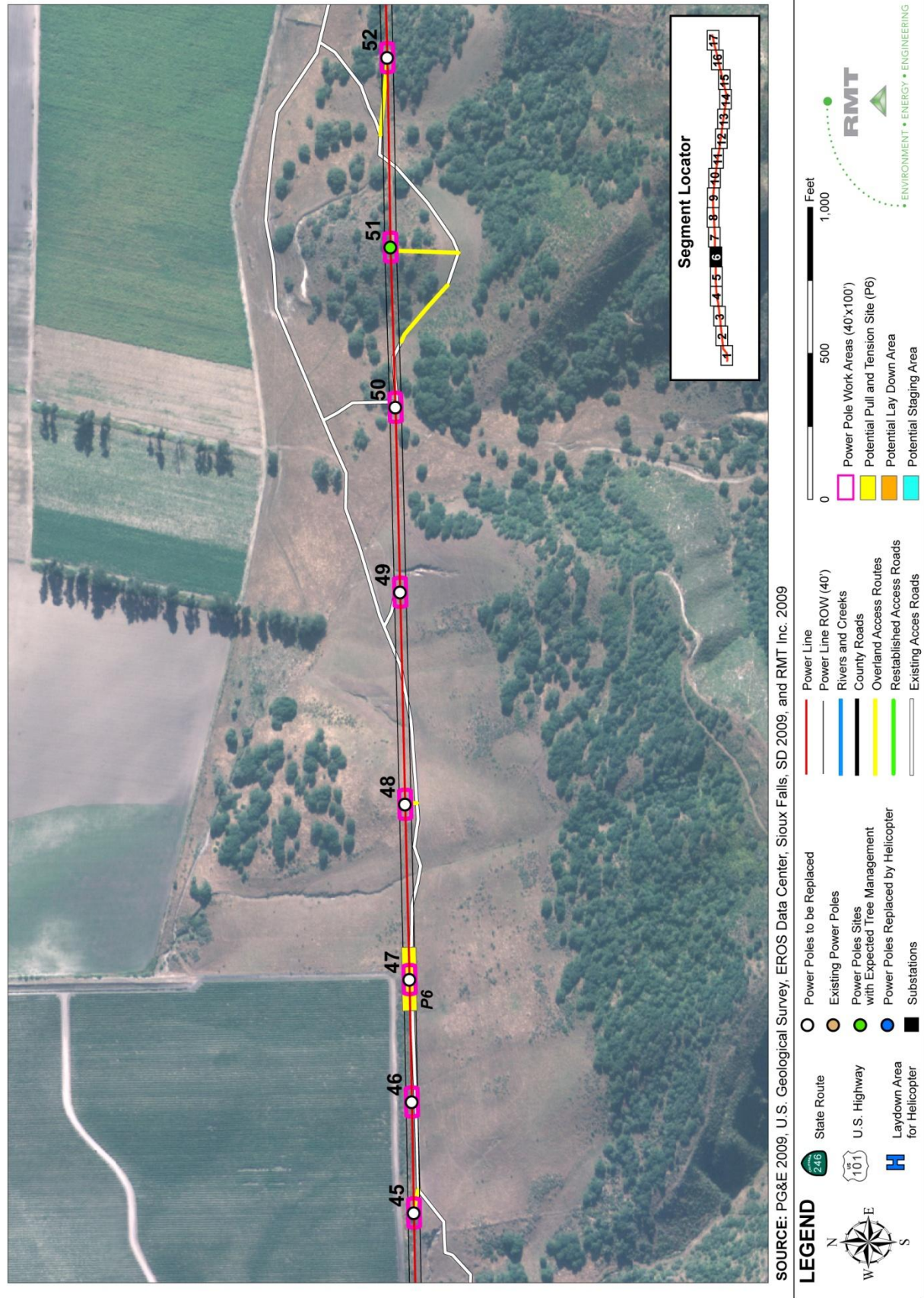


Figure 2.2-7: Power Line Segment (7 of 17)

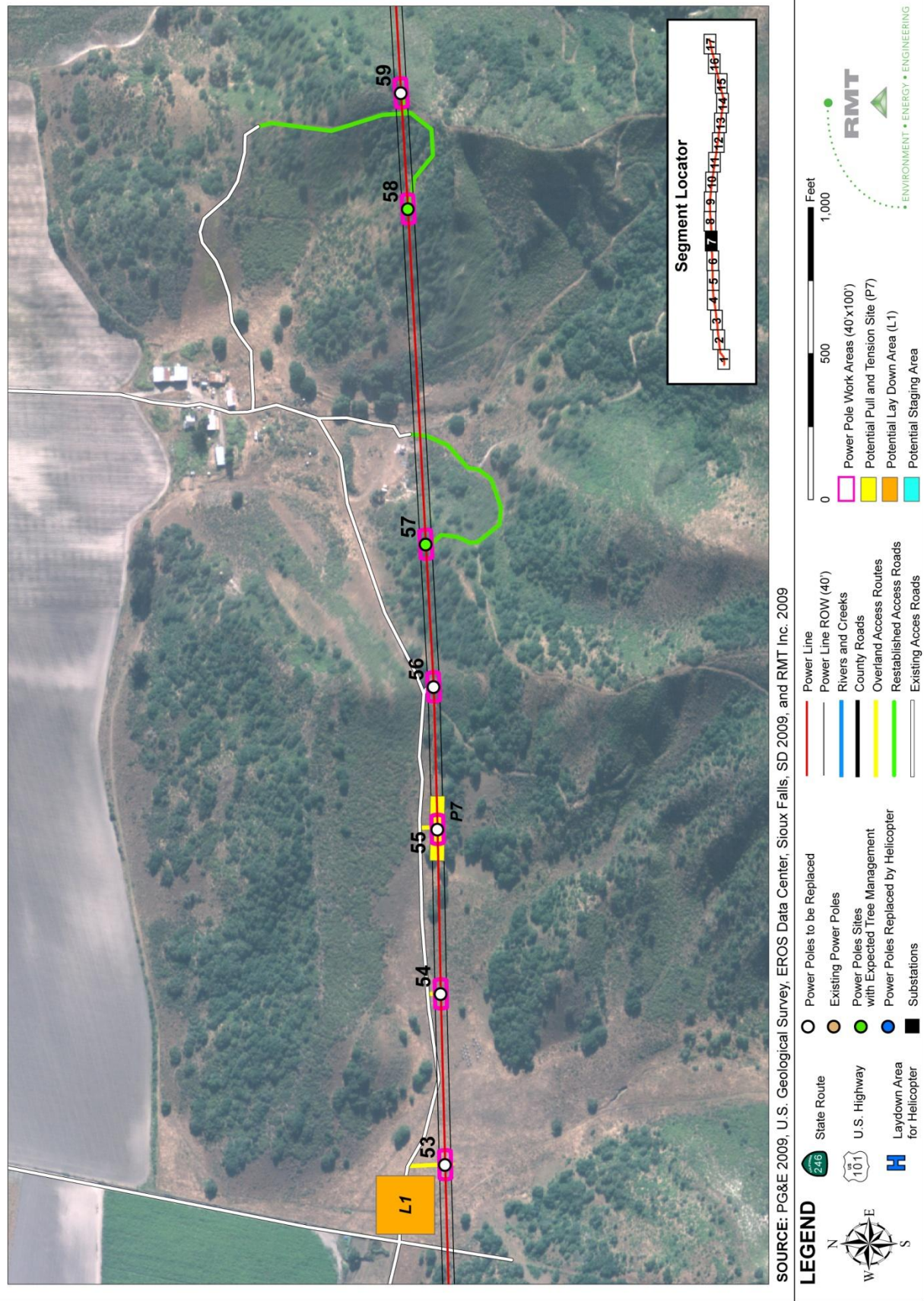


Figure 2.2-8: Power Line Segment (8 of 17)

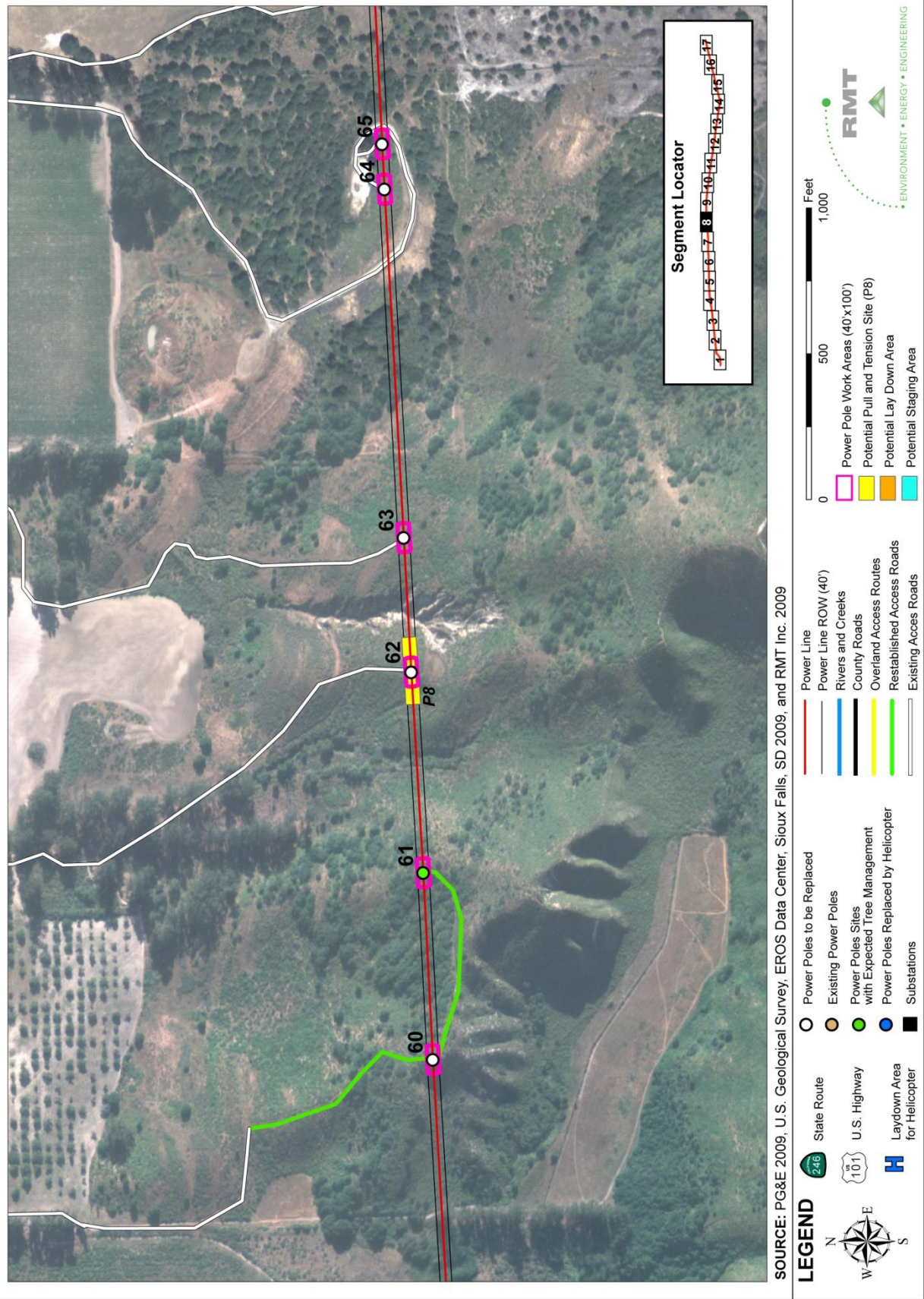


Figure 2.2-9: Power Line Segment (9 of 17)

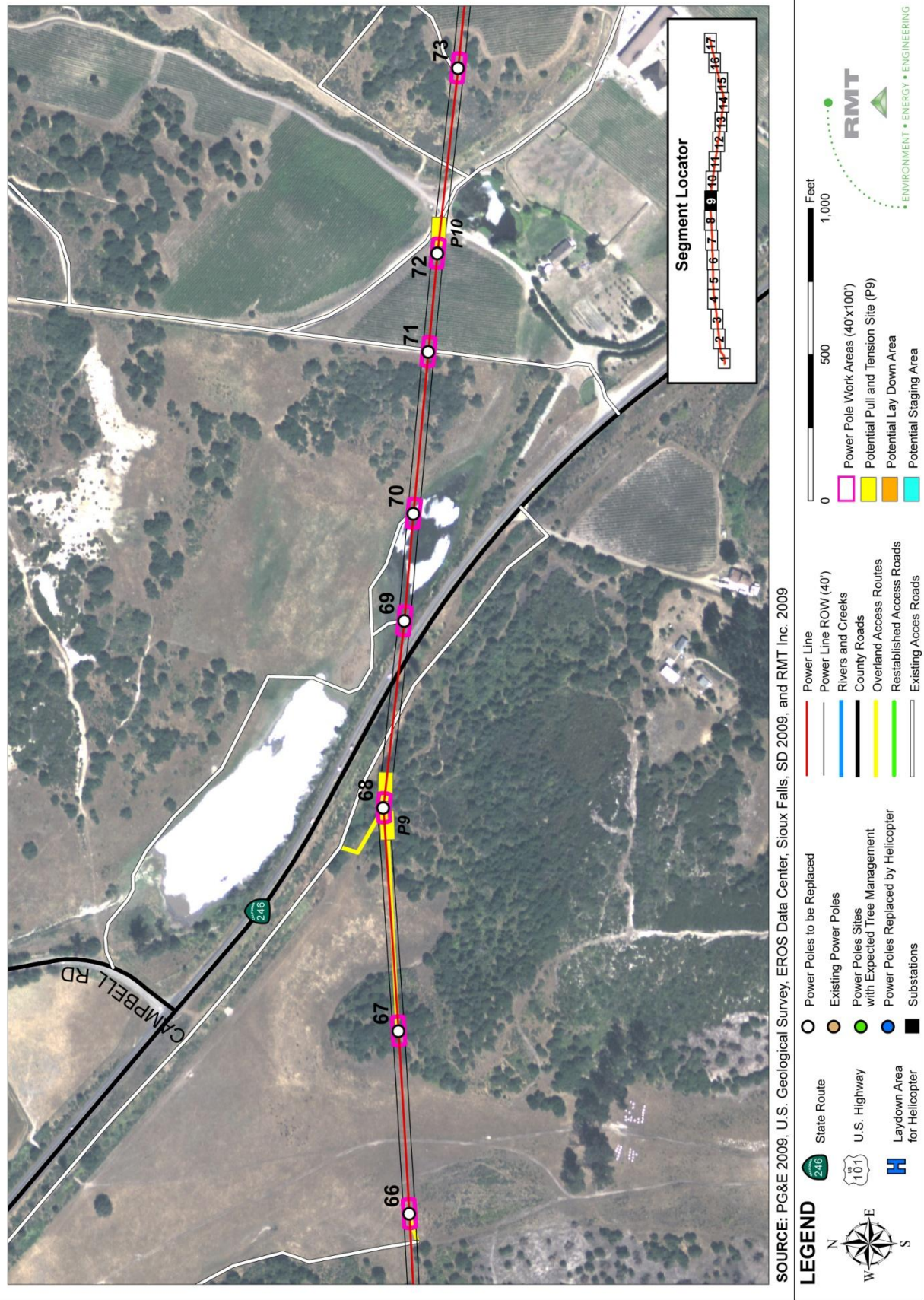


Figure 2.2-10: Power Line Segment (10 of 17)

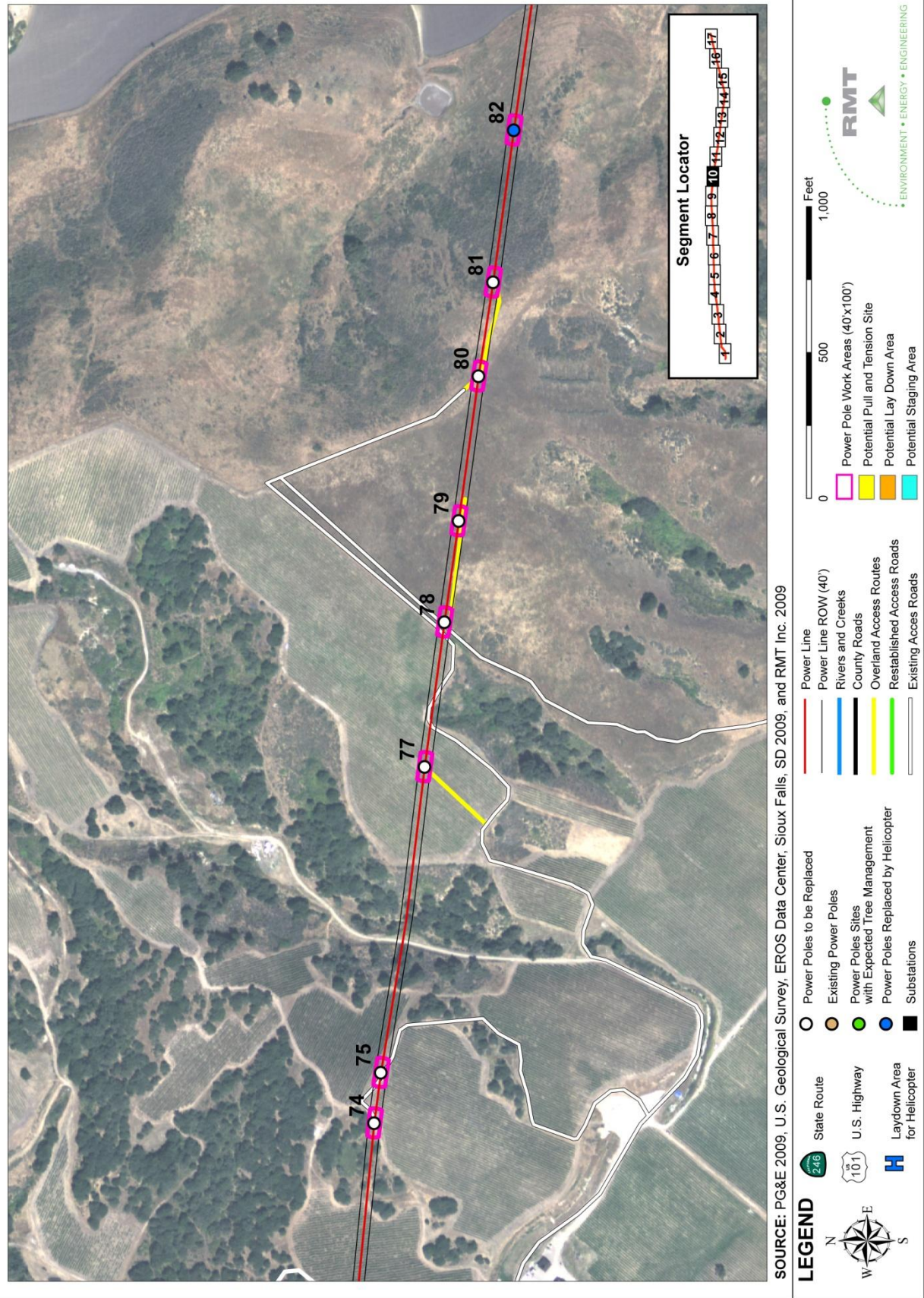


Figure 2.2-11: Power Line Segment (11 of 17)

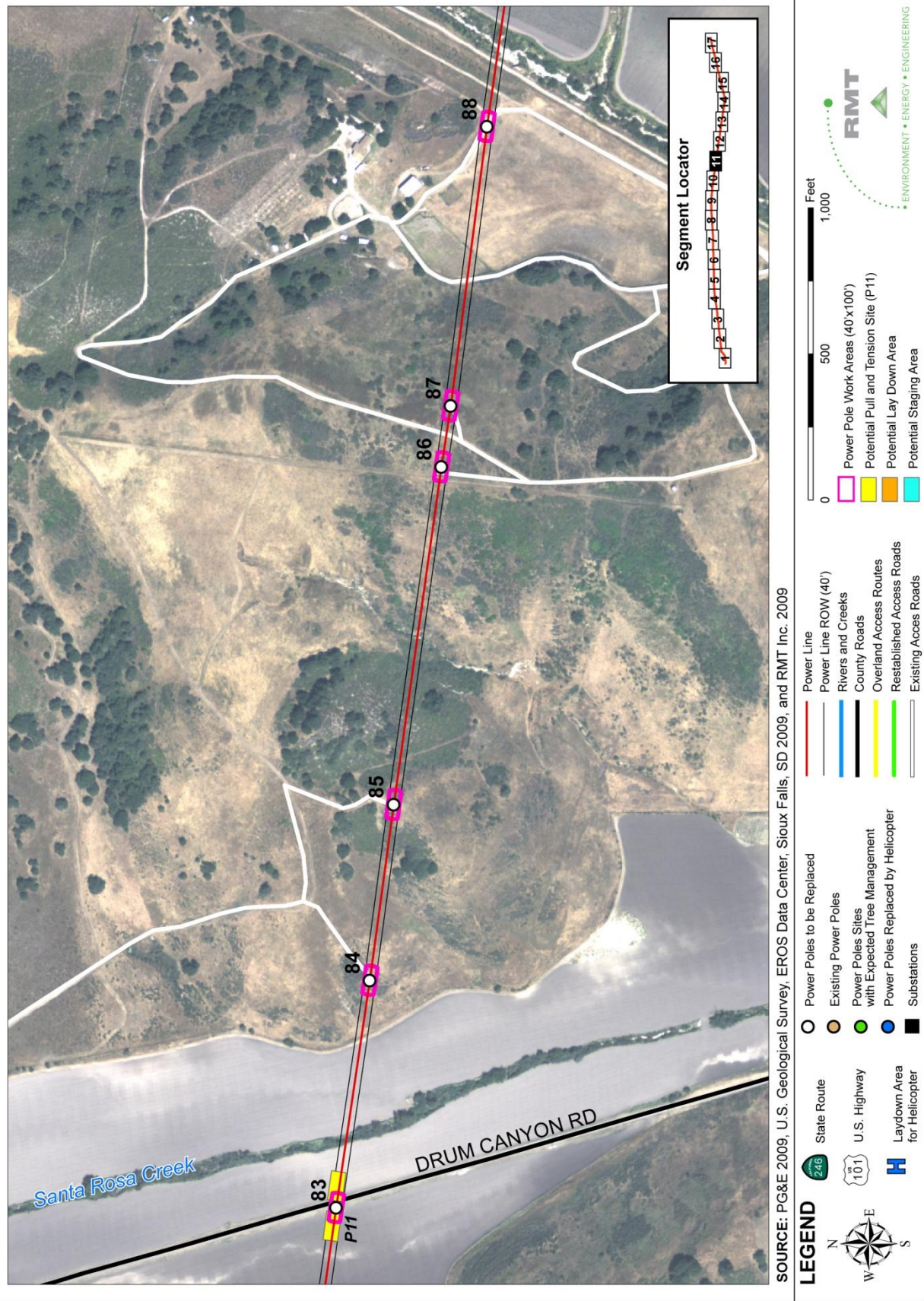


Figure 2.2-12: Power Line Segment (12 of 17)

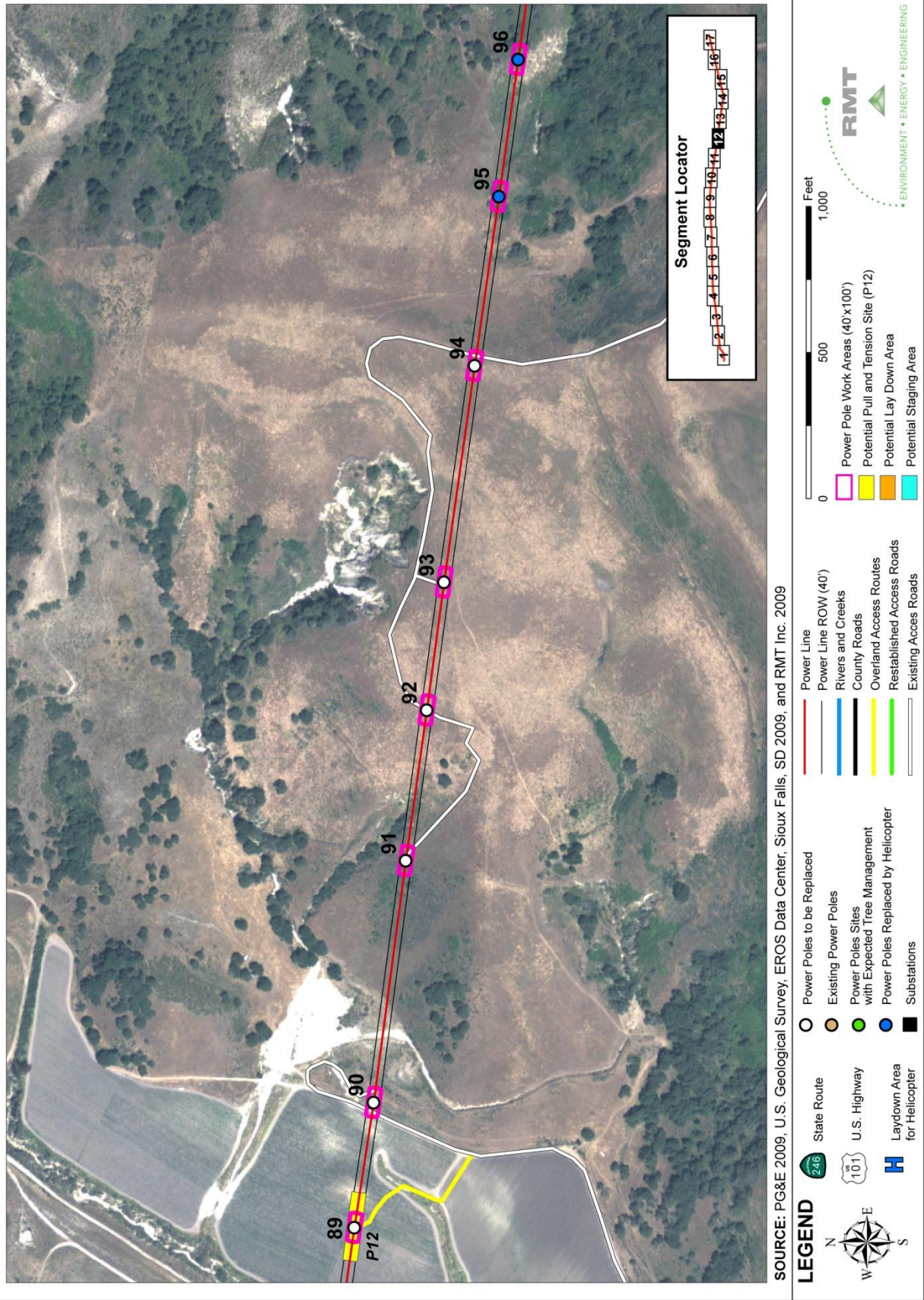


Figure 2.2-13: Power Line Segment (13 of 17)

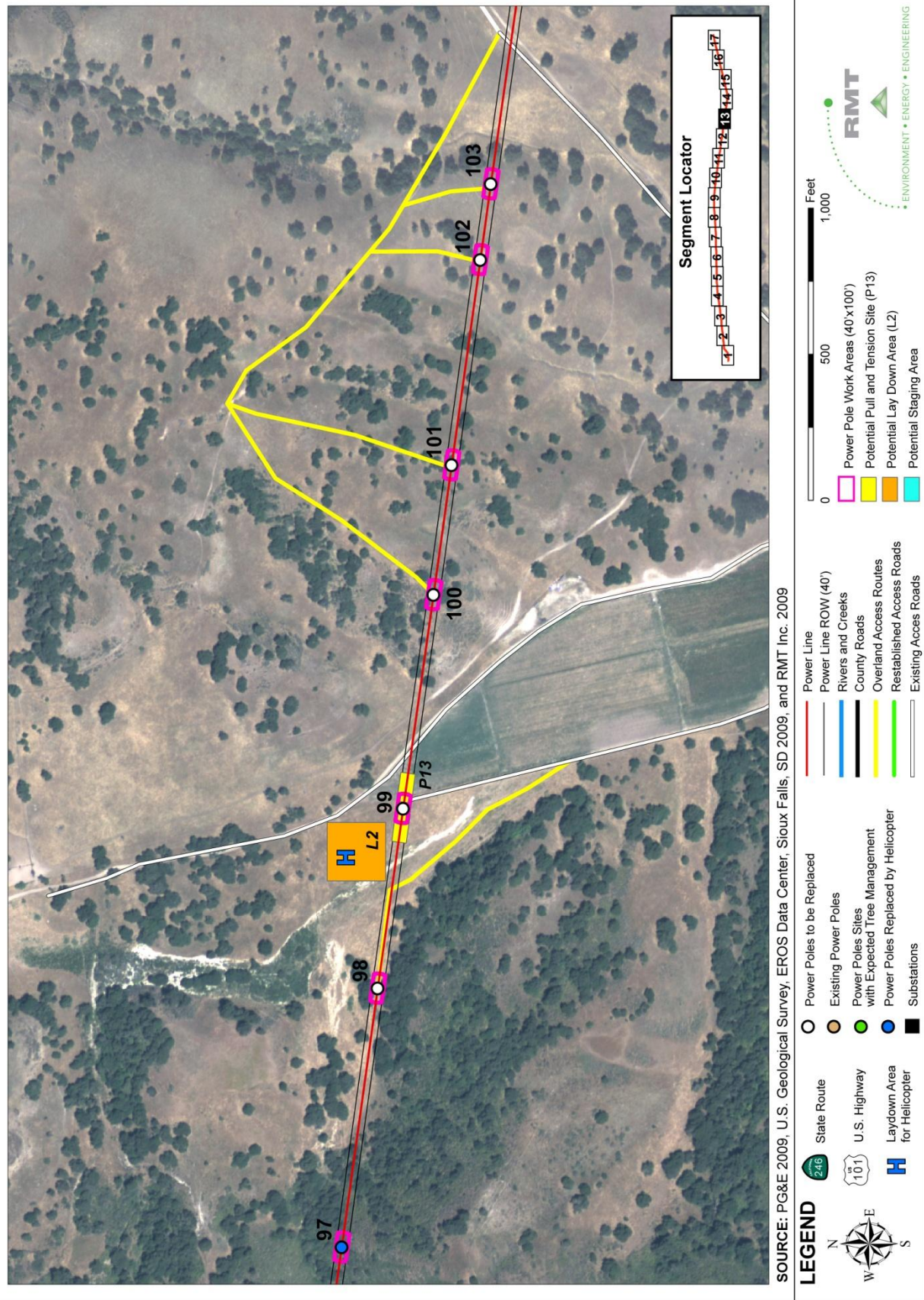


Figure 2.2-14: Power Line Segment (14 of 17)

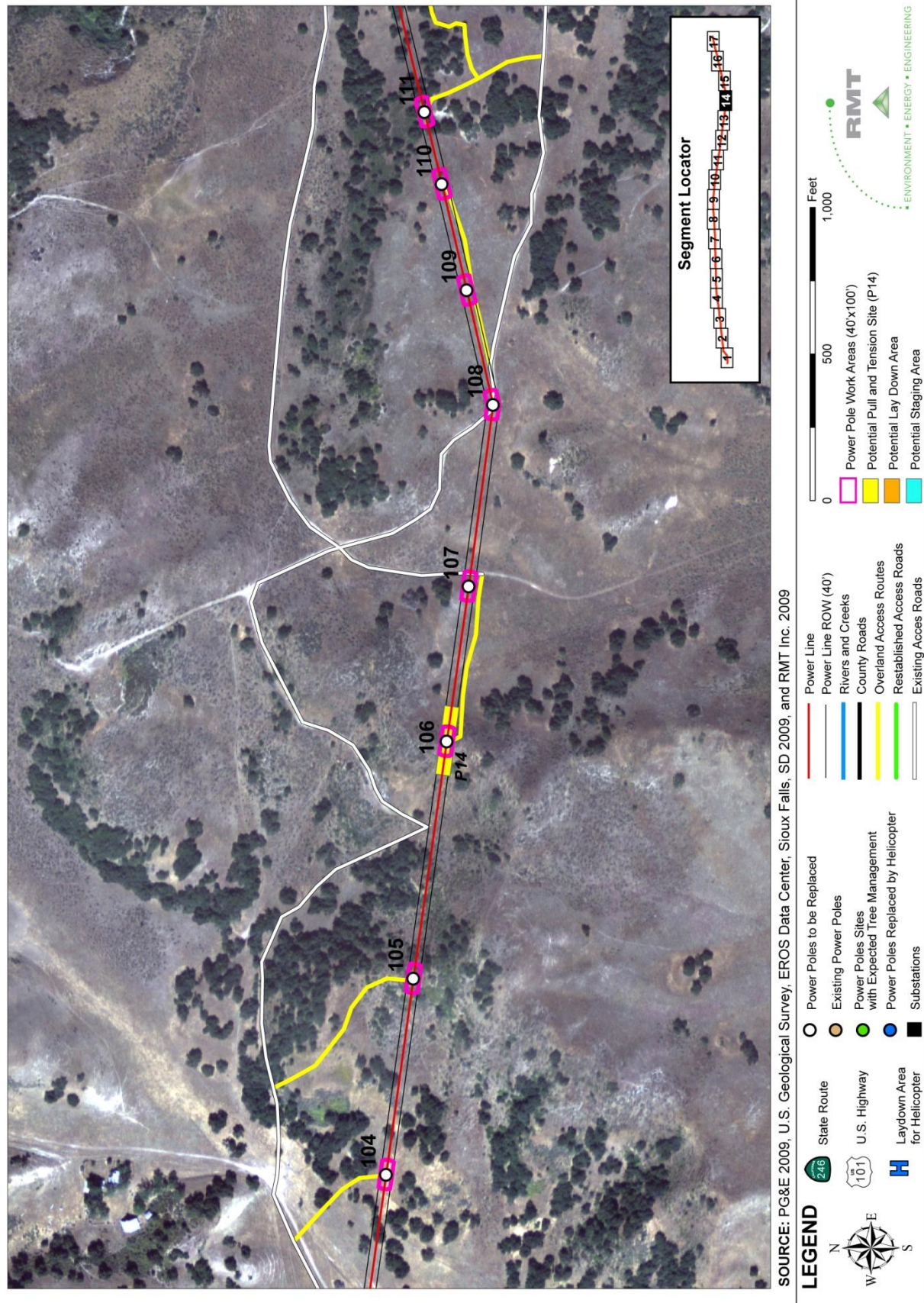


Figure 2.2-15: Power Line Segment (15 of 17)

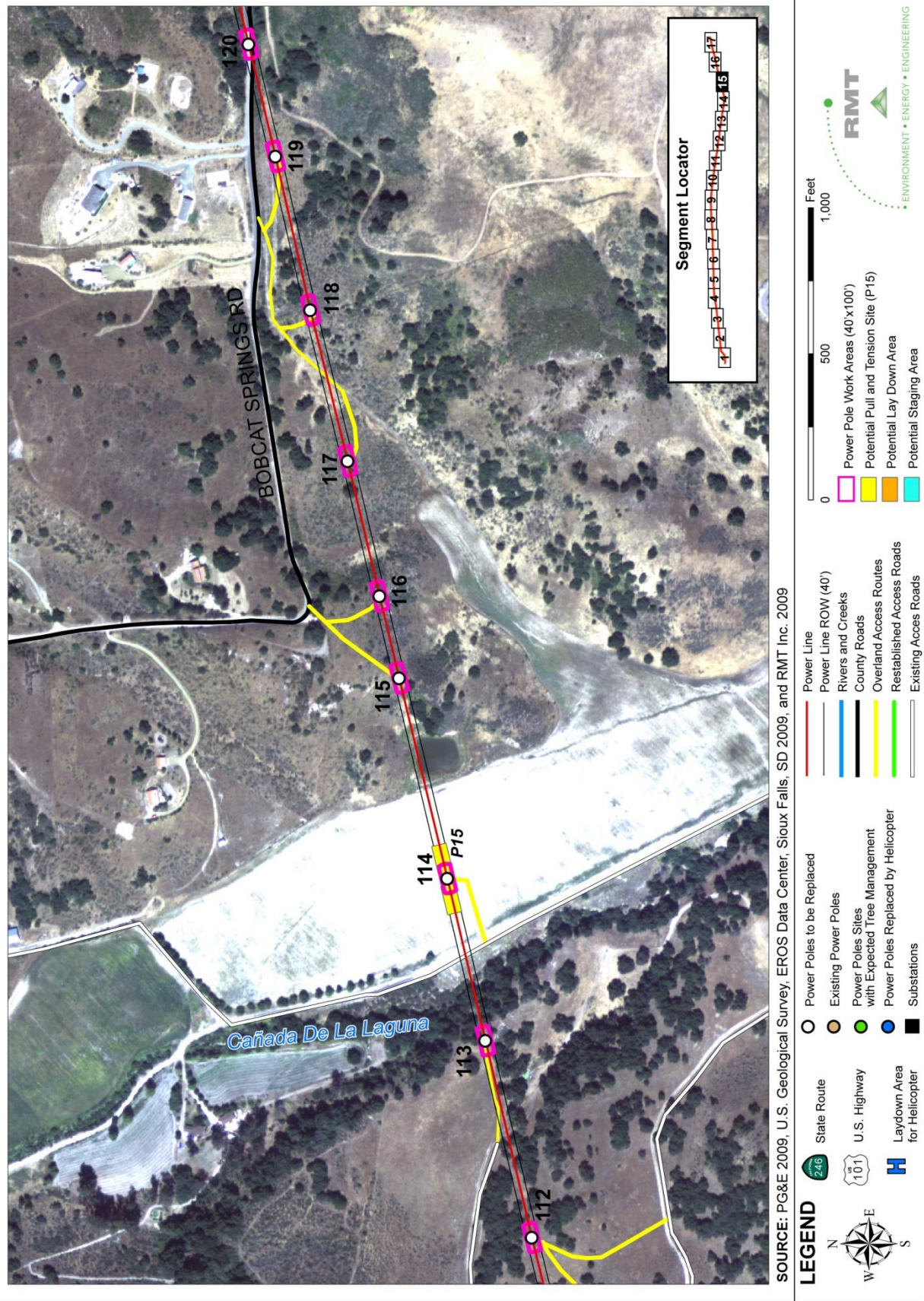


Figure 2.2-16: Power Line Segment (16 of 17)

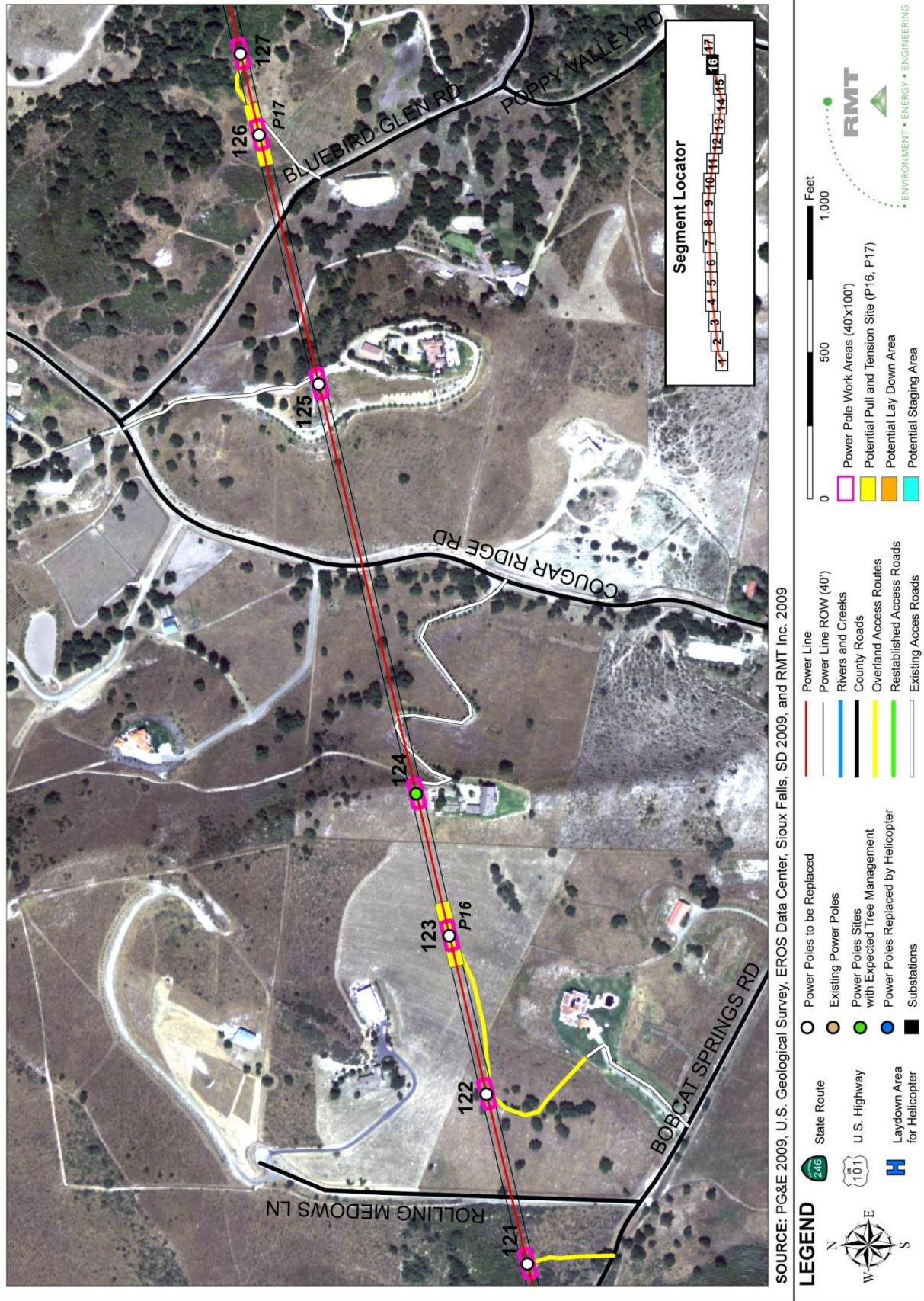


Figure 2.2-17: Power Line Segment (17 of 17)

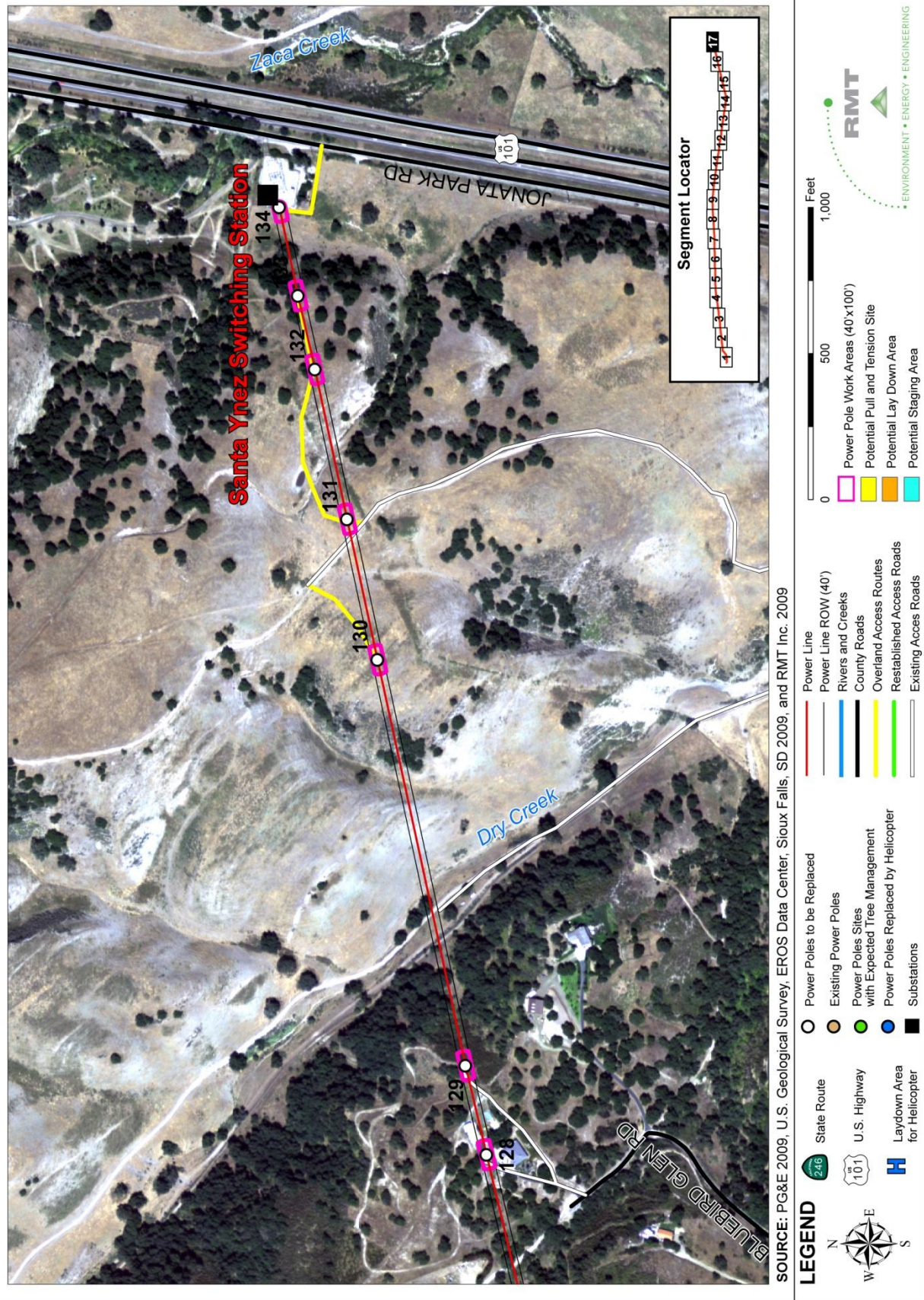
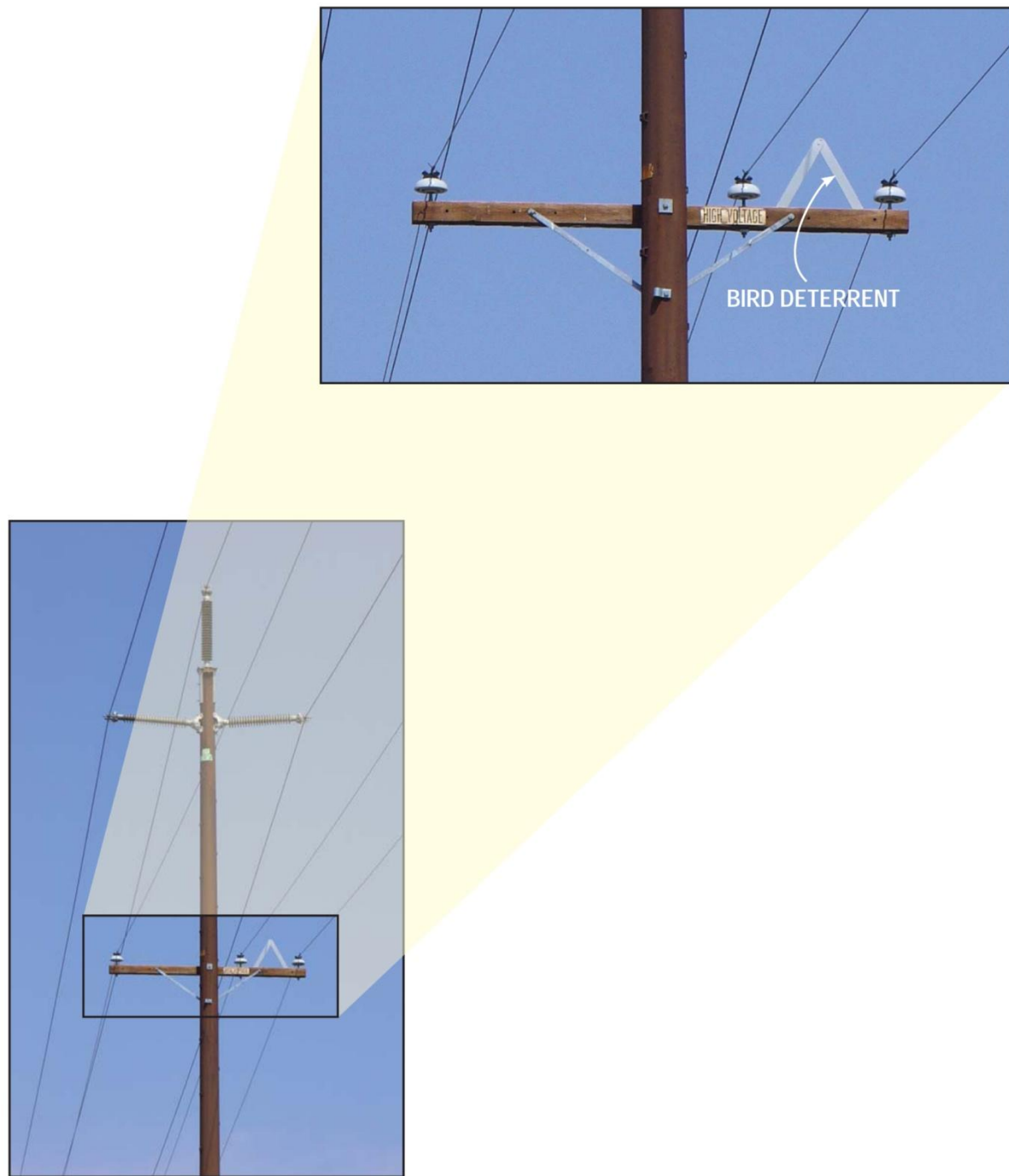


Figure 2.2-18: Example Raptor Perch Deterrent



SOURCE: CH2M Hill 2009

Average distances between poles (i.e., spans) are anticipated to vary between 350 and 780 feet, with a maximum span length between two poles of less than 1,500 feet.

Conductors and Other Hardware

The existing bare aluminum conductor (4/0 AAC, seven strand, 0.52 inch in diameter) would be replaced with a new 715 aluminum, non-specular conductor (715 MCM AAC, 0.97 inch in diameter).

To optimize the efficiency of operation and maintenance activities, insulators along the entire 14.6-mile line would also be replaced during construction, creating a consistent age for hardware along the power line. All existing communication lines and 12 kV distribution underbuilds that are collocated with the existing conductor would be moved to the new poles.

The approximate distance from the ground to the lowest conductor would follow G.O. 95 requirements:

- Thoroughfares traversed by vehicles: 30 feet minimum
- Water crossings less than 20 acres: 27 feet minimum
- Highway crossings (e.g., SR 246): 30 feet minimum

2.2.3 CONSTRUCTION ACTIVITIES

Construction Traffic and Circulation

Project construction activities are limited in duration and volume. PG&E determined that no lane closures or road closures will be required, and therefore, no circulation or detour plans are needed. Restricted access and detours are not anticipated. Construction access roads are ranch roads. When wire is being pulled across SR 246, PG&E will coordinate with the CHP to use a rolling-traffic stop. A Caltrans encroachment permit will be obtained for the SR 246 crossings, and measures will be incorporated into that permit.

Staging, Laydown, Pull and Tension Sites, and Pole Work Areas

Staging areas would be located within the existing PG&E yards at Cabrillo Substation (12th Street and Industrial Street in Lompoc, CA) and Buellton Service Center Yard (55 Easy Street in Buellton, CA). Staging areas have power and secure perimeter fencing and either are paved or have a gravel base. These areas would be used for material and equipment storage and worker and project vehicle parking. No site preparation would be required for either staging area.

Two material laydown areas would be used for storage of supplies along the power line route. These laydown areas are shown in Figures 2.2-7 and -13. Laydown areas would not require grading or vegetation clearing, as they are relatively flat and accessible by either existing access roads or overland routes. One laydown area is specifically designated for helicopter access (near Pole 99) and would be used by the helicopter to deliver and remove materials for installing Poles 82, 95, 96, and 97 (Figures 2.2-10, -12 and -13).

Individual work areas for pole assembly and installation are expected to require an approximately 40-foot by 100-foot area surrounding each existing pole. Work area sizes relative to the project area

are illustrated throughout the alignment in Figures 2.2-1 to -17. Each new pole would be delivered and staged next to the pole it would replace. Poles would be delivered and assembled using line trucks (except Poles 1 through 6, 11, and 17, which would not be replaced, and Poles 82 and 95 through 97, which would be delivered and assembled by helicopter).

In addition to individual work areas, 34 pull and tension sites are proposed along the alignment (Figures 2.2-1 to -17). The sites are all located within the existing ROW within 40-foot by 100-foot areas. These sites would be used for pull and tension activities, as well as staging and storage of materials and equipment used for reconductoring.

Hazardous Materials and Hazardous Wastes

PG&E has a system-wide, standard hazardous material and hazardous waste management program for facility and field activities. This program includes field activities that would occur during construction of the project. PG&E's program would be implemented in the event of a hazardous materials incident. All hazardous material and hazardous waste would be handled in accordance with existing laws and regulations and following conditions would apply at construction locations:

- No fueling or servicing of vehicles or construction equipment. Fueling and servicing would be performed at PG&E Service Centers (for this project Santa Maria Service Center Fleet Operations would support servicing and fueling at public dispensing facilities or at PG&E's Santa Maria or Santa Ynez Service Centers)
- No collection of hazardous waste. Waste generated during the day would be transported as "remotely generated waste" to PG&E Service Centers, which are State designated "consolidation sites".
- If potentially hazardous soil is generated, it would be transported to a PG&E consolidation site for proper determination and disposal.
- No hazardous materials would be stored at construction locations.

Access Roads and Helicopter Access

Access Roads and Overland Access Routes

Most of the proposed access routes are located along existing roads currently used for operation and maintenance. Access roads are either paved, gravel, or dirt. No new roads would need to be constructed for the completion of this project; however, portions of some existing access roads would need to be re-established through tree trimming, vegetation clearing, and some minor grading, as shown in Figures 2.2-2, -7, and -8. Grading would be performed concurrently with vegetation trimming and clearing activities. One crew of three to four people would perform both grading and vegetation activities over a two-month period.

Vegetation Removal

Vegetation along portions of existing access roads would need to be trimmed or cleared to re-establish the access roads and allow for equipment access. No trees would be removed during vegetation clearing along roads. Chainsaws and manual clippers would be used to trim and cut vegetation. Shrub vegetation would be mowed using a rubber track loader with a mower to clear

access roads for subsequent grading. Debris would be shredded and spread over the road to be driven over, or removed from access roads and disposed of (see Cleanup and Restoration below).

Additional vegetation clearing may be necessary along the power line alignment. One cypress tree would be removed near Pole 124 to allow the line truck access to the pole site work area in the ROW. Tree trimming near Poles 51, 57, 58, and 61 would also be required. Figures 2.2-6, -7, and -16 identifies the pole areas anticipated to need vegetation clearing and tree trimming.

Road Grading

Road sections would be resurfaced with a motor grader brought to an access point on a trailer hauled by a semi-truck. No major grading or slope alteration is proposed for this project. Grading is confined to minor resurfacing activities to re-establish existing access roads. Approximately 0.68 miles of the existing access roads would require resurfacing to re-establish safe access. Access road work is anticipated to begin during the dry season in 2010.

Some access to project sites would occur along overland routes where there is no existing road. Overland routes were chosen for select project sites because no grading, vegetation clearing, or trimming would be necessary across these grassy areas. The overland access routes are currently used for access for operation and maintenance work. Additional disturbance to these routes during project installation activities would be minimal and temporary. The distances of access routes that would be used for the proposed project are summarized in Table 2.2-1.

Table 2.2-1: Access Roads and Overland Access Routes		
Type of Road	Description	Distance
Dirt Road	Typically double-track access roads, previously graded. A few sections would need to be re-graded, have vegetation cleared, or have trees trimmed.	38.01 miles
Overland Access	No preparation required. Typically grassy areas that are relatively flat and currently are used for operation and maintenance. No restoration would be necessary.	3.54 miles
Note: Estimates based on a typical road width of 12 feet.		

SOURCE: CH2M Hill 2009

Helicopter Access

Existing poles would be removed and new poles would be installed by helicopter at Pole locations 82, 95, 96, and 97. New poles would be delivered by helicopter and located for assembly at the staging area near Pole 99. The Pole 99 staging area and pole installation sites are shown in Figures 2.2-10, -12, and -13.

A Bell 205 (load capacity 3,100 pounds), Bell 212 (load capacity 3,000 pounds), or Bell 214 (load capacity 6,000 pounds) helicopter would be used depending on availability at the time of

construction. Use of the helicopter is expected to be limited to one day between 7:00 a.m. and 4:00 p.m. to complete pole installation and removal at Pole locations 82, 95, 96, and 97.

Helicopter work would be limited to four poles in a remote area not located near residences. No FAA approval is needed for the lift, nor are any residents at risk of relocation.

Pole Installation and Reconductoring

Project activities for pole installation and reconductoring of the power line would consist of the following steps:

- Deliver new poles to individual pole work areas
- Auger holes at new pole locations using a line truck attachment, or dig with hand tools if the line truck cannot access the site
- Install bottom pole section using line truck (or helicopter at Pole locations 82, 95, 96, and 97)
- Install top pole section using line truck (or helicopter at Pole locations 82, 95, 96, and 97)
- Move old conductors and other collocated lines to the new poles using the line truck or by hand with ropes
- Pull new conductor while old conductor is removed
- Remove old poles using line truck (or helicopter at Pole locations 82, 95, 96, and 97)
- Fill holes

Delivery

A line truck with trailer and potentially a second truck (crew-cab or pickup truck) would be used to access most sites for pole installation and removal. A maximum of four to five truck trips would be required for each pole site to deliver the new pole, auger a hole, set the new pole, and remove the old pole. Poles come in two sections per pole and are secured together by a worker in a line truck with a lift attachment once the bottom half of the pole has been installed. Pole sections would be delivered in matched pairs to each new pole site. Up to two or three poles could be delivered at a time, depending on truck availability. Conductors and other associated equipment would be hauled to pull and tension sites using line trucks with reel trailers and mounted reel stands. Pullers would be mounted on line trucks for conductor installation.

Augering

A line truck with an auger attachment would drill holes for new poles. Holes would be 11 to 13.5 feet deep, typically 5 to 6 feet deeper than those of existing poles. Water may be applied during augering at pole areas containing sandy soils. The application of water would keep the soil firm in areas containing sandy soils. Water would be transported to individual locations in 5 gallon water bottles filled at the Buellton Service Center. It is anticipated that as many as 31 pole areas would require the application of water. Shovels would be carried to sites not accessible by the line truck and would be used to dig the holes. Holes would be covered with the end piece of a conductor spool until the new pole is installed.

Pole Installation

Holes for new poles would not require foundations. New poles would be placed directly into augered or hand-dug holes. New poles would be located within approximately 5 feet of existing poles and in line with the existing power line alignment, with one exception. Poles 69 and 70 are located in a wetland area northeast of the SR 246 crossing (Figure 2.2-9). The new Pole 69 would be installed within 5 feet of the existing Pole 69 because the SR 246 ROW limits its relocation out of the wetland; however, the new Pole 70 would be relocated approximately 35 feet upslope out of the wetland area.

Pole assembly would require a line truck with a boom attachment to position the top section of the pole onto the bottom section. A truck with a worker-lift attachment would be present so that a worker can guide the top section into place and secure the two sections. Top sections would be installed when a line can be taken out of service. This would only occur during daylight hours and would not extend to nighttime hours during the summer or peak load conditions. Pole top sections may be installed on separate days to accommodate service schedules and environmental seasonal work restrictions. Pole top sections would remain at each site until assembled to the bottom section, if installation was to occur on separate days.

Pole Removal

Old poles would be removed after the new poles are installed. A hydraulic jack mounted on a line truck would be used to loosen old poles as needed. Poles would be cut into two sections with a chainsaw for removal by a line truck with trailer or by helicopter (i.e., Poles 82, 95, 96, and 97). Soils removed from new pole holes would be used to backfill the old pole holes. Any unused soil would be feathered in around the new pole site.

Pole installation and removal would be completed by helicopter at Pole locations 82, 95, 96, and 97. Workers would arrive on foot from the nearest access road to these locations. One wood pole section would be removed per helicopter trip (i.e., two trips per pole).

Conductor Replacement

The existing power line, and any distribution lines that cross or are collocated on the same poles, would be taken out of service prior to and during conductor replacement. Existing conductors would be moved once the line is out of service. Out of service line segments would be up to 4,500 feet long (i.e., the amount of conductor on each reel) and power outages would only be issued during daylight hours. Line segments would typically be out of service between 8 to 12 hours.

Replacement of conductors would occur in sections when seasonal restrictions and crew scheduling permits. Some installation phases may occur concurrently on separate segments of the power line. Reconductoring equipment would be staged at pull and tension sites, (averaging 4,000 feet between sites,) for each section.

A line truck with a boom and a line truck with a worker lift would be used to move existing conductors from old poles to new poles. At Pole locations 82, 95, 96, and 97, which are inaccessible by a line truck, lines would be moved by hand using ropes to transfer the conductors between poles.

Rollers are required for removing and installing the conductors and would be attached to the lower end of the newly replaced pole insulators. Rollers allow the individual conductors (i.e., the new and old lines) to be pulled through each structure (i.e., pole and attached components) until final tensioning. A cable would be attached between the old conductor and the new conductor on a reel attached to a line truck at a pull and tension site. A line truck with a drum puller and an empty conductor reel would pull the old conductor onto the reel for salvage while pulling the new conductor in place from an adjacent pull and tension site. Tension would be maintained by the line truck with the new conductor reel to prevent the line from sagging to the ground (Figure 2.2-19).

After the conductors are pulled into place, wire or conductor sags would be adjusted to a pre-determined level. The conductors would then be clamped to the end of each insulator as the sheaves are removed. The final step of conductor installation would be to install vibration dampers and other accessories. Any temporarily closed roads would be opened at this time.

Road crossings and other locations within the section undergoing reconductoring would be briefly closed or traffic cautions would be arranged (e.g., rolling stop). Road closures that must occur on private and county roads are not expected to exceed 5 minutes in duration. The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) would be contacted to organize 5-minute rolling stops for the crossing at SR 246.

Cleanup and Restoration

All construction debris, including wood poles and any sawdust generated from cutting poles, would be removed from the project area and hauled to the Santa Maria Service Center by a line truck with a trailer. All debris and trash generated from the project would be recycled or disposed according to federal, state, and local regulations at a licensed Class 1 landfill or a composite-lined portion of a solid waste landfill. A final survey would be conducted to ensure cleanup activities have been completed as required.

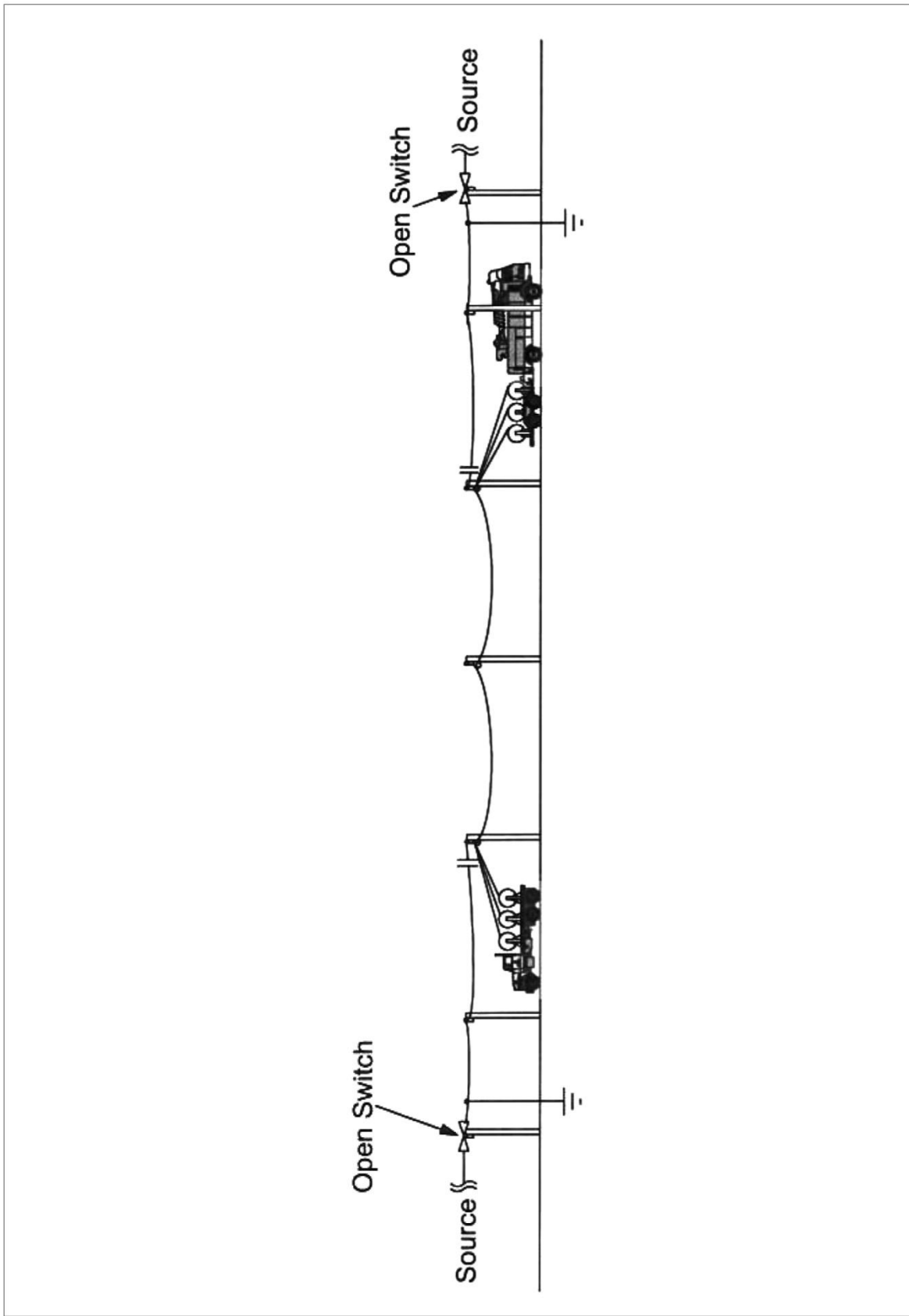
Existing access roads would continue to be used for operation and maintenance and would not be re-vegetated. Only one landscaped tree would be removed to allow truck access to Pole 124; other vegetation clearing and grading are not anticipated for any staging areas, pull and tension sites, or pole site work areas, so, no restoration would take place.

2.2.4 OPERATION AND MAINTENANCE ACTIVITIES

All power lines and assets that fall under the voltages of 70 kV through 500 kV in the Los Padres area are subject to the guidelines of PG&E's Standard S1001, Electric Transmission Line Inspection and Preventative Maintenance Program. Standard S1001 is supplemented by the Electric Transmission Preventative Maintenance Manual.

As required by Standard S1001, the existing power line is inspected yearly, or as needed when driven by an event or incident, such as an emergency. A detailed ground inspection is required every other year, with an aerial patrol required during in-between years. Routine annual inspection, detailed ground inspection, and aerial patrols are not expected to change with the proposed project. Equipment and methods typically used include off-road utility vehicles (e.g., 6x6 Polaris/Razor utility quad, line truck, and bucket truck) and walking to poles inaccessible by

Figure 2.2-19: Transmission Line Reconductoring Schematic



SOURCE: CH2M Hill 2009

vehicle. These activities are not anticipated to change from current conditions. Any existing access roads re-established during the project would be used for future maintenance activities.

No changes to existing operation and maintenance activities are anticipated. Reconductoring the line would improve reliability, resulting in less wire breakage from corrosion and brittleness. Less breakage is anticipated to result in fewer events or incidents that require emergency response and inspection.

As maintenance needs arise, repairs and preventative maintenance would be fulfilled by a PG&E power line crew (five trained employees).

2.2.5 SCHEDULE AND WORK FORCE

Schedule

The project is estimated to begin construction in April 2010 and last approximately 15 months, with a completion date of June 2011. The Cabrillo-Santa Ynez 115 kV power line would not be removed from service during the summer because of high seasonal demands. The majority of pole installation, line reconductoring, and pole removal is expected to be performed throughout the year with the majority of activities occurring outside the summer months of June, July, and August. Reconductoring would begin when new poles have been installed along an approximately 1-mile distance (i.e., approximate length of new conductor reel). Reconductoring would occur between October 2010 and June 2011. Reconductoring and pole installation would be performed in the dry season to the greatest extent feasible to minimize impacts to sensitive areas (e.g., wetlands). The construction plan would specify staggered pole delivery and installation to minimize impacts to sensitive areas. The proposed schedule is presented in Table 2.2-2.

Table 2.2-2: Proposed Construction Schedule	
Project Activity	Proposed Schedule
Final engineering completed	October 2009
Begin acquiring temporary construction easements	December 2009
Permit To Construct decision adopted and effective	March 2010
Acquire required permits	March 2010
ROW and property acquisition	Not anticipated; if needed, March 2010
Construction begins: access road re-establishment and pole installation	April 2010
Pole installation, reconductoring (as pole installation and line clearances permit), and pole removal	May 2010 through June 2011, as schedule constraints allow
Project operational	June 2011
Cleanup	July 2011

SOURCE: CH2M Hill 2009

Work Force

Two crews from the Santa Maria area, consisting of two to five workers, would work most days; however, as many as 10 crews could be used at peak construction periods to install conductors and minimize the length and number of line clearances. PG&E crews may be brought to the project area from other PG&E work areas (e.g., Templeton, San Luis Obispo, Pismo Beach, Buellton, or other areas), if needed.

Table 2.2-3 lists the equipment and personnel anticipated to be required for each construction activity. Not all equipment and personnel may be used throughout the duration of the activity.

Table 2.2-3: Required Personnel and Equipment During Construction			
Activity	People	Quantity of Equipment	
Survey	2 to 3	1	Pickup truck
Access Road Re-establishment (including vegetation clearing and road grading)	2 to 3	1	Rubber track loader with mower
		1	Motor grader
		1	Pickup truck
		1	Semi truck with trailer to haul grader
		1	Water truck
Hole Augering	3	1	Water truck
		1	Pickup truck
		1	Line truck with auger attachment
Material Haul	3	1	Line truck with trailer
Pole Delivery	3	1	Pickup truck
		1	Line truck with trailer
Pole Installation: Helicopter Access (including pole removal)	4	1	Crew-cab truck (used for transport to walk-in access point)
		1	Helicopter
Pole Installation: Ground Access (including pole removal)	4	1	Crew-cab truck
		1	Line truck with worker-lift attachment
		1	Line truck with trailer

Table 2.2-3 (Continued): Required Personnel and Equipment During Construction

Activity	People	Quantity of Equipment	
Conductor Installation (including removal of old conductor)	8	1	Line truck or trailer with wire reel attachment
		3	Pickup trucks
		2	Line trucks with worker-lift attachments
		1	Line truck with puller attachment
		1	Line truck with tensioner attachment

SOURCE: CH2M Hill 2009

2.3 Applicant Proposed Measures

PG&E's Applicant Proposed Measures (APMs) are listed below and have been incorporated into the proposed project's design and construction plans to minimize the proposed project's potential impacts. These measures would be implemented regardless of any regulatory oversight by the CPUC and are integrated as part of the project description. The assessment of potential project-specific impacts and associated levels of significance are discussed in the context of these APMs being included as part of the project. Where potentially significant impacts were identified, additional mitigation measures were added throughout this IS/MND, superseding or supplementing existing APMs to further reduce impacts to a less than significant level. APMs are presented below as found in the Proponent's Environmental Assessment (PEA) (CH2M Hill 2009). Any numbering or referencing of information within the description of the APM refers to information found within the PEA, not this IS/MND.

Aesthetics

APM Aesthetics (AE)-1: New source of substantial light or glare avoidance. PG&E will replace the existing conductor with a non-specular conductor for the specific purpose of minimizing the reflectivity of any new Project facilities.

Air Quality

APM Air Quality (AQ)-1: Fugitive dust minimization. The following fugitive dust control measures will be implemented during construction. According to the SBCAPCD, implementation of these measures minimizes fugitive dust emissions to a level of insignificance. Notes in brackets are clarifications to the SBCAPCD measures as they would apply to this linear project:

- During construction, PG&E will use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this will include wetting down such areas in the late morning and after work is completed for the day. Watering frequency will increase whenever the wind speed exceeds 15 mph. Reclaimed water will be used whenever possible. However, reclaimed water will not be used in or around crops for human consumption. [This measure is interpreted as applying to areas such as graded areas and not intended for construction

sites, and is not being interpreted here as applying to light-duty access road use by PG&E vehicles accessing pole sites for one or two days, or to pull sites where vegetation is not being cleared.]

- Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.
- Gravel pads [or equivalent] must be installed at all access points to prevent tracking of mud on to public roads. [Specific measures to prevent mud tracking will be provided in the Storm Water Pollution Prevention Plan which is discussed in APM Water Quality (WQ)-1: SWPPP development and implementation.]
- After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur. [The only clearing and grading anticipated is the re-establishment of existing unpaved access roads. After construction, those unpaved access roads will be returned to their normal operations and maintenance use; therefore, no additional dust control measures are needed.] PG&E shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SBCAPCD prior to land use clearance for map recordation and land use clearance for finish grading for the structure. [No map recordation is needed for this Project.]
- Prior to land use clearance, the applicant shall include, as a note on a separate informational sheet to be recorded with map, these dust control requirements. All requirements shall be shown on grading and building plans. [No map recordation is needed for this Project.]

Greenhouse Gases

APM Greenhouse gas (GHG)-1: GHG emissions minimization. The following measures will be implemented during construction to minimize GHG emissions.

- Park-and-ride facilities in the Project vicinity will be identified and construction workers will be encouraged to carpool to the job staging area to the extent feasible. The ability to develop an effective carpool program for the Proposed Project will depend upon the proximity of carpool facilities to the staging area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the Project's construction schedule. Crew transportation to the Project site is discussed in Section 4.10, Traffic and Transportation.
- Unnecessary construction vehicle idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as

part of pre-construction conferences. Those briefings will include discussion of a “common sense” approach to vehicle use.

- Construction equipment will be maintained in good working order, per manufacturing specifications. Low-emission construction equipment will be used where feasible to further minimize the minimal short-term increase in GHG emissions. With implementation of APM GHG-1, the entire construction effort for this project is forecasted to create 379 metric tons of CO₂ which represents a small fraction of the emissions limit set by AB322020 (427 million metric tons CO₂e).

Biological Resources

APM Biological Resources (BO)-1: General avoidance of biological resources impacts.

- **Development and implementation of a Worker Environmental Awareness Program.** A qualified biologist will conduct an environmental awareness program for all construction and on-site personnel prior to the beginning of site work. Training will include a discussion of the avoidance and minimization measures that are being implemented to protect biological resources as well as the terms and conditions of the Biological Opinion and other permits. Training will include information on the federal and state Endangered Species Acts and the consequences of noncompliance with these acts. Under this program, workers shall be informed about the presence, life history and habitat requirements of the California red-legged frog, California tiger salamander, western spadefoot toad, southwestern pond turtle, burrowing owl, and American badger. Training will also include information on state and federal laws protecting nesting birds, wetlands and other water resources.

An educational brochure will be produced for construction crews working on the Project. Color photos of sensitive species will be included, as well as a discussion of the APMs and specific avoidance or minimization measures for sensitive species and habitats.

- **Biological monitor on-site during construction activities in sensitive areas.** A qualified biological monitor will be onsite during ground-disturbing construction activities near and in sensitive habitat as defined and will ensure implementation and compliance with all avoidance and mitigation measures. The monitor will have the authority to stop work or determine alternative work practices in consultation with agencies and construction personnel, as appropriate, if construction activities are likely to impact sensitive biological resources. The biological monitor will document monitoring activities in a daily log summarizing construction activities and environmental compliance. The daily logs will be included in the Project report submitted to the agencies following completion of construction.
- **Identification and marking of sensitive resource areas.** Sensitive resources in or adjacent to Project work areas within the alignment identified during the preconstruction surveys such as occupied habitat, active badger, burrowing owl or California tiger salamander burrows or occupied nests in the Project vicinity will be mapped and clearly marked in the field. Such areas will be avoided during construction to the extent practicable and/or additional measures (described below) will be implemented to avoid or minimize impacts.

- **Litter and trash management.** All food scraps, wrappers, food containers, cans, bottles, and other trash from the Project area will be deposited in closed trash containers. Trash containers will be removed from the Project area at the end of each working day.
- **Parking.** Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed or developed areas or work areas as identified in this document. Off-road parking shall only be permitted in previously identified and designated work areas.
- **Route and speed limitations.** Vehicles will be confined to established roadways and pre-approved access roads, overland routes and access areas. Access routes and temporary work areas will be limited to the minimum necessary to achieve the Project goals. Routes and boundaries of work areas, including access roads, will be clearly mapped prior to initiating Project construction. Vehicular speeds will be kept to 15 mph on unpaved roads.
- **Maintenance and refueling.** All equipment will be maintained such that there will be no leaks of automotive fluids such as fuels, solvents, or oils. All refueling and maintenance of vehicles and other construction equipment will be restricted to designated staging areas located at least 100 feet from any down gradient aquatic habitat unless otherwise isolated from habitat. Proper spill prevention and cleanup equipment shall be maintained in all refueling areas.
- **Minimization of fire hazard.** During fire season in designated State Responsibility Areas, all motorized equipment driving off paved or maintained gravel/dirt roads will have federal or state approved spark arrestors. All off-road vehicles will be equipped with a backpack pump filled with water and a shovel. All fuel trucks will carry a large fire extinguisher with a minimum rating of 40 B:C, and all equipment parking and storage areas will be cleared of all flammable materials.
- **Pets and firearms.** No pets or firearms will be permitted at the Project site.
- **Reporting and communication.** The biological monitor will be responsible for immediately reporting any capture and relocation, or inadvertent harm, entrapment or death of a listed species to the U.S. Fish and Wildlife Service and the California Department of Fish and Game. A monitoring report will be submitted to the resource agencies 90 days after the completion of construction activities.

APM BO-2: Avoidance of impacts to natural habitats

- **Minimization of grading and vegetation removal along access roads and pole work areas.** Clearing and grading will be limited to previous access roads that have become overgrown with vegetation. Overland access routes and work areas around pole locations will not require any grading or vegetation removal other than minimal tree trimming as described in the Project description.
- **Tree removal.** A single tree, a Leland Cypress, is planned for removal as described in the Project description. No other tree removal is planned.
- **Re-vegetation.** Since clearing and grading is limited to re-establishment of existing roads, no re-vegetation is needed for the Project. Temporarily disturbed vegetation is expected to recover without the need for reseeding.

- **Weed management.** Prior to work on the Project, vehicles and construction equipment will be cleaned of excessive mud and dirt that may transport weed seed into the Project area.

APM BO-3: Avoidance of and minimization of potential impacts to special-status plants.

- **Rare plant population avoidance.** To the maximum extent possible, rare plant populations will be avoided. A qualified biologist will stake an exclusion zone at the limit of work adjacent to rare plant occurrences that have been identified to date. Within 60 days after Project activities have been completed at a given worksite, all staking and flagging will be removed.

APM BO-4: General avoidance and minimization of impacts to aquatic or wetland habitat.

- **Timing and extent of work in aquatic or wetland habitat.** Work in aquatic or wetland habitat is limited to the removal of two poles and replacement of one pole in the wetland northeast of SR 246. All ground-disturbing work at this location will take place in dry conditions. The timing is dependant on seasonal rainfall; in winter 2008-2009, ground was dry even in January.

APM BO-5: Avoidance of impacts to California red-legged frog, California tiger salamander, western spadefoot toad and western pond turtle in proximity to identified suitable breeding ponds or aquatic habitat.

- **Pre-construction surveys and relocation of species.** Pre-construction surveys within two weeks of start of construction at work areas within 600 feet of suitable California tiger salamander breeding habitat with small mammal burrows will be conducted by a qualified, agency-approved biologist. Pre-construction surveys within two weeks of start of construction at work areas within 300 feet of suitable California red-legged frog aquatic habitat will be conducted by a qualified, agency-approved biologist. The biologist will remove any individuals found to a location agreed upon by the USFWS and CDFG. Potential habitat for western spadefoot toad and western pond turtle exists in similar locations to the California red-legged frog and California tiger salamander and potential impacts will be minimized with the implementation of this APM. Before the start of work each morning, the biologist will check under any equipment and stored constructed supplies left in the work area overnight within 600 feet of suitable habitat. All pole holes will be backfilled or covered at the end of the work day.
- **Seasonal timing restrictions.** To the extent possible, all ground-disturbing construction activities within the critical habitat and within 600 feet of suitable breeding habitat will be limited to the period from May 1 through October 31. When ground-disturbing activities, such as pole removal, are necessary, a qualified biologist will conduct a pre-construction survey of the work area immediately preceding construction activities. All potential areas including burrows, woody debris piles, wetlands, riparian areas and edges of ponds within the work area will be thoroughly checked. Any species found will be captured and relocated to an approved location type (e.g., a small mammal burrow) within an approved area prior to the start of construction.

- **Dawn and dusk timing restrictions.** Construction activities within 600 feet of suitable aquatic habitat shall not begin prior to 30 minutes after sunrise and will cease no later than 30 minutes before sunset.
- **Minimization of burrow disturbance.** In non-ground-disturbing work areas with active burrows, plywood sheets will be used to temporarily cover burrows to minimize disturbance. When the plywood is removed, all burrow openings that were clear before the plywood was placed will be cleared.
- **Erosion control materials.** Only tightly woven netting or similar material shall be used for all geo-synthetic erosion control materials such as coir rolls and geo-textiles. No plastic monofilament matting will be used.

APM BO-6: Avoidance of and minimization of potential impacts to southwestern willow flycatcher and least Bell's vireo.

- **Avoidance of sensitive species near work areas.** Work anticipated within 300 feet of the potential nesting habitat for these species is the use of pull site P1 and insulator replacement at Poles 4, 5 and 6. Insulator replacement and use of the pull site will be restricted to the non-nesting season unless pre-construction surveys determine neither the flycatcher nor the vireo is nesting within 300 feet of the poles.

APM BO-7: Avoidance of and minimization of potential impacts to western burrowing owl.

- **Pre-construction survey.** A qualified biologist will conduct a preconstruction survey in all Project work areas that providing suitable nesting habitat (annual grasslands and pastures) for the burrowing owl habitat prior to construction. The survey will include checking for the burrowing owl and owl signs (e.g., white wash at burrow entrances). If owls are found a work area and avoidance is not feasible, a passive relocation effort (displacing the owls from the work area) may be conducted as described below, subject to the approval of the CDFG.
- **Avoidance through passive relocation.** Passive relocation of owls may occur during the non-breeding season (September 1 through January 31). Passive relocation would include installing one-way doors on the entrances of burrows. The one-way doors shall be left in for 48 hours to ensure the owls have vacated the nest site. Owls would not be relocated during the breeding season.
- **Avoidance of occupied burrows.** No work areas will be established around a known occupied burrow. No disturbance should occur within approximately 160 feet (50 meters) of occupied burrows during the non-breeding season of September 1 through January 31 or within approximately 250 feet (75 meters) during the breeding season of February 1 through August 31. The limits of the exclusion zone in the Project work area will be clearly marked with signs, flagging and/or fencing.

APM BO-8: Avoidance of and minimization of potential impacts to song birds, raptors and other migratory bird species.

- **Minimization of disturbance through pre-construction surveys and biological monitoring during construction.** Pre-construction bird nesting surveys for pull sites or locations of pole replacement or clearing and grading activities will be conducted before

work performed between February 15 and August 15. In the event an active nest is identified within 50 feet (300 feet for raptors) of the Project work area, a biological monitor will monitor the activity of the nesting birds during work to determine if construction activities are resulting in significant disturbance to the birds. To the extent possible, working in the vicinity of the nest will be avoided; however, if avoidance is not practicable, a buffer zone, as determined by a qualified biologist, will be maintained around the active nest to prevent nest abandonment.

- **Minimization of electrocution hazards.** Installation of the replacement power lines will conform to PG&E's most current version of Bird and Wildlife Protection Standards, which may include the use of insulated jumper wires and bird/animal guards.

APM BO-9: Avoidance of and minimization of potential impacts to wetlands and water resources.

- **Stormwater Pollution Prevention Plan and erosion control measures.** As described in Section 4.8, APMs WQ-1 and WQ-3, a Stormwater Pollution Prevention Plan (SWPPP) will be developed that describes sediment and hazardous materials control, fueling and equipment management practices, and other factors deemed necessary for the Project. Erosion control measures will be implemented where necessary to reduce erosion and sedimentation in wetlands, waters of the United States, and waters of the state, as well as aquatic habitat occupied by sensitive species. Erosion control measures will be monitored on a regularly scheduled basis, particularly during times of heavy rainfall. Corrective measures will be implemented in the event erosion control strategies are inadequate. Sediment/erosion control measures will be continued at the Project site until such time that soil stabilization is deemed adequate.

Brush or other similar debris material will not be placed within any stream channel or on its banks. No Project work activity is planned within the limits of any stream channel.

Cultural Resources

APM Cultural Resources (CR)-1: Archaeological site avoidance. To ensure that AE-1857-3H is not inadvertently damaged during implementation of the Project, the limits of the work areas listed in Potential Impact CR-1 will be marked with readily visible flagging tape and the construction crews will be instructed that there will be no vehicle access, travel, equipment staging and storage, or other construction-related work outside of the flagged work areas when working at Pole 13.

APM CR-2: Pre-construction Worker Education Program. PG&E will design and implement a Worker Education Program that will be provided to all Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. No construction worker will be involved in field operations without having participated in the Worker Education Program.

The Worker Education Program shall include, at a minimum:

- A review of archaeology, history, prehistory and Native American cultures associated with historical resources in the Project vicinity.

- A review of applicable local, state and federal ordinances, laws and regulations pertaining to historic preservation.
- A discussion of site avoidance requirements and procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Project.
- A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and PG&E policies.
- A statement by the construction company or applicable employer agreeing to abide by the Worker Education Program, PG&E policies and other applicable laws and regulations.

The Worker Education Program may be conducted in concert with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified instructor meeting applicable professional qualifications standards.

APM CR-3: Unanticipated discoveries management. In the unlikely event that previously unidentified cultural resources are uncovered during implementation of the Project, all work within 165 feet (50 meters) of the discovery will be halted and redirected to another location. PG&E's cultural resources specialist or his/her designated representative will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, the resource will be documented on State of California Department of Parks and Recreation cultural resource records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, PG&E will evaluate the significance and CRHR eligibility of the resources, and implement data recovery excavation or other appropriate treatment measures if warranted.

Geology and Soils

APM Geology and Mineral Resources (GM)-1: Appropriate design measures implementation. A landslide survey of the planned Project alignment will be conducted, which will include a reconnaissance to identify potential problems at planned pole locations. Appropriate design features will be developed where potential problems are found to exist. Appropriate design features may include excavation of potentially problematic soils during construction and replacement with engineered backfill, relocation of poles to avoid problematic soils or landslide areas, and pole depth specifications.

APM GM-2: Soft or loose soils during construction minimization. Where soft or loose soils are encountered during construction, appropriate measures will be implemented to avoid, accommodate, replace, or improve soft or loose soils encountered during construction. Such measures may include:

- Locating construction facilities and operations away from areas of soft and loose soil.
- Over-excavating soft or loose soils and replacing them with engineered backfill materials.

- Increasing the density and strength of soft or loose soils through mechanical vibration and/or compaction.
- Treating soft or loose soils in place with binding or cementing agents.

Construction activities in areas where soft or loose soils are encountered will be scheduled for the dry season to allow safe and reliable equipment access.

APM GM-3/Water Quality (WQ)-3: Erosion Control and Sediment Transport Plan

implementation. An Erosion Control and Sediment Transport Plan will be prepared in association with the Storm Water Pollution Prevention Plan (SWPPP). This plan will be prepared in accordance with the Water Board guidelines and other applicable Best Management Practices.

Implementation of the plan will help stabilize disturbed areas and waterways and will reduce erosion and sedimentation. The plan will designate Best Management Practices that will be followed during construction activities. Erosion-minimizing efforts may include measures such as:

- Avoiding excessive disturbance of steep slopes.
- Using drainage control structures (straw wattles or silt fencing) to direct surface runoff away from disturbed areas.
- Strictly controlling vehicular traffic.
- Implementing a dust-control program during construction.
- Restricting access to sensitive areas.
- Using vehicle mats in wet areas.
- Revegetating disturbed areas where applicable following construction.

In areas where soils are to be temporarily stockpiled, soils will be placed in a controlled area and will be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles will be placed at least 100 feet from the waterbody or will be properly contained (such as berming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures will be used to protect exposed areas during and after construction activities.

Erosion-control measures will be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures such as silt fences or straw wattles intended to minimize erosion from temporarily disturbed areas will remain in place until disturbed areas have stabilized.

The SWPPP will be designed specifically for the hydrologic setting of the proposed Project, which includes slopes, intermittent and seasonal streams, and the Santa Ynez River. BMPs documented in the Erosion Control and Sediment Transport Plan will also be included in the SWPPP.

APM GM-4: Slope instability during construction minimization. Temporary construction slopes and existing natural or constructed slopes impacted by construction operations will be evaluated for stability. In developing grading plans and construction procedures for access roads and power poles, the stability of both temporary and permanent cut, fill, and otherwise impacted slopes will

be analyzed. Construction slopes and grading plans will be designed to limit the potential for slope instability and minimize the potential for erosion and flooding during construction. During construction, slopes affected by construction operations will be monitored and maintained in a stable condition. Construction activities likely to result in slope instability will be suspended, as necessary, during and immediately following periods of heavy precipitation when unstable slopes are more susceptible to failure.

Hazards and Hazardous Materials

APM Hazards and Hazardous Materials (HM)-1: Hazardous Substance Control and Emergency Response Plan development and implementation. PG&E has and will implement its systemwide program which includes established procedures for handling and managing hazardous substances and emergency response in the event of a hazardous substance spill. These procedures will add to the requirements in the Project Stormwater Pollution Prevention Plan (SWPPP) (see also APM WQ-3 and APM WQ-4).

Emergency-spill supplies and equipment will be available to respond in a timely manner, if an incident should occur. Response materials such as oil-absorbent material, tarps, and storage drums will be used as needed to contain and control any minor releases.

A search of government databases indicates that there are no hazardous waste sites located within the Project area. If hazardous materials are encountered in excavated soils or groundwater as noted through sheen, odor, or other nontypical appearance, work will be stopped until the material is properly characterized and appropriate measures are taken to protect human health and the environment. If excavation of hazardous materials is required, they will be handled, transported, and disposed of in accordance with federal, state, and local regulations.

Removed wood poles will be collected in project-specific containers at a PG&E Service Center designated as a PG&E consolidation site. Poles will be scheduled for transportation to the appropriate licensed Class 1 or a composite-lined portion of a solid waste landfill as containers are filled. Chemical Waste Management (CWM) Kettleman Hills is typically used. There is no disposal capacity issue associated with the treated wood poles generated by this Project that will be received at CWM.

APM HM-2/WQ-2: Environmental Training and Monitoring Program (ETMP) development and implementation. An environmental training program will be established to communicate to all field personnel any environmental concerns and appropriate work practices, including spill prevention and response measures and Best Management Practices (BMPs). The training program will emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of flow paths to nearest waterbodies) and will include a review of all site-specific plans, including but not limited to the Project's SWPPP, Erosion Control and Sediment Transport Plan, Health and Safety Plan, and Hazardous Substances Control and Emergency Response Plan.

A monitoring program will also be implemented to ensure that the plans are followed throughout the construction period. BMPs, as identified in the Project SWPPP and Erosion Control and Sediment Transport Plan, will also be implemented during the Project to minimize the risk of an accidental release and to provide the necessary information for emergency response.

APM HM-3: Project-specific Fire Prevention and Response Plan development and implementation. PG&E will prepare a Fire Prevention and Response Plan that will include procedures to reduce the potential for igniting combustible materials. The plan will cover electrical hazards, flammable materials, smoking, and vehicle and equipment access during construction and maintenance procedures during subsequent operation. Project personnel will be directed to park away from dry vegetation; to equip vehicles with fire extinguishers; not to smoke; and to carry water, shovels, and fire extinguishers in times of high fire hazard. The plan will also cover procedures to reduce the potential fire hazard from operation of the power line.

Hydrology and Water Quality

APM Water Quality (WQ)-1: SWPPP development and implementation. PG&E will comply with all applicable federal, state, and local regulatory requirements that protect surface water and groundwater. PG&E will prepare and implement a SWPPP that will include BMPs to minimize construction impacts on surface and groundwater quality and will include, at a minimum, measures such as:

- APM WQ-2, Worker Environmental Awareness specific to this Project.
- APM WQ-3, Erosion Control and Sediment Transport measure implementation.
- APM WQ-4, Hazardous Substance Control and Emergency Response measure specific to this Project.

The SWPPP will be prepared once the Project is approved.

APM WQ-2/HM-2: Environmental Training and Monitoring Program (ETMP) development and implementation. Worker environmental awareness will communicate environmental issues and appropriate work practices specific to this Project. This awareness will include spill prevention and response measures and proper BMP implementation. The SWPPP training will emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of flow paths to nearest waterbodies) and will include a review of all site-specific water quality requirements, including applicable portions of , the Erosion Control and Sediment Transport Plan, Health and Safety Plan, and PG&E's Hazardous Substances Control and Emergency Response program.

A monitoring program will also be implemented to ensure that the plans are followed throughout the construction period. BMPs, as identified in the Project SWPPP and Erosion Control and Sediment Transport Plan, will also be implemented during the Project to minimize the risk of an accidental release and to provide the necessary information for emergency response.

APM WQ-3/GM-3: Erosion Control and Sediment Transport Plan preparation and implementation. An Erosion Control and Sediment Transport Plan will be prepared in association with the SWPPP. This plan will be prepared in accordance with Water Board guidelines and other applicable BMPs.

Implementation of the plan will help stabilize disturbed areas and waterways and will minimize erosion and sedimentation. The plan will designate BMPs that will be followed during construction activities. Erosion-minimizing efforts may include measures such as:

- Avoiding excessive disturbance of steep slopes.

- Using drainage control structures (straw wattles or silt fencing) to direct surface runoff away from disturbed areas.
- Defining ingress and egress.
- Implementing a dust control program during construction.
- Restricting access to sensitive areas.
- Using vehicle mats in wet areas.
- Revegetating disturbed areas where applicable following construction.

In areas where soils are to be temporarily stockpiled, soils will be placed in a controlled area and will be managed with similar erosion control techniques. Where construction activities occur near a surface waterbody or drainage channel and drainage from these areas flows towards a waterbody or wetland, stockpiles will be placed at least 100 feet from the waterbody or will be properly contained (such as berming or covering to minimize risk of sediment transport to the drainage). Mulching or other suitable stabilization measures will be used to protect exposed areas during and after construction activities.

Erosion-control measures will be installed, as necessary, before any clearing during the wet season and before the onset of winter rains. Temporary measures such as silt fences or wattles intended to minimize erosion from temporarily disturbed areas will remain in place until disturbed areas have stabilized.

The SWPPP will be designed specifically for the hydrologic setting of the proposed Project, which includes slopes, intermittent and seasonal streams, and the Santa Ynez River. BMPs documented in the Erosion Control and Sediment Transport Plan will also be included in the SWPPP.

APM WQ-4: Hazardous Substance Control and Emergency Response Plan implementation.

PG&E has and will implement its system-wide program which includes established procedures for handling and managing hazardous substances and emergency response in the event of a hazardous substance spill. These procedures will add to the requirements in the Project Stormwater Pollution Prevention Plan (SWPPP).

A search of government databases indicates that there are no hazardous waste sites located within the Project area. If hazardous materials are encountered in excavated soils or groundwater, work will be stopped until the material is properly characterized and appropriate measures are taken to protect human health and the environment (see Section 4.7, Hazards and Hazardous Materials, for additional discussion). If excavation of hazardous materials is required, these materials will be handled, transported, and disposed of in accordance with federal, state, and local regulations.

Land Use

APM Land Use (LU)-1: Agriculture impacts avoidance. To avoid potential impacts to agriculture, PG&E will work with farmers and ranchers to conduct its work between their harvest and planting periods where and whenever possible. In areas containing permanent crops (i.e., grape vines, tree orchard, etc.) that must be removed and replaced to gain access to poles sites for construction purposes, PG&E will provide compensation to landowners for crop loss and other reasonable and associated costs as soon as practicable after completion of construction. Access

across active crop areas will be negotiated with the owners in advance of any construction activities.

Noise

APM Noise (NO)-1: Noise minimization with portable barriers. Compressors and other small stationary equipment will be shielded with portable barriers in proximity to residential areas.

APM NO-2: Noise minimization with “quiet” equipment. “Quiet” equipment (i.e., equipment that incorporates noise-control elements into the design—compressors have “quiet” models) will be used during construction whenever possible.

APM NO-3: Noise minimization through direction of exhaust. Equipment exhaust stacks and vents will be directed away from buildings.

APM NO-4: Noise minimization through truck traffic routing. Truck traffic will be routed away from noise-sensitive areas where feasible.

APM NO-5: Noise disruption minimization through residential notification. PG&E will coordinate with the City of Lompoc and the County of Santa Barbara to notify residents that are located near the power lines of the timeframe for the construction activities.

Traffic and Transportation

APM Traffic and Transportation (TT)-1: Traffic Management Plan development and implementation. PG&E will follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. PG&E is a member of the California Joint Utility Traffic Control Committee, which published the Work Area Protection and Traffic Control Manual. PG&E will follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the CVC. The establishment of a Traffic Management Plan (TMP) will address haul routes, timing of heavy equipment and building material deliveries, potential street and/or lane closures, signing, lighting, and traffic control device placement. Notification to the public of temporary road closures will be provided as prescribed by a Santa Barbara County Road Closure and/or encroachment permit. In particular, all construction activities shall be coordinated with local law enforcement and fire protection agencies. Emergency service providers will be notified of the timing, location, and duration of construction activities.

APM TT-2: Lift Plan development and implementation. A Lift Plan will be prepared and approved by the FAA prior to all construction helicopter operations. PG&E does not anticipate that residents will be required to temporarily vacate their homes. In the unlikely event that final construction plans and the Lift Plan require otherwise, PG&E will coordinate with potentially affected residents (providing a minimum of 30 days notice) to minimize the duration of the necessary work and any resultant inconvenience. The implementation of this measure will minimize impact TT-2 to a less than significant level.

2.4 Electric and Magnetic Fields

Electric and magnetic fields (EMF) are not normally considered in the context of CEQA as an environmental impact because there is no agreement among scientists that EMF does create a potential health risk. There are no defined or adopted CEQA standards for defining health risk from EMF. This section provides information regarding EMF associated with electric utility facilities and the potential effects of the proposed project related to public health and safety for the benefit of the public and decision makers, as there is a great deal of public interest and concern regarding the potential health effects of exposure to EMF from power lines.

Potential health effects from exposure to electric fields from power lines (produced by the existence of an electric charge, such as an electron, ion, or proton, in the volume of space or medium that surrounds it) are typically not of concern since electric fields are effectively shielded by materials such as trees, walls, etc. Research on potential health risks from exposure to magnetic fields (invisible fields created by moving charges) from power lines remains inconclusive. Several national and international panels have stated that sufficient evidence does not exist to conclude that EMF causes cancer. The International Agency for Research on Cancer and the California Department of Health Services both classified EMF as a possible carcinogen (Aspen Environmental Group 2009).

There are currently no applicable regulations related to EMF levels from power lines or substations; however, following a decision from 1993 (D.93-11-013) that was reaffirmed on January 27, 2006 (D.06-01-042), the CPUC requires utilities to incorporate “low-cost” or “no-cost” measures to mitigate EMF at least 15 percent from new or upgraded electrical utility facilities up to approximately 4 percent of total project cost. The Transmission Magnetic Field Management Plan for the project states “there are no feasible no-cost EMF reduction measures that would be implementable for the proposed project”; however, there are low-cost measures that would be applied to priority residential areas. This plan proposes to raise the height of seven poles in the residential land use area by 10 feet (PG&E, 2009).

2.5 Permits and Approvals

The project as proposed would require various permits for access road improvements, ground disturbance, reconductoring, and general construction.

Table 2.5-1 lists the permits and approvals necessary for project implementation.

Table 2.5-1: Permits and Approvals Necessary for the Proposed Project

Permit, Approval, or Exemption	Purpose	Regulating Agency
<i>Federal</i>		
Clean Water Act 404 Nationwide Permit	Discharge of dredged and fill material into waters of the United States	U.S. Army Corps of Engineers
<i>State</i>		
Storm Water Pollution Prevention Plan; enrollment under General Construction National Pollution Discharge Elimination System permit	Road grading and ground disturbance for pole installation	Central Coast Regional Water Quality Control Board
Section 401 certification	Discharge of dredged and fill material into waters of the United States.	Central Coast Regional Water Quality Control Board
Encroachment Permits	For any work to take place within ROW for US 101, SR 1, and SR 246	California Department of Transportation
<i>Local</i>		
Traffic Control Permit	Required for any work within the ROW for County roadways	Santa Barbara County Department of Public Works
Encroachment Permits	Required for any work within the ROW for City roadways	City of Lompoc

Chapter 3:

Environmental Setting and Environmental Impacts

3.1 Aesthetics

3.1.1 ENVIRONMENTAL SETTING

Regional Visual Character

Aesthetics, or visual resources, are the natural and cultural features of the landscape that can be seen and that contribute to the public's enjoyment of the environment. The project is located in Santa Barbara County, California, along a 14-mile stretch between the cities of Lompoc and Buellton. The Santa Rosa Hills are located to the north of the project area and the Santa Rita Hills are located to the south. Agriculture is the predominant land use in this part of the county. The Santa Ynez Valley, located approximately 8 miles east of the project area, is an area known for its wine production. Viewsheds containing rolling hills of vineyards are the predominant visual feature in the region.

Local Visual Character

Landscape Units

The project area is categorized geographically into four general areas or "landscape units":

- Lompoc
- SR 246 crossing
- A residential subdivision north of Buellton
- US 101

Existing views, viewer sensitivity, and overall visual quality are discussed in Table 3.1-1.

Scenic Highways

The California Scenic Highway Program protects and enhances the natural scenic beauty of California highways and adjacent corridors through special conservation (Caltrans 2009). A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view.

There are no state-designated Scenic Highways along the power line route. The nearest designated Scenic Highways to the project area are SR 1 and SR 154. The designated scenic portion of SR 154 is located approximately 7 miles east of the easternmost portion of the power line route in the City of Buellton. The designated scenic portion of SR 1 is located approximately 1 mile south of the westernmost portion of the route in the City of Lompoc (Caltrans 2007) (Figure 3.1-1).

Segments of SR 1 and US 101 are listed as eligible for designation as state scenic highways. The eligible segment of SR 1 extends to the intersection of SR 1 and SR 246, which is approximately 0.2

miles south of the project area. The eligible segment of US 101 is approximately 0.2 miles east of the project area.

Scenic Vistas

The project area includes a Santa Barbara County-designated scenic travel corridor along US 101, north of Buellton. The scenic corridor extends to Los Alamos, approximately 15 miles away, which has a scenic rating level of high to moderate. This travel corridor area is designated as open space, as are most high-rated scenic areas (Santa Barbara County 1979).

The project area also provides expansive views of the Santa Rita Valley including the hills to the north and south. These long-distance views could be considered scenic vistas, although there is no official designation.

Light and Glare

Light pollution is defined as any adverse effect of artificial light, including sky glow, glare, light trespass, light clutter, decreased visibility at night, and energy waste. Few significant light sources exist in the immediate vicinity of the project area. Existing sources of light and glare are generally related to residences, business and commercial buildings, local street lighting, and traffic on highways and local roads.

3.1.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

AESTHETICS – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

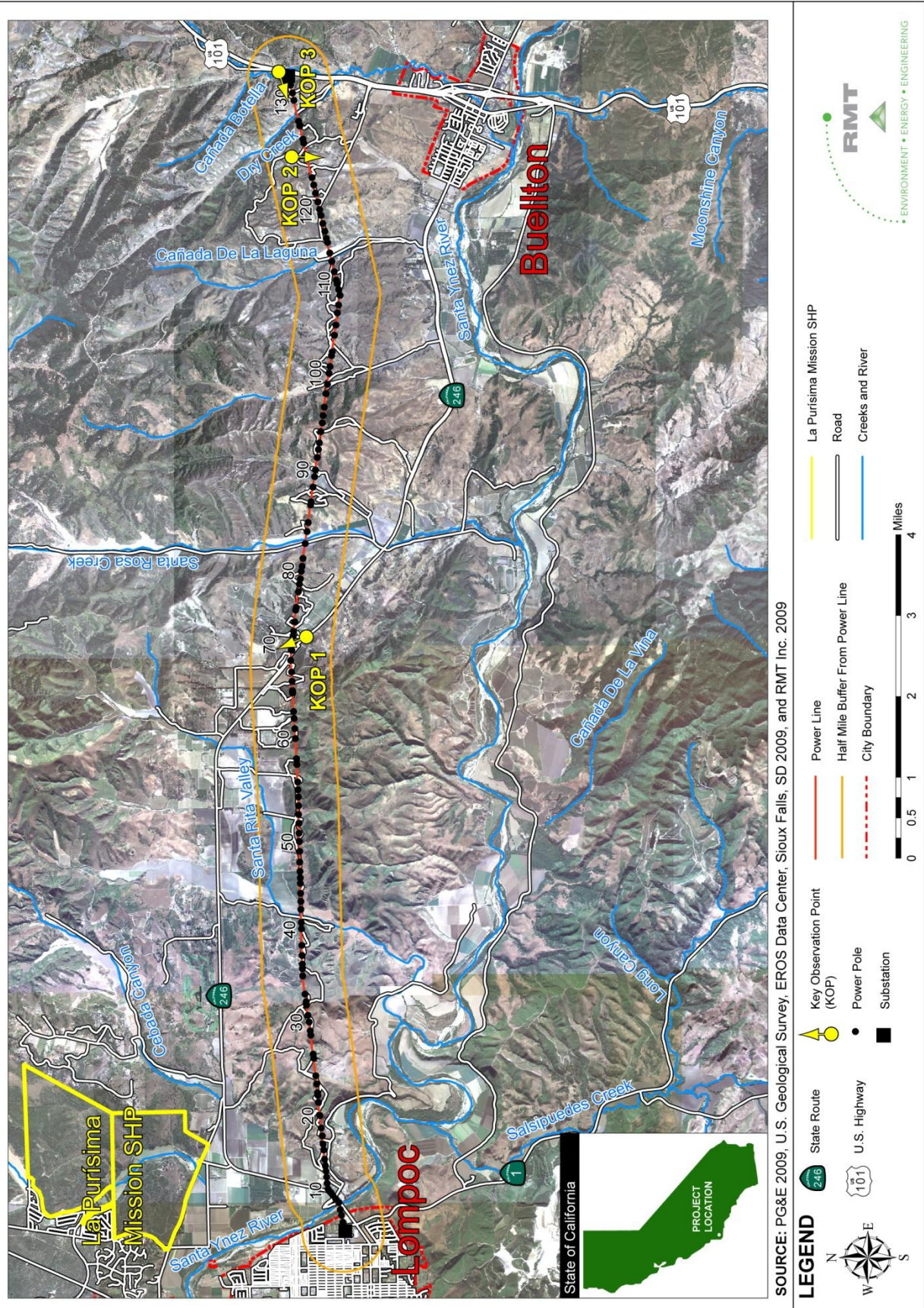
Table 3.1-1: Description of Landscape Units

Landscape Unit	Description	Visual Quality	Viewer Exposure	Viewer Sensitivity
<i>Lompoc Landscape Unit</i>	This landscape unit is characterized by a transition to a more urbanized setting from the rural residential and agricultural settings that typify the SR 246 corridor to the east. La Purisima Mission State Historic Park (SHP) is located approximately 1.75 miles from the project area. A segment of the power line is barely discernable in views from the entrance to the mission. The area just east of Lompoc affords long distance views to the east and west, including the Santa Rita Valley, through which SR 246 passes. Views to the west include the City of Lompoc and, beyond, the peaks that separate the city from the Pacific Ocean. The Santa Ynez River flows beneath SR 246 just outside the eastern city limit of Lompoc, and is visible from SR 246. River Park, a regional day use park and RV campground, extends along the eastern bank of the river.	Moderate to high. The Santa Ynez River is identified by Santa Barbara County as an area of high scenic value.	Typical viewers in this area are motorists, the majority of whom are just entering or just departing Lompoc. Some motorists will be turning on to (or will have just turned off of) SR 1, at the eastern border of Lompoc. These viewers would have short-term views of the poles in the background viewsheds. Local destinations for motorists in this area include River Park and La Purisima Mission SHP.	Moderately low.
<i>SR 246 Crossing Landscape Unit</i>	Existing power poles are most visible near the location where the power line intersects with and crosses SR 246, approximately 8 miles west of Buellton. Along this segment of SR 246, the area is characterized by a mixture of agricultural and rural residential uses east of the highway. The Santa Rosa Hills are located beyond the agricultural land and residences. The northeastern edge of the Santa Rita Hills abuts the roadway on the west. Views of the power poles are unobstructed to motorists approaching the power line crossing from both east and west directions along SR 246.	Moderately low. The hills visible in the middle-ground and assorted vegetation in the foreground contribute an element of vividness to the view; however, the highway and its wide shoulder is the most prominent feature in the view.	Typical viewers in this area include motorists traveling at highway speeds along SR 246. Views of the power line would be relatively short in duration. Travelers turning off of the highway to visit Foley Estates Vineyard and Winery would be decelerating along this segment of the road, and would have somewhat longer-duration views of the power line. This unit shows the view to the northwest of the power line route from the westbound lane of SR 246. The entrance to Foley Estates is located just east of the power line.	Moderately low.

Table 3.1-1 (Continued): Description of Landscape Units

Landscape Unit	Description	Visual Quality	Viewer Exposure	Viewer Sensitivity
<i>Buellton Residential Subdivision Landscape Unit</i>	The residential subdivision north of Buellton is a privately accessed neighborhood of rural residences on relatively large lots, set amongst a series of hills. A number of these properties include equestrian-related facilities (e.g., barns and riding rings) and a network of horse riding trails. The area is hilly with moderately dense vegetation, which allows for mostly short-duration views of the surrounding area from main roads. Occasional long-distance views into the Santa Rita Valley to the south of the area are possible. The existing power line passes through the residential area, with poles occasionally located near homes. An existing pole, located near a house at the top of a hill, appears against the sky, extending above the skyline formed by the distant Santa Rita Hills.	Moderately high. Vivid natural features, particularly the Santa Rita Valley and hills, which appear as background to hills and mature trees in the foreground, are prominent in this view.	Typical viewers in this area include residents of the subdivision. Views of the existing power line are available from access roads, horse trails, and residences.	High.
<i>US 101 Landscape Unit</i>	The US 101 landscape unit is characterized by a four-lane highway, which runs along the eastern edge of the project area and is bordered on both sides by low, steep hills. Grassy hillsides are spotted with clusters of oak trees in the vicinity of the Santa Ynez Switching Station. The hillside to the south of Santa Ynez Switching Station is privately owned rangeland. This unit shows the view of the existing power line from the north, along Jonata Park Road. This view is approximately the same one seen by motorists traveling in the southbound lane of US 101. In this view, two of the existing power poles are visible against the sky, above the hillside.	Moderate. Mature trees and other vegetation results in a moderately high level of vividness; however, the visibility of existing power poles above the natural skyline detracts from the overall intactness of the view.	Typical viewers in this area include motorists traveling along US 101 and people at the nearby Pistol and Bow Club. Views from the road toward the eastern end of the power line are intermittent due to dense vegetation. Views are short in duration due to the typical driving speeds on the highway.	Low to moderate.

Figure 3.1-1: Project Area and Key Observation Point Locations



Impact Discussion

Potential Impact: Would the project have a substantial adverse effect on a scenic vista?

Construction

Construction impacts would be associated with ground disturbance and the presence of construction equipment and materials. Construction would result in some visual impacts within the foreground of the scenic vistas in the project area. Impacts to the scenic vistas from construction would be short-term and would be considered less than significant. No mitigation is necessary.

Operation and Maintenance

Impacts from the replacement of the poles would be minimal because pre-weathered steel poles would be installed. Heights of the new poles would be similar to those of the existing poles, except at two locations where poles would be 5 to 12 feet taller than existing poles to provide adequate ground clearance for the new conductor and reduce EMF near residences. Views of the scenic vistas would not be significantly altered or damaged as a result of the project. Impacts would be less than significant.

Potential Impact: Would the project damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no state-designated Scenic Highways along the power line route. The nearest designated Scenic Highways are SR 1 and SR 154, located 1 and 7 miles away, respectively. The project would only be minimally visible in background viewsheds from these designated Scenic Highway segments due to the distance and intervening natural terrain. Temporary construction activities and the minor permanent changes related to the change in pole medium (from wood to weathered steel) would only be minimally visible and would not distract from or significantly alter the scenic qualities of the views. Impacts to scenic resources as viewed from a state Scenic Highway would be less than significant.

Potential Impact: Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Construction

Impacts from construction would be associated with ground disturbance and the presence of construction equipment and materials. Construction would result in some impacts to the visual character in the project area; however, impacts to the visual character from construction would be short-term, limited in extent, and would be considered less than significant.

Operation and Maintenance

Operation of the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. The existing power line route would not change substantially as a result of the project. Replacement poles would have a similar weathered appearance to that of existing poles, which is intended to minimize the apparent difference in color and texture between new steel poles and existing wooden poles. New poles would be

approximately the same height as existing poles (except at two locations), and would typically be placed within approximately 5 feet of the existing pole locations.

Key Observation Points (KOPs) were selected and used in the analysis of potential visual impacts. KOP simulations were done to depict the visual difference between the current power line and proposed reconducted power line. Simulations were done for these KOPs using the TPD cross arm pole configuration; however, these configurations may be subject to change pending final engineering and construction design. Potential pole configurations are available in Appendix A.

KOPs are located at the SR 246 crossing (KOP 1) and in the proximity of a residential development viewed from both west (KOP 2) and east (KOP 3). These KOPs represent the areas along the power line route with the most significant changes in viewsheds and the most sensitive viewers. KOP locations are presented in Figure 3.1-1 and described below.

- **KOP 1:** The project would not substantially affect the visual character or quality of the landscape as seen from KOP 1. Poles would remain subordinate components of the view in relation to the roadway and hills. The hilltop in the right side of the view would remain the tallest feature in the view, and the highway and its shoulder would continue to characterize much of the view's foreground. The two existing poles in this view would be replaced with poles that would be approximately 10 to 12 feet taller. The increased height of these poles would not substantially alter the level of intactness in the existing view or impact the view's overall unity. Viewers in the area, including motorists traveling along the highway and visitors to Foley Estates, would not likely experience any substantial change in visual quality or note a substantial alteration to the area's visual character as a result of the proposed project (Figures 3.1-2 and 3.1-3).
- **KOP 2 and KOP 3:** The project would slightly alter the design and height of existing poles seen from both KOP 2 and KOP 3. In both views, poles would continue to be visible against the sky, but the slight increase in height (approximately 5 to 10 feet) would not result in any encroachment that does not already exist in current views as illustrated in Figures 3.1-4 and 3.1-6. Natural features currently visible would not be obstructed by the replacement poles, and the project would not result in any substantial effects to the vividness in the area. The overall unity of these views would remain unchanged, and there would be no substantial change to the existing visual quality of views. Sensitive viewers in the area, which are mostly residents from the subdivision and motorists travelling on the highway, would not notice any substantial change to the visual character from the proposed project (Figures 3.1-5 and 3.1-7). Impacts would be less than significant and no mitigation would be required.

Another location of potential visual impact is to visual receptors is the Cloud 9 Vineyards, LLC. This residence and vineyard is located between KOP 1 and 2, within 300 feet to the proposed project area. The location has existing views of Poles 90 and 91, located west and east of the residence. With project implementation, Pole 91 would be replaced with a slightly taller pole, increasing the overall pole height by approximately 5 to 7 feet. The distance between the ground and the conductor would remain the same. The replacement of Pole 90 would not change in height. The existing visual quality of the area would not be significantly altered or degraded with slight changes in pole height. Impacts would be less than significant and no mitigation would be required.

Figure 3.1-2: Key Observation Point 1 (Existing)



SOURCE: CH2M Hill 2009

NOTE View to the northwest from the shoulder of the westbound lane of SR 246. The entrance to Foley Estates Vinyard and Winery is visible in front of this KOP. The Santa Rosa Hills are visible in the distance in the right side of this view.

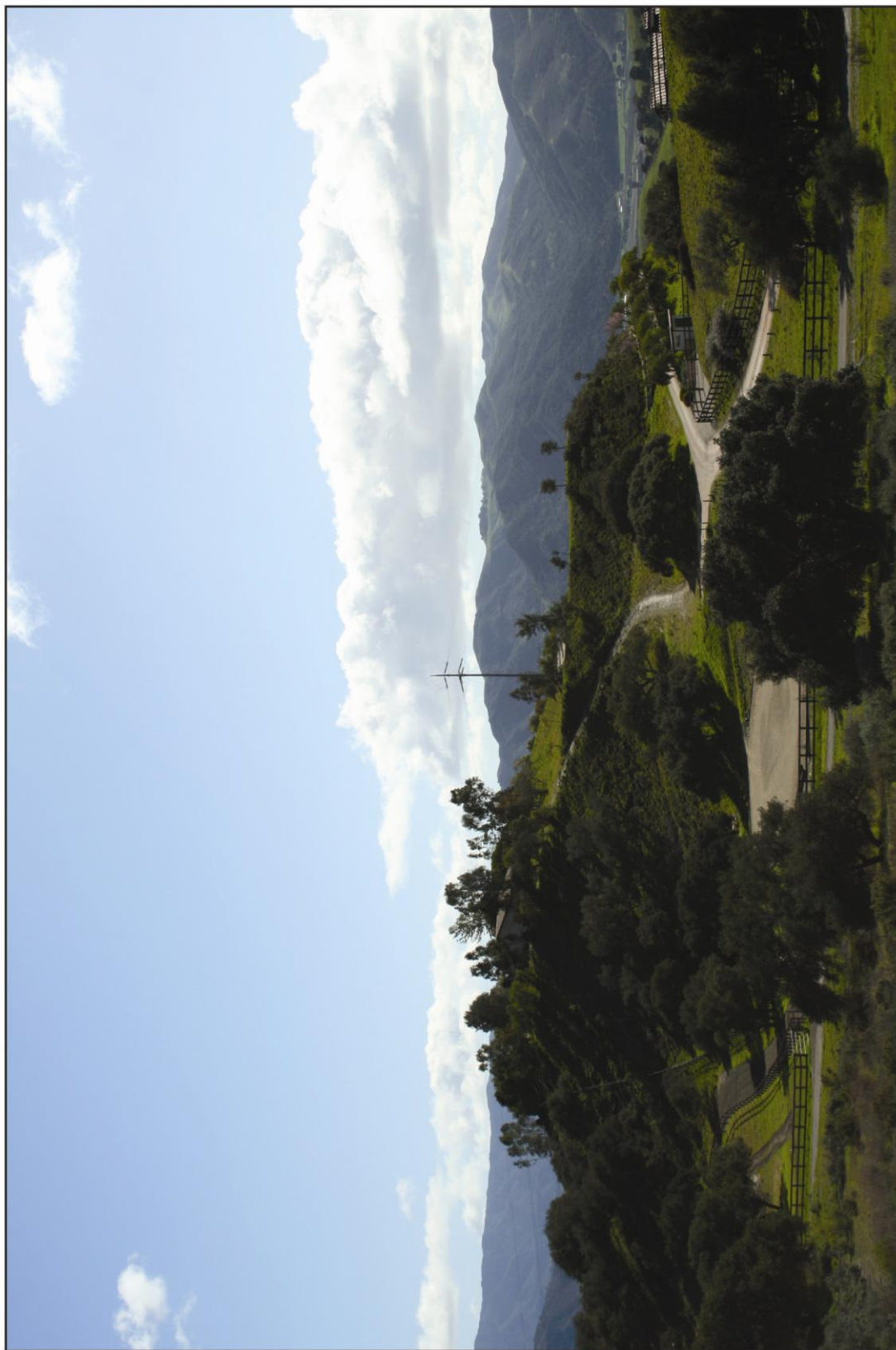
Figure 3.1-3: Key Observation Point 1 (Proposed)



SOURCE: CH2M Hill 2009

NOTE View from KOP 1 with reconductoring.

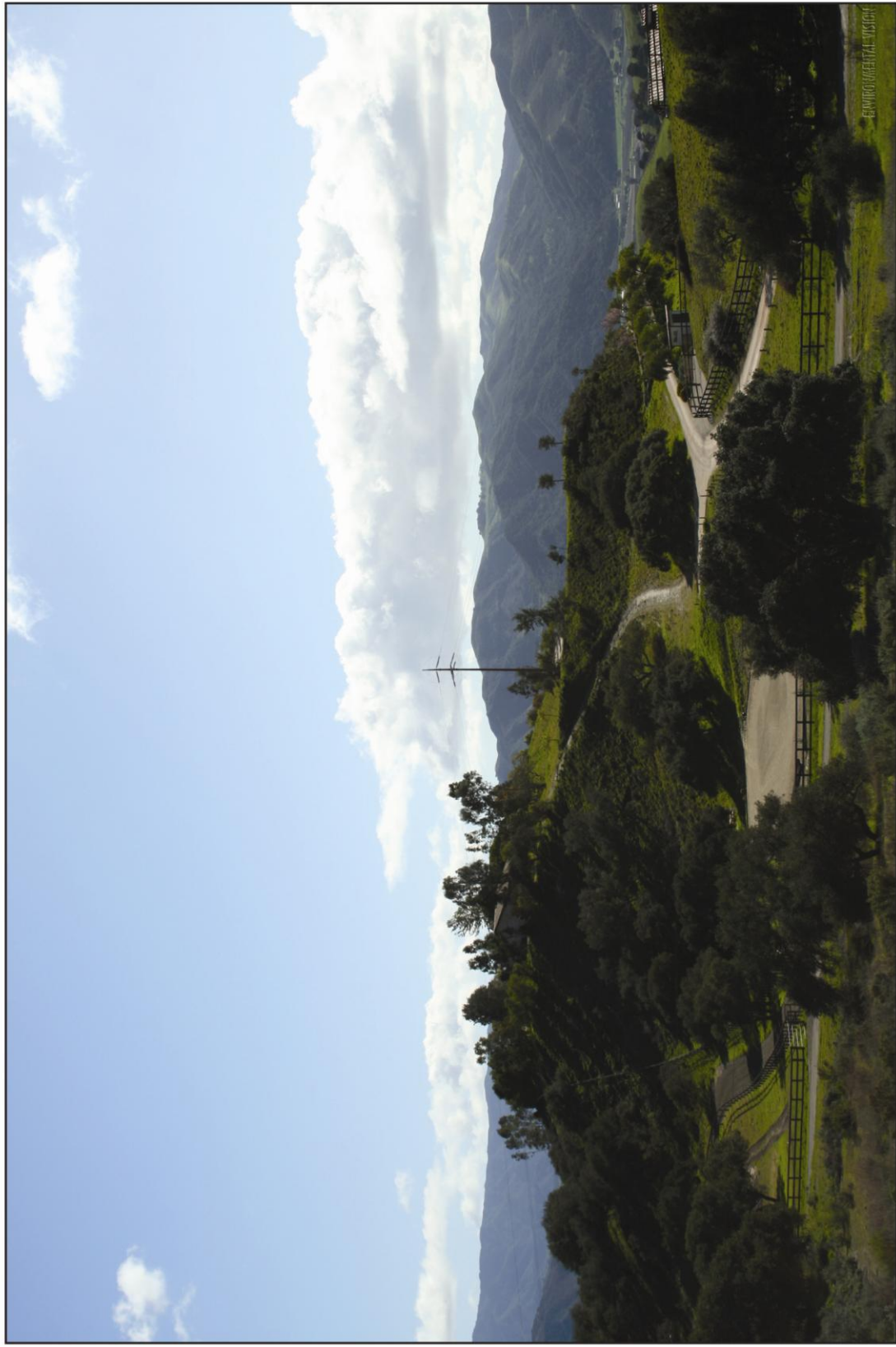
Figure 3.1-4: Key Observation Point 2 (Existing)



SOURCE: CH2M Hill 2009

NOTE View to the south from Cougar Ridge Road above Bluebird Glen Road. A residence is visible to the left of a pole proposed to be reconducted as part of the project. The Santa Rita Hills are visible in the distance.

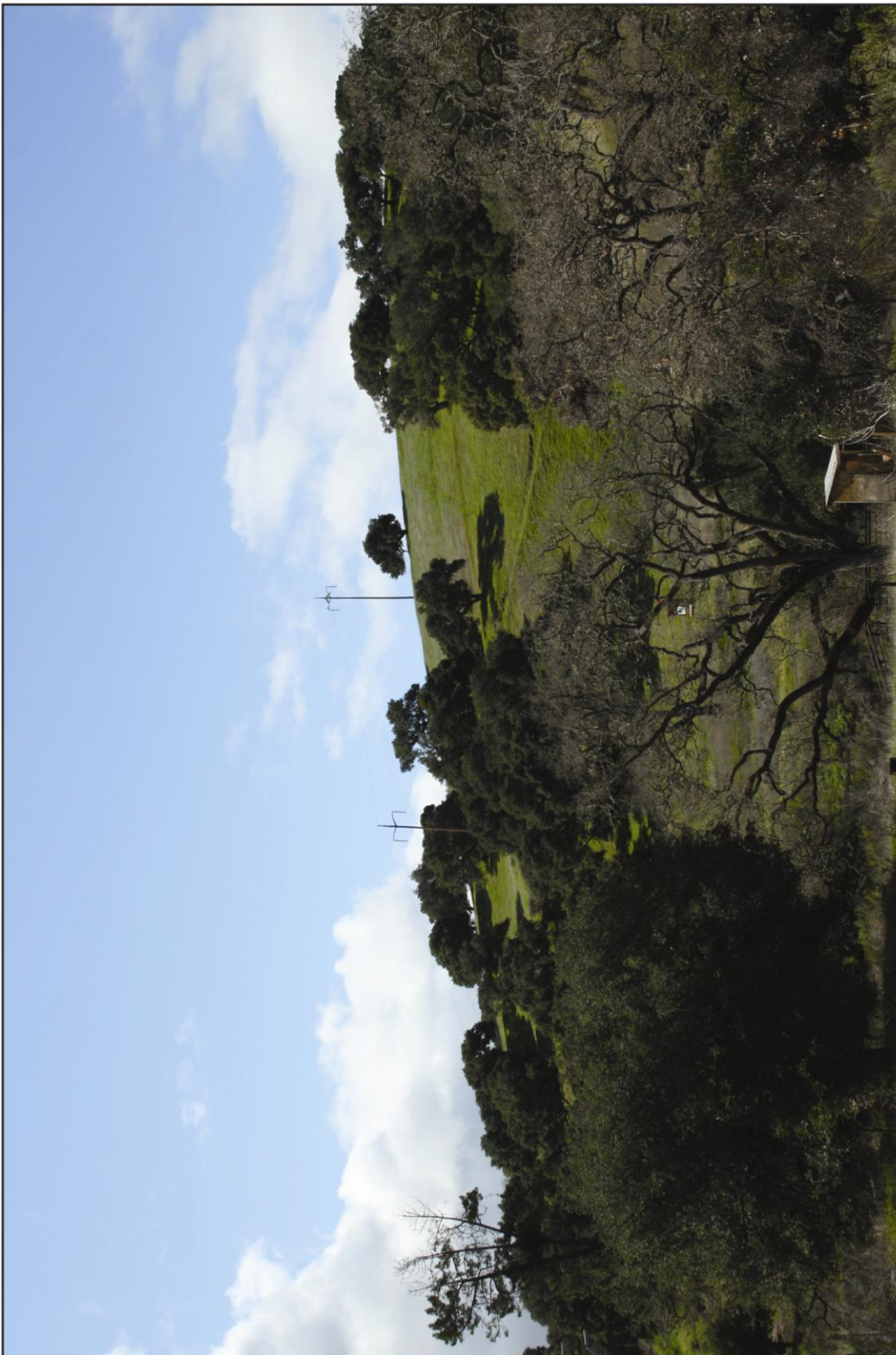
Figure 3.1-5: Key Observation Point 2 (Proposed)



SOURCE: CH2M Hill 2009

NOTE View from KOP 2 with reconductoring.

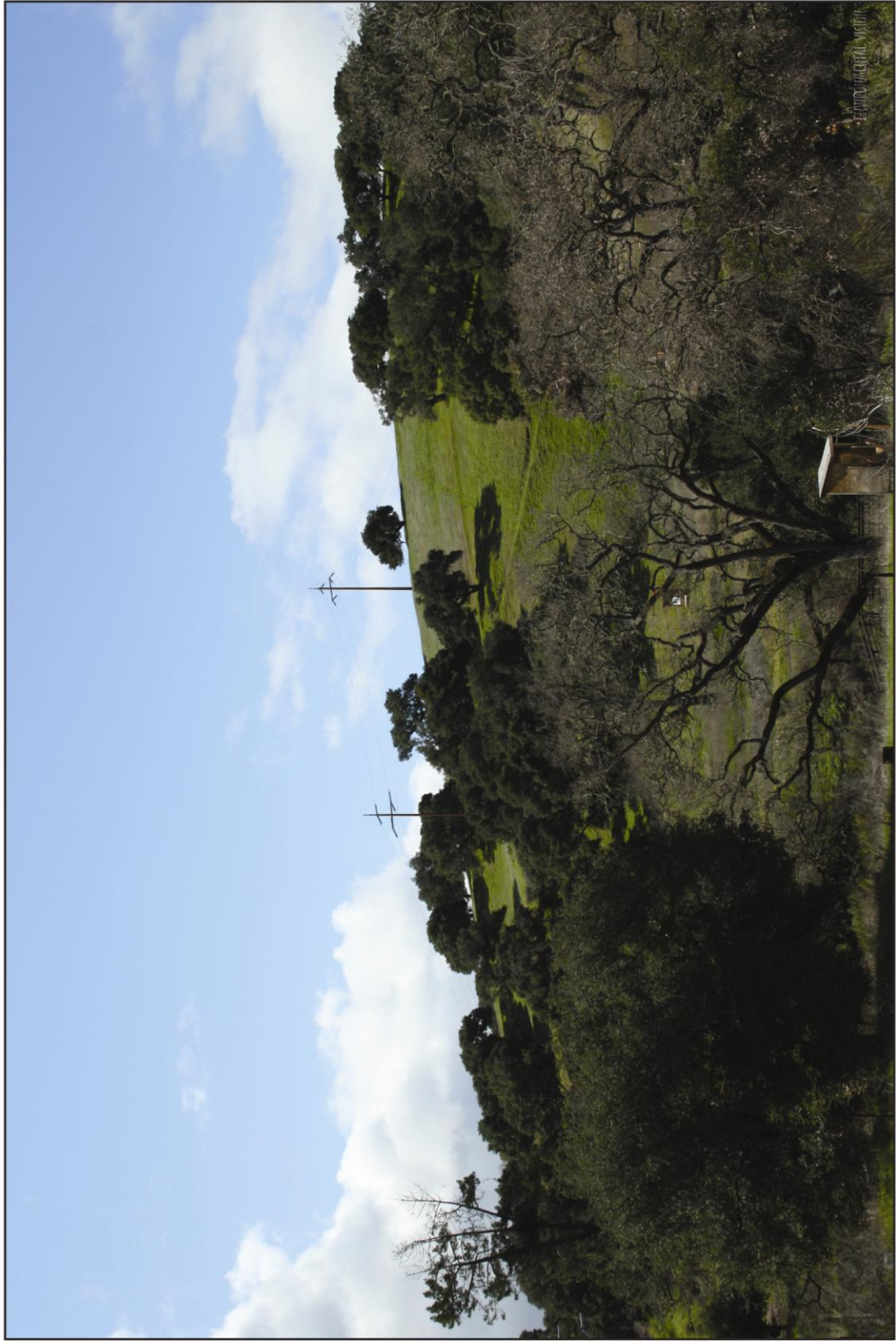
Figure 3.1-6: Key Observation Point 3 (Existing)



SOURCE: CH2M Hill 2009

NOTE View to the southwest from Jonata Park Road. Structures associated with the Santa Ynez Valley Pistol and Bow Club are visible in the lower center portion of the view. Santa Ynez Switching Station is located to the south of this KOP, and is left of this view.

Figure 3.1-7: Key Observation Point 3 (Proposed)



SOURCE: CH2M Hill 2009

NOTE View from KOP 3 with reconductoring.

Potential Impact: Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

The conductor installed on the existing power line produces low levels of reflective light. Implementation of APM AE-1 would reduce minor glare from the existing conductor by replacing it with a non-specular conductor. Impacts from glare would be less than significant.

No permanent lighting facilities are proposed as part of the project. Lighting would not be required during construction because regular construction activities would be scheduled to occur only during daylight hours. Emergency repair work or special circumstances for operation or maintenance activities could require work during non-daylight hours. Activities during non-daylight hours would be temporary in nature and any required lighting would be directed toward temporary maintenance areas only. Lighting would not spill onto nearby properties or roadways or into the nighttime sky. Light and glare impacts would be less than significant.

3.2 Agricultural Resources

3.2.1 ENVIRONMENTAL SETTING

Regional

Agriculture is the largest production industry in Santa Barbara County, contributing over 1 billion dollars to the economy in 2006 (Santa Barbara County 2008). The county's top agricultural commodities in terms of production value are strawberries, broccoli, lettuce, and cattle. The flower seed industry is also prominent in the region, so much so that the area was dubbed the "Valley of Flowers" (Lompoc Valley Historical Society 2008).

The project area is predominantly rural and is characterized by valleys with prime soils and climate for agriculture and viticulture (wine production) surrounded by rolling hills ideal for livestock (Santa Barbara County 1991).

Local

Most of the proposed project area is classified as Non-Prime Agricultural Land under the Williamson Act Program and approximately half of the power line corridor is located on lands under Williamson Act contracts. Several parcels along the alignment are used for rotational agriculture, such as pepper and strawberry farms. The power line also traverses privately owned vineyards. Cabrillo Substation is in a light industrial area within the eastern extent of the City of Lompoc, approximately 0.5 mile from any land zoned for agricultural use. Santa Ynez Switching Station is on land zoned for agriculture. Farmland designations and Williamson Act contract lands are shown in Figure 3.2-1.

3.2.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

AGRICULTURAL RESOURCES– <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Convert land designated as prime farmland, unique farmland, or farmland of statewide importance to nonagricultural use?	☐	☐	☐	☒
Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☒	☐
Change the environment resulting in conversion of designated farmland to nonagricultural use?	☐	☒	☐	☐

Impact Discussion

Potential Impact: Would the project convert land designated as prime farmland, unique farmland, or farmland of statewide importance to nonagricultural use?

The majority of the power line route lies within lands used for grazing (Figure 3.2-1); however, portions of the line cross areas designated by the California Farmland Mapping and Monitoring Program as Prime, Farmland of Local Importance, Unique, or Other Land (CDC 2004). Project activities would be limited to previously disturbed areas along the existing power line route.

Ground disturbance and staging would be limited to areas within the existing 40-foot-wide PG&E ROW of the power line or off-site service yards. Some temporary disturbance to agricultural operations could occur during reconductoring; however, the project would not result in the direct, permanent conversion of any designated agricultural lands. The proposed project would have no impact on the conversion of prime farmland, unique farmland, or farmland of statewide importance to nonagricultural use.

Potential Impact: Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

Large portions of the project area are under Williamson Act contracts (Figure 3.2-1). The project would be consistent with local plans and ordinances. Work areas (40-foot by 100-foot areas surrounding existing poles) would be disturbed for pole installation and reconductoring activities; however, construction activities would be temporary and farmland would continue to be farmed or used for ranching around and between new poles as is the case with the existing power line. The project would not conflict with existing zoning districts or a Williamson Act contract because the project area would be within a PG&E ROW and would involve replacement of existing infrastructure. No rezoning would be needed for the proposed project. The proposed project would have a less than significant impact on existing zoning for agricultural use and Williamson Act contracts.

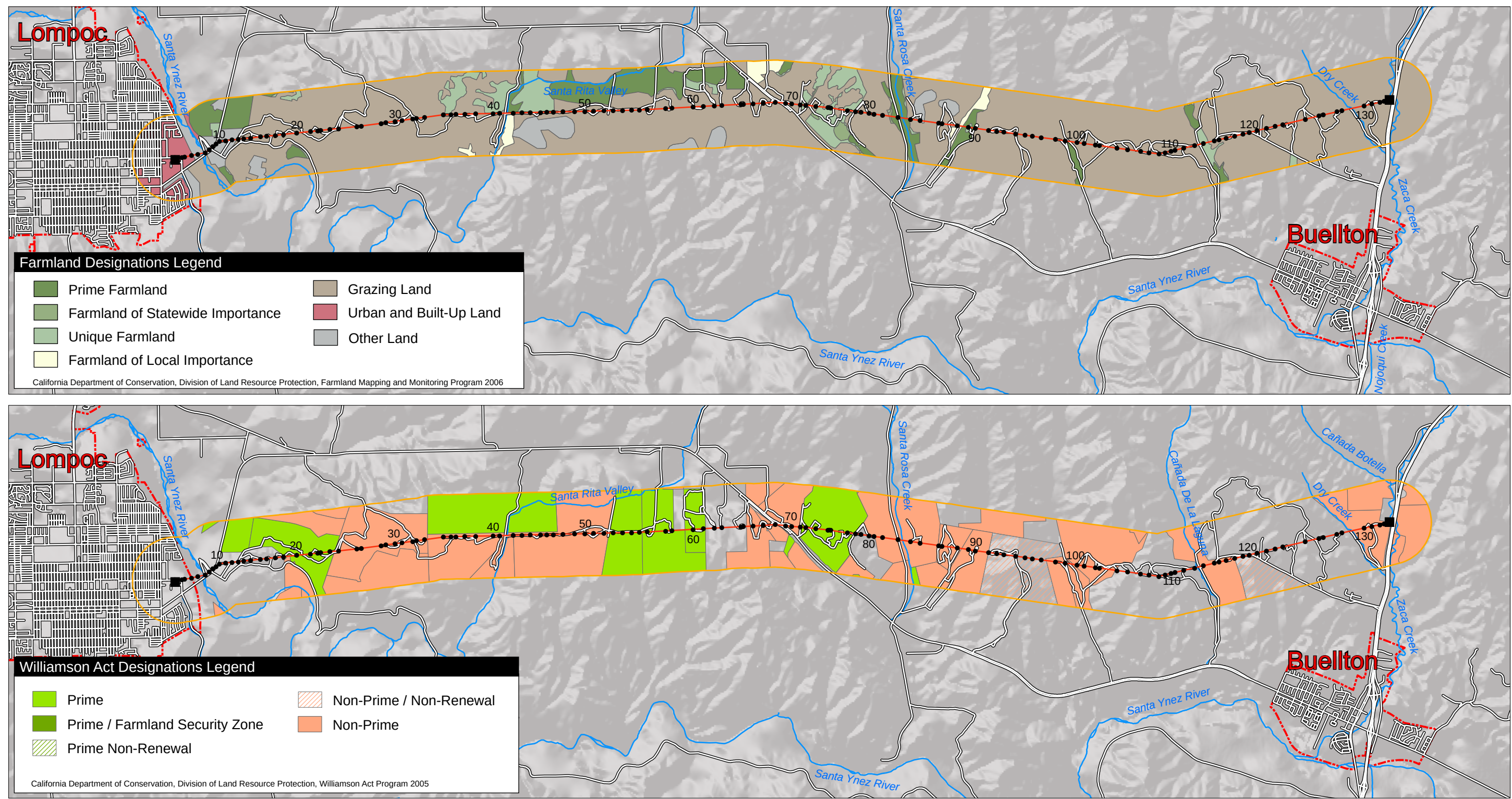
Potential Impact: Would the project change the environment resulting in the conversion of designated farmland to nonagricultural use?

Construction

Agricultural uses, primarily vineyards and grazing, currently occur in the vicinity of the existing power line. Ground disturbance from project activities would be limited to a 40-foot-wide PG&E ROW. Work areas and pull and tension sites (40-foot by 100-foot areas surrounding existing poles) would experience the most disturbance from pole installation and reconductoring activities.

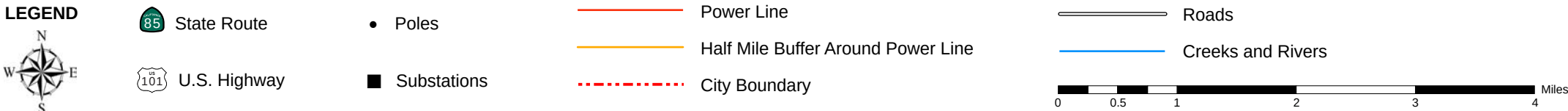
Access and delivery of materials and equipment to these sites along the power line could temporarily disturb existing agricultural or grazing lands through minor grading and vegetation clearing along existing access roads or overland access routes. Farmland would continue to be farmed or used for grazing around and between new power poles as is the case with the existing power line; however, some areas used for agricultural activities may be disturbed during construction.

Figure 3.2-1: Farmland Designations and Williamson Act Contract Lands



SOURCE: PG&E 2009, U.S. Geological Survey, EROS Data Center, Sioux Falls, SD 2009, and RMT Inc. 2009

Date Created: 11/04/2009



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APM (LU)-1 would coordinate the timing of project construction to avoid harvest and planting periods. This measure also outlines compensatory actions for the loss of crops. Impacts to agricultural uses during construction would be reduced to a less than significant level, with the implementation of APM (LU)-1.

Operation

No changes to existing operation and maintenance activities would occur with implementation of the proposed project. Reconductoring of the line would improve reliability, resulting in less wire breakage from corrosion and brittleness, and thereby, requiring fewer emergency repairs and inspections. The power line would be subject to the guidelines of PG&E's Standard S1001, Electric Transmission Line Inspection and Preventative Maintenance Program, and would require routine annual inspections, detailed ground inspections, and aerial patrols; however, these would not change the environment resulting in the conversion of designated farmland to nonagricultural use. Equipment and methods typically used (e.g., off-road utility vehicles and walking to poles inaccessible by vehicle) would not change. No impacts would occur from project implementation.

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3.3 Air Quality

3.3.1 ENVIRONMENTAL SETTING

Air Basin

The project area is located within the South Central Coast Air Basin, which is located next to the Pacific Ocean and composed of Ventura, San Luis Obispo, and Santa Barbara Counties. Air quality in Santa Barbara County, where this project is located, is regulated by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) and the Santa Barbara County Air Pollution District (SBCAPCD). Both of these agencies develop rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

Climate and Meteorology

Santa Barbara County's air quality is influenced by local topography and meteorological conditions. Surface and upper-level wind flow varies both seasonally and geographically in Santa Barbara County, and inversion conditions common to the area can affect the vertical mixing and dispersion of pollutants. Prevailing wind flow patterns are not necessarily those that cause high ozone values. High ozone levels are often associated with atypical wind flow patterns.

Semi-permanent high pressure occurs off the Pacific coast, which leads to limited rainfall (around 18 inches per year), with warm, dry summers and relatively damp winters. Maximum summer temperatures average about 70°F near the coast and are in the high 80s°F to 90s°F inland. Average minimum winter temperatures range from 40°F along the coast to 30°F inland. Cool, humid, marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer. Fog and low clouds can persist for several days before dissipating from a change in the weather pattern.

Ambient Air Quality

The primary pollutants of concern in Santa Barbara County are ozone and particulate matter less than 10 microns in size (PM₁₀). Santa Barbara County is designated nonattainment by CARB for ozone and PM₁₀ state standards. Ozone is not directly emitted, but is formed in the atmosphere by complex chemical reactions of various precursors, reactive organic compounds (ROCs), and nitrogen oxides (NO_x) in the presence of sunlight. The major sources of ozone precursor emissions in Santa Barbara County are motor vehicles, the petroleum industry, and solvent usage (paints, consumer products, and certain industrial processes) (SBCAPCD 2008). PM₁₀ sources include mineral quarries, grading, demolition, agricultural tilling, road dust, and vehicle exhaust (SBCAPCD 2008).

The Santa Barbara Air Pollution Control District (SBCAPCD) operates a network of ambient air quality monitoring stations that measure concentrations of ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), PM₁₀, and fine particulate (PM_{2.5}). Data from the nearest monitoring station in Lompoc, California, were used to determine the existing ambient air quality for the project area. Table 3.3-1 presents concentrations of the nonattainment pollutants, ozone and PM₁₀, measured at the Lompoc station. Concentrations of CO, NO₂, SO₂, PM₁₀, and PM_{2.5} have not

Table 3.3-1: Summary of Ambient Air Monitoring Results for the Project Area (Lompoc Station)					
Pollutant	Averaging Time	State Ambient Air Quality Standards	2006	2007	2008
Ozone (ppm)	1 Hour	0.09	0.056	0.078	0.082
	8 Hour	0.07	0.054	0.064	0.074
PM ₁₀ (µg/m ³)	24 Hour	50	48.6	39.6	49.3
	Annual Arithmetic Mean	20	17.9	20.4	*
Notes: Bold text indicates concentration exceeds standard. * There were insufficient (or no) data to determine the value. ppm = parts per million µg/m ³ = micrograms per cubic meter					

SOURCE: CARB 2009

exceeded a federal or state standard in the past 3 years. Measured 8-hour ozone concentrations exceeded the state standard once in the past 3 years; however, the 1-hour ozone concentrations did not exceed the state standard during the past 3 years. Hydrogen sulfide, vinyl chloride, and visibility-reducing particles are not monitored in Santa Barbara County.

Toxic Air Contaminants

Toxic air contaminants are air pollutants that may cause adverse health effects, particularly cancer or reproductive harm (SBCAPCD 2008). The Air Toxics “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588) was enacted in September 1987. The project is not a stationary source subject to AB 2588 requirements.

Sensitive Receptors

Sensitive receptors include children, seniors, sick persons, or people subject to continuous exposure based on the averaging period for the pollutant. Sensitive receptor locations are facilities such as hospitals, schools, convalescent facilities, or residential areas. Several residences, parks, schools, and churches are located within a 0.5 mile buffer of the project area.

3.3.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

AIR QUALITY— <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Construction

Activities conducted within Santa Barbara County are required to comply with provisions of the 2007 Clean Air Plan (CAP) (SBCAPCD 2007) and the Air Quality Supplement to the Santa Barbara County Comprehensive Plan (Santa Barbara County 1981). The 2007 CAP presents the strategy to continue to improve air quality in Santa Barbara County. The SBCAPCD is responsible for implementing and regulating air emissions from stationary and area sources.

The Air Quality Supplement discusses land use planning procedures that reduce automobile driving. Although these plans do not apply to the project, the project would nevertheless be consistent with the goal of the Air Quality Supplement because it would not permanently increase regional vehicle miles traveled. Additional traffic would be generated from construction activities; however, these increases would not be permanent and would last approximately 15 months. Impacts would be less than significant.

Operation and Maintenance

Operation of the project, a power line, would not result in air emissions and the project is not subject to stationary, area, or mobile source regulations. Operation and maintenance of the project would be consistent with existing operations and would not be expected to generate additional emissions. The project is consistent with the goals of the 2007 CAP and the policies in the Air Quality Supplement of Santa Barbara County's Comprehensive Plan. No impact is anticipated and no mitigation is needed.

Potential Impact: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction

Exhaust from construction equipment results in short-term emissions of ROC, NO_x, CO, SO₂, PM₁₀, and PM_{2.5}. ROC and NO_x emissions during construction are estimated to be 0.4 ton per year (tpy) and 2.7 tpy, respectively, and are less than the quantitative thresholds of significance established by the SBCAPCD (25 tpy) for construction projects (Santa Barbara County 2008). Quantitative thresholds have not been established for CO, SO₂, PM₁₀, or PM_{2.5} emissions; however, emissions of CO, SO₂, PM₁₀, and PM_{2.5} would be minimal, as indicated in Table 3.3-2.

Fugitive particulate matter emissions during construction would occur from soil disturbance and travel on paved and unpaved roads. Table 3.3-2 presents the estimated fugitive PM₁₀ emissions from project construction. Calculations used to determine the amount of emissions generated during construction are included in Appendix B.

The SBCAPCD has determined that any determination of significance with respect to PM₁₀ construction emissions should be based on a consideration of additional control measures designed to minimize PM₁₀ emissions. APM AQ-1 requires implementation of fugitive dust control measures, which would reduce impacts to air quality; however, the APM has been superseded by mitigation measure AQ-1 for the purpose of creating a project-specific Fugitive Dust Control Plan

Table 3.3-2: Construction Emission Estimates

Emission Source and Thresholds	Emissions (tons/project)						
	ROC	NO _x	CO	SO ₂	Exhaust PM ₁₀	Fugitive PM ₁₀	Exhaust PM _{2.5}
Total Project Construction Emissions	0.4	2.7	2.1	0.03	0.1	7.0	0.1
SBCAPCD Threshold	25 tpy	25 tpy	N/A	N/A	N/A	N/A	N/A
Threshold Exceeded?	No	No	N/A	N/A	N/A	N/A	N/A
Note: N/A = Quantitative threshold has not been established.							

SOURCE: CH2M Hill 2009; Santa Barbara County 2008

that addresses all topical elements required to fully reduce potential impacts to a less than significant level and incorporates project-specific detail for the reduction of fugitive dust. Fugitive dust emissions would not violate any air quality standard or result in an air quality violation and potential impact would be reduced to less than significant levels with the implementation of mitigation measure AQ-1.

Mitigation Measure AQ-1 (Proposed to supersede APM AQ-1): The following fugitive dust control measures would be implemented unless otherwise approved by the SBCAPCD. Copies of the finalized dust control measures would be submitted to the CPUC for recordkeeping.

- PG&E would use water trucks or sprinkler systems during construction on all active construction and disturbed areas to keep areas of vehicle and equipment movement sufficiently damp to prevent dust from leaving the site. At a minimum, this would include wetting down these areas in the late morning and after work is completed for the day. Watering frequency would increase whenever the wind speed exceeds 15 miles per hour (mph).
- Reclaimed water will be used whenever possible; however, reclaimed water will not be used in or around crops for human consumption.
- Construction equipment and related vehicles, including personal vehicles, would be limited to a maximum speed of 15 mph on unpaved roads
- All exposed soil stockpiles (e.g., soil and sand) would be covered.
- Gravel pads, bamboo mats, or a suitable equivalent would be installed at all access points to prevent tracking mud on to public roads, as discussed in the project's Stormwater Pollution Prevention Plan (SWPPP)
- PG&E would designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent dust transport off site. Monitor duties would include holiday and weekend periods when work may be in progress. The name and telephone number of the monitor would be provided to the SBCAPCD prior to project construction.

Operation and Maintenance

PG&E would continue to periodically monitor and inspect the power line alignment at the same or reduced frequency. No significant change in emissions associated with ongoing maintenance activities would occur, nor would emissions violate any applicable air quality standards. Impacts would be less than significant.

Potential Impact: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Construction

The project would emit nonattainment pollutants NO_x and ROC (ozone precursors) as a result of fuel combustion from the operation of construction equipment. Project construction is not

expected to result in a cumulatively significant increase in the nonattainment pollutants NO_x or ROC because emissions would remain below significance thresholds (Table 3.3-2).

Fugitive PM₁₀ emissions would be minimized further with the implementation of mitigation measure AQ-1. Impacts to air quality would be less than significant.

Operation and Maintenance

PG&E would continue to periodically monitor and inspect the power line alignment at the same or reduced frequency. No significant change in emissions associated with ongoing maintenance activities would occur. Impacts would be less than significant.

Potential Impact: Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction

Sensitive receptors include rural residences located along the power line alignment. Construction would generate particulate matter from earthmoving activities and equipment exhaust. The project area is in nonattainment for particulate matter. Implementation of mitigation measure AQ-1 would reduce potential impacts on air quality from particulate matter from construction activities to less than significant levels, and would prevent sensitive receptors from being exposed to substantial pollutant levels. The low level of emissions from the project would be temporary and would not have an impact on sensitive receptors. Impacts would be less than significant.

Operation and Maintenance

Operation of the power line would not contribute to significant levels of air pollutants in violation of air quality standards. The project would not increase the number of vehicles required for maintenance activities and would not cause a net increases in pollutants. Impacts would be less than significant.

Potential Impact: Would the project create objectionable odors affecting a substantial number of people?

No objectionable odors would be generated from project construction or operation activities; therefore, no odor impacts are anticipated.

3.4 Greenhouse Gases

3.4.1 ENVIRONMENTAL SETTING

Greenhouse gases (GHGs) are global concerns, unlike criteria air pollutants or toxic air contaminants that are of regional and/or local concern. Scientific research indicates that observed climate change is most likely a result of increased GHG emissions associated with human activity (IPCC 2007). Global climate change describes a collection of phenomena, such as increasing temperatures and rising sea levels, occurring across the globe due to increasing anthropogenic emissions of GHGs (EPA 2009). GHGs contribute to climate change by allowing ultraviolet radiation to enter the atmosphere and warm the Earth's surface, but also prevent some infrared radiation from the earth from escaping back into space. The largest anthropogenic source of GHGs is the combustion of fossil fuels, which result primarily in carbon dioxide (CO₂) emissions.

As defined in AB 32, "greenhouse gas" or "greenhouse gases" include, but are not limited to CO₂, methane (CH₄), NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF₆). California is a substantial contributor to global GHG emissions. It is the second largest contributor in the United States and the sixteenth largest in the world (CEC 2006).

In California, the main sources of GHG emissions are the transportation and energy sectors. Some of the potential effects of future climate change on California resources include (CCCP 2009):

- Warming would raise the elevation of snow levels, reduce spring snowmelt, and increase winter runoff. Additional winter runoff is generally not storable because of flood control needs. Less snowmelt runoff would mean lower early summer storage at major foothill reservoirs with less hydroelectric production
- Higher temperatures and reduced snowmelt would compound the problem of providing suitable cold water habitat for salmon species
- Sea level rise would affect the Sacramento-San Joaquin River Delta, worsening existing levee problems; cause more saltwater intrusion; and adversely affect many coastal marshes and wildlife reserves
- Increasing temperature would increase agricultural demands for water and increase the stress level on native vegetation, potentially allowing for an increase in pest and insect epidemics and a higher frequency of large, damaging wildfires

The SBCAPCD has not established significance criteria for GHG emissions; therefore, the significance of project GHG impacts was evaluated using the October 24, 2008, CARB Preliminary Draft Staff Proposal for setting significance thresholds for GHGs (CARB 2008). CARB has proposed significance thresholds for industrial and residential/commercial projects; however, no significance thresholds for construction have been established. CARB's preliminary draft proposal suggests a quantitative threshold of 7,000 metric tons of CO₂ equivalents per year for operational emissions (excluding transportation) for industrial projects. The South Coast Air Quality Management District (SCAQMD) has established an interim GHG significance threshold of 10,000 metric tons of CO₂ equivalents per year. This threshold includes construction emissions amortized over 30 years and added to operational GHG emissions (SCAQMD 2008).

3.4.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

GREENHOUSE GAS EMISSIONS – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?	☐	☐	☐	☒
Note: The greenhouse gas checklist questions are based on proposed amendments to the CEQA Guidelines (OPR 2009).				

Impact Discussion

Potential Impact: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

Project construction would result in emissions of GHGs from on-site construction equipment and off-site worker trips. Anticipated GHG emissions were calculated for all construction activities. The most common GHGs associated with fuel combustion are CO₂, CH₄, and nitrous oxide (N₂O). Methane and N₂O emissions, even when taking into account their global warming potential, represent less than 1 percent of the combustion emissions for this project and, therefore, were not included in the GHG calculations. Other GHGs such as, SF₆, hydrofluorocarbons, and perfluorocarbons, were not included in this analysis because the project would not contain these sources. Example sources for these GHGs include circuit breakers, refrigeration units, and semiconductor processing.

The results of detailed construction GHG emission calculations are presented in Appendix B. Construction emissions were estimated using construction equipment emission factors from URBEMIS2007 and truck emission factors from EMFAC2007. Over the entire construction phase of the project, approximately 427 metric tons of CO₂ would be emitted. The proposed project would not emit significant quantities of GHGs. The CARB Preliminary Draft Staff Proposal presumes that there would be a less than significant impact related to climate change if interim CARB performance standards are implemented for construction- and transportation-related activities. GHG construction emissions from the proposed project amortized over 30 years and added to negligible operation emissions would fall well below the interim numerical thresholds of

significance. For example, the SCAQMD standard of 10,000 metric tons of CO₂ equivalents per year is 25 times greater than the projected construction emission for the proposed project.

The applicant has proposed a measure to further reduce GHG emissions from the project. APM GHG-1 would reduce short-term GHG emissions by approximately 15 percent to 379 metric tons of CO₂ with measures such as carpooling to the project area, minimizing construction vehicle idling time, and maintaining construction equipment.

Operation and Maintenance

Project operation would result in the generation of a small amount of GHG emissions from vehicle travel during periodic inspection and maintenance of the power line. The reconductored power line would not require additional inspection or maintenance activities beyond those already conducted for the existing power line; therefore, operation of this project would not result in a change in GHG emissions and impacts would be less than significant.

Potential Impact: Would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?

The Climate Change Scoping Plan, approved by CARB on December 12, 2008, provides an outline for actions to reduce California's GHG emissions. The scoping plan requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. However, at this time, there are no applicable plans, mandatory GHG regulations, or finalized agency guidelines that would apply to this project. The project would be in compliance with the AB 32 goal of reducing GHG emissions to 1990 levels by 2020, and construction activities would not result in a significant impact.

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3.5 Biological Resources

3.5.1 ENVIRONMENTAL SETTING

Unless otherwise noted, information presented below is summarized from the Biological Resources Technical Report for the Cabrillo-Santa Ynez 115 kV Reconductoring Project (GANDA 2009), attached in Appendix C-1.

Vegetation and Wildlife Habitat Types

Reconnaissance-level field surveys were conducted by vehicle and on foot in January 2009 to identify and map potential habitats for special-status wildlife species and to verify mapped vegetation typing based on remote geographic information system (GIS) sensing techniques. General habitat types were characterized for the power line alignment and areas adjacent to it; however, field surveys were limited to the anticipated work areas. A 200-foot-wide buffer area, centered on the existing power line alignment, was mapped with the results of these surveys and is provided in Appendix C-2. Vegetation community designations used in this section are those defined by Holland (1986) and/or Sawyer and Keeler-Wolf (1995).

Upland Habitats

Upland habitat types present within the project area consist primarily of California annual grassland, Central coast scrub, and coast live oak woodlands.

- **California annual grassland** is an upland community composed of dense to sparse cover, mainly introduced annual grasses, approximately 1 to 3 feet in height. Characteristic species include soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), and foxtail chess (*B. madritensis*).
- **Central coast scrub** found in the project area is typically dominated by California sagebrush (*Artemisia californica*) and black sage (*Salvia mellifera*). Coyote brush (*Baccharis pilularis*) commonly occurs as an associated species.
- **Coast live oak woodlands** typically integrates with California annual grassland and Central coast scrub. The overstory of this community is characterized by coast live oak (*Quercus agrifolia*) with an understory of hedge nettle (*Stachys bullata*), pitcher sage (*Salvia spathacea*), miners lettuce (*Claytonia perfoliata*), fiesta flower (*Pholistoma auritum*), bedstraw (*Gallium* sp.), and a variety of other native annual herbs and nonnative grasses.

Table 3.5-1 presents all habitat types present within the project region and includes approximate spatial coverage for each habitat.

Riparian, Wetland, and Aquatic Habitats

Wetland delineation field surveys were conducted in January and March 2009 (CH2M Hill 2009a). The purpose of field surveys was to identify and map the limits of jurisdictional wetlands and other waters within the boundaries of the approximately 73-acre project area. Access roads identified as requiring clearing or grading, as well as overland routes, were surveyed to ensure no wetlands or other waters were present in these areas. Wetland survey methodology was done according to the standards established by the U.S. Army Corp of Engineers.

Table 3.5-1: Habitat Types in the Project Region

Natural Vegetation	Area (acres)
<i>Upland</i>	
California annual grassland	95.2
Central coast scrub	107.5
Coast live oak woodlands	72.3
<i>Riparian, Wetland, and Aquatic</i>	
Riparian scrub ¹	3.9
Freshwater ponds ² and seeps	1.2
Mulefat scrub ¹	0.9
<i>Other Vegetation</i>	
Agriculture	47.6
Developed/Landscaped	10.3
Ruderal	5.4
Total	344.3
Notes: ¹ Associated with the Santa Ynez River, which is not an area of impact. ² Includes man-made stock ponds and detention basins and the wetland area northeast of SR 246.	

SOURCE: GANDA 2009

Seasonal wetlands and numerous other aquatic habitat features are present at various locations within the project area (Figures 3.5-1 and 3.5-2) (CH2M Hill 2009a). The Santa Ynez River flows through the western portion of the project area. Numerous ephemeral tributaries to the Santa Ynez River are present along the power line route from the river east towards Buellton. Stock ponds and detention basins are present in the project area and vicinity.

Special-Status Species

A preliminary search was conducted to prepare a list of special-status species with the potential to occur in the project area. The search involved a review of the following sources:

- California Natural Diversity Database within the 15 surrounding U.S. Geological Survey (USGS) quadrangles
- California Native Plant Society's (CNPS) Electronic Inventory of Rare, Threatened, and Endangered Plant Species
- Aerial photographs, which were reviewed to identify potential habitats for special-status species

A comprehensive list of special-status species identified for the project area based on the research was refined using the results of site reconnaissance surveys conducted in 2009 by Garcia and

Figure 3.5-1 : Special Status Species and Critical Habitat Within the Project Area (1 of 2)

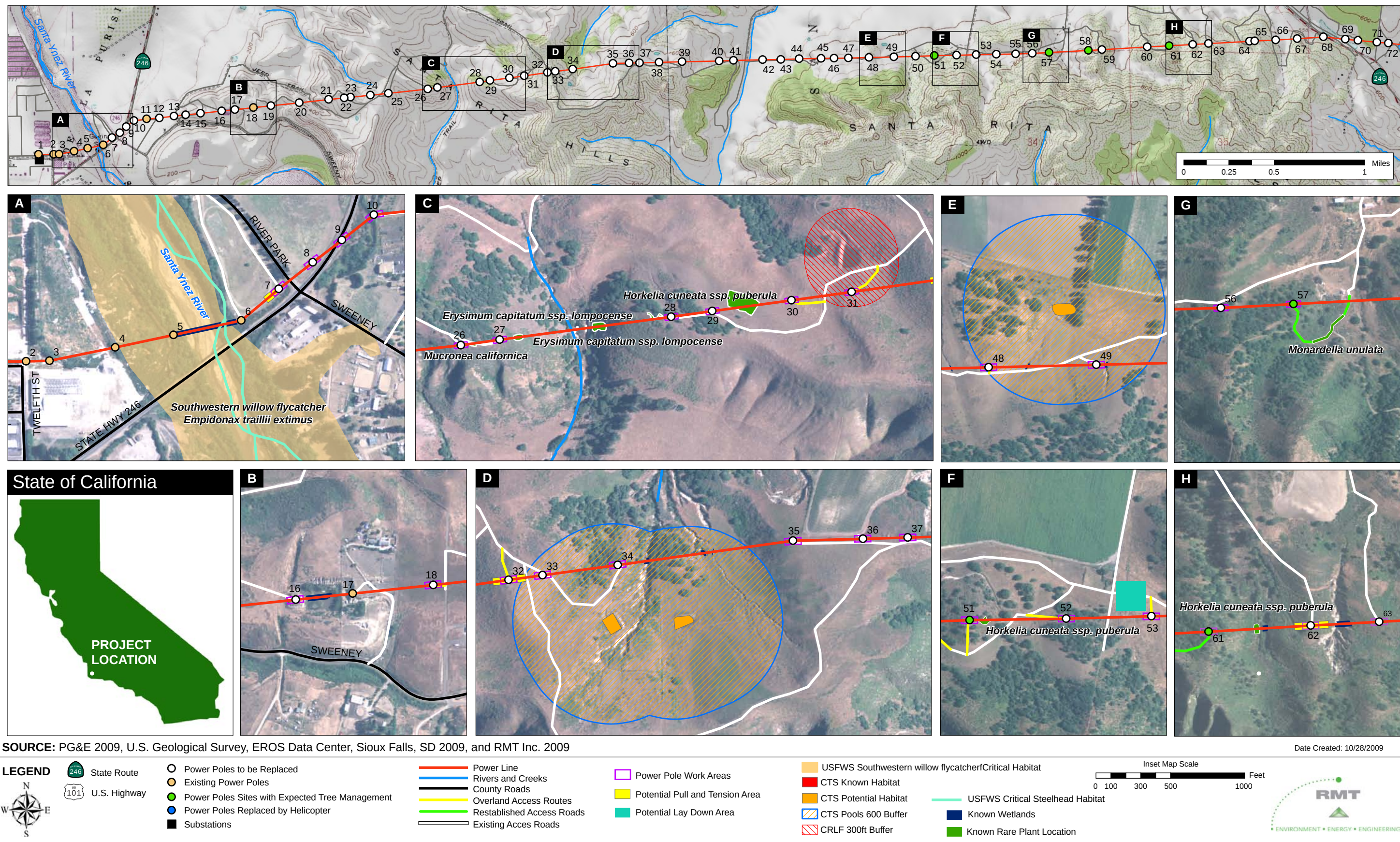
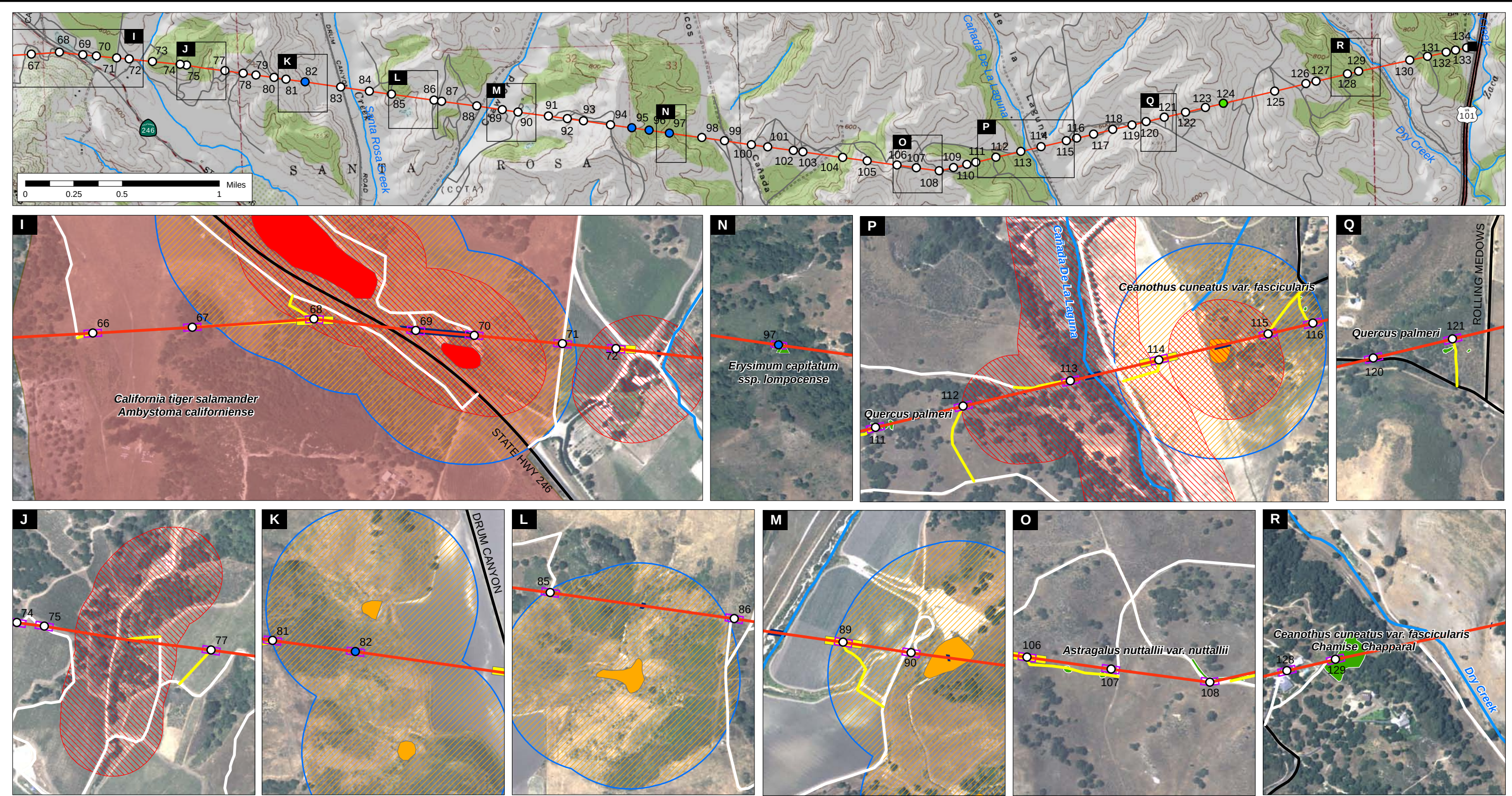
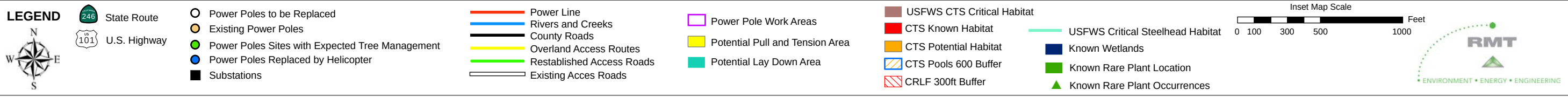


Figure 3.5-2 : Special Status Species and Critical Habitat Within the Project Area (2 of 2)



SOURCE: PG&E 2009, U.S. Geological Survey, EROS Data Center, Sioux Falls, SD 2009, and RMT Inc. 2009

Date Created: 10/28/2009



Associates on March 2 through 6, April 20 through 25, and July 6 through 10, and discussions with local experts. Appendix C-1 presents detailed species information for all special-status wildlife with the potential to occur in the project area, including their federal and state status and probability of occurrence. Special-status plants and wildlife with a potential to occur in the project area are summarized below.

Special-Status Plants

The project area was surveyed for special-status plants and included all temporary and permanent project impact areas within the project ROW, as well as temporary staging areas and access roads requiring clearing and grading. Surveys began in March 2009 and were completed in early July 2009 by Garcia and Associates. The surveys coincided with the blooming periods of potential rare plant species.

Seven special-status plant species were identified in the project area and are summarized in Table 3.5-2.

Special-Status Wildlife

A list of 29 special-status wildlife species with potential to occur in the project area was compiled based on results of habitat assessments during the reconnaissance field survey and background research and is presented in Table 3.5-3.

Table 3.5-2: Special-Status Plants in the Project Area	
Name	Listing Status
California (or Mesa) horkelia (<i>Horkelia cuneata</i> ssp. <i>puberula</i>)	Federal: None State: None CNPS: 1B.1
La Purissima manzanita (<i>Arctostaphylos purissima</i>)	Federal: None State: None CNPS: 1B.1
Lompoc ceanothus (<i>Ceanothus cuneatus</i> var. <i>fascicularis</i>)	Federal: None State: None CNPS: 4.2
Curlyleaf monardella (<i>Monardella undulata</i>)	Federal: None State: None CNPS: 4.2
San Luis Obispo wallflower (<i>Erysimum capitatum</i> ssp. <i>lompocense</i>)	Federal: None State: None CNPS: 4.2
California spineflower (<i>Murcinea californica</i>)	Federal: None State: None CNPS: 4.2

Table 3.5-2 (Continued): Special-Status Plants in the Project Area

Desert scrub oak (<i>Quercus palmeri</i>)	Federal: None State: None CNPS: Locally Rare
Note: CNPS Designations: 1B: Plants rare, threatened, or endangered in California or elsewhere. 2: Plants rare, threatened, or endangered in California, but more common elsewhere. 3: Plants for which more information is needed – a review list. 4: Plants of limited distribution – a watch list. CNPS Threat Designations 0.1: Seriously endangered in California. 0.2 Fairly endangered in California. 0.3 Not very endangered in California.	

Table 3.5-3: Special-Status Wildlife in the Project Area

Name	Listing Status	Habitat Affinity	Potential to Occur in Project Area
Insects			
Monarch butterfly (<i>Danaus plexippus</i>)	Federal: None State: None	Winter roosts in wind-protected tree groves.	Present
Fish			
Southern steelhead (<i>Oncorhynchus mykiss irideus</i>)	Federal: FE State: CSC	Santa Ynez River and its tributaries are designated USFWS critical habitat. Alisal, Salsipuedes, and San Miguelito Creeks are also suitable habitat.	High
Amphibians			
California red-legged frog (CRLF) (<i>Rana draytonii</i>)	Federal: FT State: CSC	Breeds in ponds and pools in slow-moving streams with emergent vegetation; adjacent upland habitats are often used for refuge.	Present
California tiger salamander (CTS) (<i>Ambystoma californiense</i>)	Federal: FE State: CSC	Inhabits grassland and oak savannah habitats. USFWS-designated critical habitat, as well as two wetland areas and seasonal ponds capable of supporting potential breeding habitat, are located in project area.	Present

Table 3.5-3 (Continued): Special-Status Wildlife in the Project Area

Name	Listing Status	Habitat Affinity	Potential to Occur in Project Area
Amphibians			
Western spadefoot toad (<i>Spea hammondi</i>)	Federal: None State: CSC	Known to occur in wetland northeast of SR 246; however, other seasonal and permanent ponds in the project area are capable of supporting breeding populations of this species.	Present
Arroyo toad (<i>Bufo californicus</i>)	Federal: FE State: CSC	Known to occur in semi-arid regions near washes or intermittent streams. Habitat, such as loose gravelly areas of streams, is present in the project area in the Santa Ynez River area.	Moderate
Reptiles			
Coast horned lizard (<i>Phrynosoma coronatum</i>)	Federal: None State: CSC	Inhabits sandy washes with lowlands or open areas with low bushes for cover.	Present
Coast patch-nosed snake (<i>Savadora hexalepis virgulata</i>)	Federal: None State: CSC	Associated with rocky or gravelly soil vegetated with low scrub (i.e., coastal chapparal).	Moderate
Silvery legless lizard (<i>Anniella pulchra pulchra</i>)	Federal: None State: CSC	Found in moist, warm, sandy or loose loamy soils often in areas with leaf litter.	Moderate to High
Southwestern pond turtle (<i>Actinemys marmorata pallid</i>)	Federal: None State: CSC	Found in permanent and seasonal ponds, lakes, and slow-moving parts of streams.	Present
Two-striped garter snake (<i>Thamnophis hammondi</i>)	Federal: None State: CSC	Found in or near permanent freshwater around pools, creeks, or other sources of water. Suitable habitat is present along the Santa Ynez River in the project area.	Moderate
Birds			
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Federal: FE State: SE	Nests along margins of bushes. Requires a dense shrub layer.	High
Southwestern willow fly-catcher (<i>Empidonax traillii extimus</i>)	Federal: FE State: SE	Occurs in riparian woodland. Found in bushes, thickets, and brushy fields.	High
Western yellow-billed	Federal: FC	Nests in riparian forests along	Moderate

Table 3.5-3 (Continued): Special-Status Wildlife in the Project Area

Name	Listing Status	Habitat Affinity	Potential to Occur in Project Area
cuckoo (<i>Coccyzus americanus occidentalis</i>)	State: SE	broad, lower flood-bottoms of large river systems. Nests in riparian jungles.	
Golden eagle (<i>Aquila chrysaetos</i>)	Federal: BGEPA State: None	Found in rolling foothills, mountain areas, and desert. Cliff-wall canyons used for nesting.	High
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	Federal: None State: CSC	Found in dense grasslands on rolling hills, lowland plains. Favors native grasslands.	High
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Federal: None State: CSC	Prefers open habitat for hunting and fairly dense shrubs and brush for nesting.	Moderate to High
Long-eared owl (<i>Asio otus</i>)	Federal: None State: CSC	Found in riparian bottomlands with tall willows and cottonwoods.	High
Mountain plover (<i>Charadrius montanus</i>)	Federal: None State: CSC	Prefers short vegetation with bare ground and flat topography.	Moderate to High
Tri-colored blackbird (<i>Agelaius tricolor</i>)	Federal: None State: CSC	Nests in freshwater marshes containing emergent vegetation.	Low to Moderate
Western burrowing owl (<i>Athene cunicularia hypugea</i>)	Federal: None State: CSC	Nests in burrows and forages in low-growing grasslands and semi-arid habitats.	Moderate
Yellow warbler (<i>Dendroica petechia brewsteri</i>)	Federal: None State: CSC	Found in riparian plan associations. Nests in woodlands or thickets near lakes, swamps, and marshes.	High
White-tailed kite (<i>Elanus leucurus</i>)	Federal: None State: CFP	Nests in oak, willow, or other trees and forages over open grasslands.	High
Mammals			
American badger (<i>Taxidea taxus</i>)	Federal: None State: CSC	Prefers dry, open areas within shrub, forest, and herbaceous habitats.	Present
Pallid bat (<i>Antrozous pallidus</i>)	Federal: None State: CSC	Prefers open, dry habitats such as grasslands, shrublands, and woodlands with rocky substrate.	Moderate
Townsend's big-eared bat	Federal: None	Roosts in the open, hanging from	Moderate

Table 3.5-3 (Continued): Special-Status Wildlife in the Project Area

Name	Listing Status	Habitat Affinity	Potential to Occur in Project Area
<i>(Corynorhinus townsendii)</i>	State: CSC	walls and ceilings of caves or mines near woodlands.	
Western red bat <i>(Lasiurus blossevilli)</i>	Federal: None State: CSC	Roosting habitat includes forests and woodlands. Forages over grasslands, forests, and croplands.	Low to Moderate
Yuma myotis <i>(Myotis yumanensis)</i>	Federal: None State: CSC	Optimal habitat is open forest and woodlands with water sources. Forages over open water.	Moderate
Western mastiff bat <i>(Eumops perotis californicus)</i>	Federal: None State: CSC	Found in open, semi-arid habitats, including conifer and deciduous woodlands, coastal scrub, and chaparral.	Low
Notes: USFWS = U.S. Fish & Wildlife Service Federal Designations: FE: Listed as Endangered under the Endangered Species Act FT: Listed as Threatened under the Endangered Species Act FC: Listed as Candidate under the Endangered Species Act BGEPA: Bald and Golden Eagle Protection Act None: No Listed Status State of California Designations: SE: California Fish and Game Code Endangered Species ST: California Fish and Game Code Threatened Species CFP: California Fish and Game Code Fully Protected Species CSC: California Department of Fish and Game Species of Special Concern CCC: California Candidate Species as Threatened or Endangered None: No Listed Status			

SOURCE: GANDA 2009

3.5.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

BIOLOGICAL RESOURCES – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Substantially affect, reduce in numbers, restrict range, or cause loss of habitat for a population of a state or federally listed threatened or endangered species or special-status species, including fully protected, candidate proposed for listing, CSC, and certain CNPS list designations?	☐	☒	☐	☐
Substantially reduce or affect any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or the USFWS?	☐	☒	☐	☐
Substantially disturb federally protected wetlands as defined in Section 404 of the Clean Water Act (including, but not limited to, marshes, riparian woodlands, or vernal pools) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
Substantially interfere with the movement of any resident or migratory fish or wildlife species?	☐	☐	☒	☐
Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
Conflict with a local Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state plan?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project substantially affect, reduce in numbers, restrict range, or cause loss of habitat for a population of a state or federally listed threatened or endangered species or special-status species, including fully protected, candidate proposed for listing, CSC, and certain CNPS list designations?

Construction

Special-Status Plants

Construction activities have the potential to impact special-status plant species that have the potential to occur in the project area. Vegetation clearing and tree trimming activities would remove existing vegetation. Special-status plants could be impacted if found in any locations requiring vegetation management. Five special-status species were identified within the proposed work areas during previous surveys. Work areas near poles 26, 57, 97, 106, 107, 108, 111, and 116 would be flagged to avoid known populations of special-status plant species (Figure 3.5-1C and 3.5-1G and Figure 3.5-2N and 3.5-2P).

Several components of APMs have been superseded here with mitigation measures for the purposes of fully reducing potential impacts to special status species to a less than significant level. An Environmental Awareness Program, proposed in APM BO-1 “Development and implementation of a Worker Environmental Awareness Program”, has been superseded with mitigation measure Bio-1 to expand the training to include all special status species with a potential to be affected in the project area. APM BO-1 “Biological monitor on-site during construction activities in sensitive areas” and “Reporting and communication” has been superseded with mitigation measure Bio-2 to fully identify areas where monitors are required to survey and to outline the timing of reporting duties for the on-site monitor. APM BO-1 “Identification and marking of sensitive resource areas” has been superseded by mitigation measure Bio-3 to encompass all previously identified biological resources in the vicinity and not limit marking to features only found within the alignment.

APMs BO-2 and BO-3 contain specific measures to reduce the impacts special-status plants including a protocol for the protection against invasive weeds and the avoidance of known populations of rare plants in the project area. Mitigation measures Bio-4 and Bio-5 would supersede APMs BO-2 “Weed management” and BO-4 to fully mitigate the potential impacts to special-status species. Mitigation measure Bio-4 includes detailed instructions to ensure invasive weed materials are not brought into the project area. Mitigation measure Bio-5 has been altered to indicate appropriate timing for marking or flagging special-status plants prior to construction and instructions on actions if special-status plant populations are unavoidable. These requirements have been defined for the purposes of facilitating monitoring during construction.

Potential impacts to any special-status plant species would be minimized to a less than significant level with implementation of mitigation measures Bio-1 through Bio-5.

Mitigation Measure Bio-1 (Proposed to supersede APM BO-1 “Development and implementation of a Worker Environmental Awareness Program”): A qualified biologist would conduct an environmental awareness program for all construction and on-site

personnel prior to the beginning of construction activities. Training would include a discussion of avoidance and minimization measures being implemented to protect biological resources as well as the terms and conditions of the Biological Opinion and other permits. Training would include information on the federal and state Endangered Species Acts and the consequences of noncompliance with these acts. Under this program, workers would be informed about the presence, life history, and habitat requirements of all special-status species with a potential to be affected within the project area. Training would include information on state and federal laws protecting nesting birds, wetlands, and other water resources.

An educational brochure would be produced for construction crews working on the project. The brochure would include color photos of sensitive species as well as a discussion of mitigation measures.

Mitigation Measure Bio-2 (Proposed to supersede APM BO-1 “Biological monitor on-site during construction activities in sensitive areas” and “Reporting and communication”): A qualified biological monitor would be on site during all ground-disturbing construction activities in or near sensitive habitats previously identified by a qualified biologist. The monitor would ensure implementation of and compliance with all avoidance and mitigation measures. The monitor would have the authority to stop work or determine alternative work practices in consultation with agencies and construction personnel as appropriate if construction activities are likely to impact sensitive biological resources. The biological monitor would document monitoring activities in daily logs to document construction activities and environmental compliance. The daily logs would be included in the project report submitted to the appropriate agencies following completion of construction.

The biological monitor would be responsible for reporting any capture and relocation, harm, entrapment, or death of a listed species to the USFWS and/or the CDFG and for reporting any permit violations in a timely manner and as indicated in their respective permits. Weekly monitoring reports would be submitted to CPUC, and to any resource agencies (upon request), throughout construction. A final project summary report would be submitted to the CPUC 90 days after the completion of construction activities.

Mitigation Measure Bio-3 (Proposed to supersede APM BO-1 “Identification and marking of sensitive resource areas”): Sensitive resources identified during pre-construction surveys in the project vicinity would be mapped and clearly marked in the field. Such areas would be avoided during construction to the extent practicable and/or additional measures specific to sensitive species types as described herein and that may be required by the USACE, FWS, CDFG, and RWQCB permits, would be implemented to avoid or minimize impacts.

Mitigation Measure Bio-4 (Proposed to supersede APM BO-2 “Weed management”): All project vehicles would be washed before arrival on site at PG&E’s Santa Maria, Lompoc, or Buellton PG&E wash facilities or otherwise approved wash-down location. Vehicles will also be cleaned at the completion of the project or when off-road use for that vehicle has been completed.

Mitigation Measure Bio-5 (Proposed to supersede APM BO-3 “Avoidance of and minimization of potential impacts to special-status plants”): A pre-construction survey would be conducted by a qualified botanist or biologist prior to commencement of construction in each area. All rare plant populations would be appropriately marked or flagged for exclusion, or as appropriate, the limits of construction will be marked between the population and the work area. Surveys and marking or flagging must be completed no more than 30 days prior to construction. In the event that any previously unidentified listed plants, or CNPS List 1-3 plants cannot be avoided, PG&E would consult with the USFWS and/or the CDFG (depending on whether the species is on the federal or state list of sensitive species) to determine appropriate measures to minimize effects to the species and its habitat during construction of the project, as well as during operation and maintenance. The CPUC would be informed of the results of any agency consultations.

Special-Status Wildlife

Suitable habitat for special-status wildlife species is present along the power line alignment. Construction activities and pole installation in the vicinity of stock ponds, permanent seeps, drainage crossings, migration corridors, and aestivation habitat could potentially disturb or remove habitat occupied or potentially occupied by special-status insects, fish, amphibians, reptiles, birds, and mammals. Construction activities have the potential to directly or indirectly kill or harm eggs, juveniles, or adult special-status species. Specific impacts on special-status species are described below.

Amphibians and Reptiles. Some construction work areas are located within USFWS-designated habitat for the CTS. This habitat may be temporarily impacted by construction noise and ground disturbance; however, the project would not result in the net loss of habitat for this species. CRLF habitat areas would also be temporarily disturbed during construction activities. Special-status amphibians and some reptiles are especially sensitive to changes to aquatic resources or riparian habitat. Impacts could include increased sedimentation from construction runoff or hazardous materials entering drainages, wetlands, or waterways in the project area.

APM BO-4 would limit wetland habitat work to a single wetland northeast of SR 246 and restricts work within this area to during dry conditions only. Several components of APMs have been superseded here with mitigation measures for the purposes of fully reducing potential impacts to special status species to a less than significant level.

Potential impacts from construction activities on special-status amphibians or reptiles would be minimized with implementation APM BO-4 and mitigation measures Bio-1 through Bio-3 and Bio-6 through Bio-8. Mitigation measures Bio-6 through Bio-8 would supersede APM BO-5 “Pre-construction surveys and relocation of species”, “Seasonal timing restrictions” and “Minimization of burrow disturbance” for the purposes of including all special status species with potential to occur in the area, the inclusion of agency oversight, and the addition of proper protocol for covering burrows. APM BO-5 “Erosion control methods” would reduce potential harm to special-status species from entanglement and has not been superseded. In addition to these measures, the development of a SWPPP, referenced in APM BO-9, and an Erosion Control and Sediment Transportation Plan (ECSTP) (outlined in APMs WQ-1 and WQ-3/GM-3 and superseded by

mitigation measures Hydro-1 and Hydro-2) would further reduce impacts to special-status amphibians and reptiles to less than significant levels.

Mitigation Measure Bio-6 (Proposed to supersede APM BO-5 “Pre-construction surveys and relocation of species”): Pre-construction surveys for special-status amphibians and aquatic reptiles would be conducted no more than two weeks prior to the commencement of construction. Surveys would include work areas within 600 feet of suitable CTS breeding habitat and work areas within 300 feet of suitable CRLF aquatic habitat. Surveys would be conducted by a qualified, agency-approved biologist. Potential habitat for western spadefoot toad and western pond turtle exists in similar locations to those for CRLF and CTS. The biologist would relocate any special-status species to a location previously agreed upon by the USFWS and the CDFG. Before the start of work each morning, the biologist would check under any equipment and stored construction supplies left in the work area overnight within 600 feet of suitable habitat. All pole holes would be backfilled or covered at the end of the work day to prevent entrapment of special-status species.

Mitigation Measure Bio-7 (Proposed to supersede APM BO-5 “Seasonal timing restrictions”): All ground-disturbing construction activities within 600 feet of suitable habitat for CRLF, CTS, western spadefoot frog, and western pond turtle would be limited to May 1 through October 31, to the greatest extent feasible. For work in these areas, a qualified biologist would conduct a pre-construction survey of the work area immediately preceding construction activities. All potential habitat areas including burrows, woody debris piles, wetlands, riparian areas, and edges of ponds within the work area would be thoroughly checked. Any special-status species found would be captured and relocated to a FWS and CDFG approved location type (e.g., a small mammal burrow) and area, prior to the start of construction.

Mitigation Measure Bio-8 (Proposed to supersede APM BO-5 “Minimization of burrow disturbance”): Plywood sheets would be used to temporarily cover potentially active burrows in work areas within 600 feet of suitable breeding habitat. Burrows would be covered after re-location has taken place, if necessary, or otherwise specified in the Biological Opinion.

Birds and Bats. Potential impacts to special-status bird and bat species could result from construction activities. Impacts would be potentially damaging if species were disturbed during nesting or roosting activities (during the breeding season). Nearby suitable habitat may be indirectly impacted by human disturbance or incidental intrusion by construction personnel or equipment. Sensitive species such as the burrowing owl, as well as migratory birds, bats, or raptors, would likely leave the immediate area during construction; however, if construction occurred during the breeding season, special-status species could abandon nests or young.

The southwestern willow flycatcher and least Bell’s vireo are riparian obligate species that share very similar habitat requirements. Both species are known to nest in the riparian habitat found along the Santa Ynez River in the project area (Figure 3.5-1A). The riparian area surrounding the Santa Ynez River is critical habitat, designated by the USFWS, for the southwestern willow flycatcher. No ground disturbance would occur in the designated critical habitat area to avoid

effects to the species and its habitat. Other areas such as the narrow riparian habitat adjacent to Santa Rosa Creek (near Pole 83) are not designated critical habitat by USFWS, but could potentially support both species.

No riparian habitat would be removed or otherwise impacted by the project; however, nearby construction activities could potentially disturb both the southwestern willow flycatcher and least Bell's vireo if work occurred near suitable habitat and/or during the breeding season.

Several bat species could be found in the project area and habitat exists in the form of tree cavities and buildings in the project vicinity. Potential impacts to bats would be less than significant given the duration of the construction in a given area and that all tree trimming and removal (i.e., one Leland Cypress) would be done outside the roosting season.

APMs have been superseded here with mitigation measures for the purposes of fully reducing potential impacts to special status species to a less than significant level. APM BO-6 has been superseded with mitigation measure Bio-9 in order to expressly define the breeding season for raptors and other nesting birds as well as include protocols defined in the Avian Protection Plan. Mitigation measure Bio-10 has superseded APM BO-7 to fully reduce impacts to the western burrowing owl and maintain compliance with resource agency requirements. Mitigation measure Bio-10 has superseded APM BO-7 with the addition of agency requirements for survey timing and project-specific protocols. Mitigation measure Bio-11 has been added to reduce all potential impacts from owls or other species from inhabiting uncovered stored steel poles. Mitigation measure Bio-12 would supersede APM BO-8 to further define the protocols for surveys and avoidance of nesting birds or raptors in accordance to agency recommendations.

With implementation of APM BO-9 and mitigation measures Bio-1 through Bio-3 and Bio-9 through Bio-12, potential impacts to these special-status avian species would be reduced to a less than significant level. In addition to these measures, the development of a SWPPP and an ECSTP (outlined in APMs WQ-1 and WQ-3/GM-3 and superseded by mitigation measures Hydro-1 and Hydro-2) would further reduce impacts to special-status species with riparian or riverine habitat requirements to less than significant levels.

Mitigation Measure Bio-9 (Proposed to supersede APM BO-6 "Avoidance of and minimization of potential impacts to southwestern willow flycatcher and least Bell's vireo"): Work anticipated within 300 feet of the potential nesting habitat for these species and the designated critical habitat for southwestern willow flycatcher includes the use of pull site P1 and insulator replacement at Poles 4, 5, and 6. Insulator replacement and use of the pull site would be restricted to the non-nesting season. For the purposes of this measure, the nesting season for these species is considered to be March 15 to September 15. Additionally, the raptor nesting season extends from February 1 through August 15. Work within the period of February 1 to September 15 in this area would only occur if pre-construction surveys determine these species are not actively nesting within 300 feet of the work areas, or a qualified biologist is present during all activities to monitor for potential nest disturbance per an Avian Protection Plan as described in Avoidance and Minimization Measures (AMM) BO-8

Mitigation Measure Bio-10 (Proposed to supersede APM BO-7 “Avoidance of and minimization of potential impacts to western burrowing owl”): Pre-construction surveys would be conducted by a qualified biologist for burrowing owls for all project work areas that provide suitable nesting or wintering habitat (annual grasslands and pastures). Although burrowing owls are no longer known to nest in Santa Barbara County, the potential for nesting owls cannot be precluded. The work area surveys would take place within the ROW, covering the work area and surrounding areas visible from the ROW. The survey would include checking for the burrowing owl and owl signs (e.g., white wash at burrow entrances). If ground-disturbing activities in suitable habitat are delayed or suspended for more than 30 days after the pre-construction surveys, the site would be resurveyed. If no burrowing owls are detected, no further mitigation is necessary.

If active burrows are found near a work area, work in the vicinity of the burrows would be limited as follows:

- No disturbance would occur within approximately 160 feet (50 meters) of occupied burrows during the non-breeding season of September 1 through January 31, or within approximately 250 feet (75 meters) during the breeding season of February 1 through August 31
- The limits of the exclusion zone in the project work area will be clearly marked with signs, flagging and/or fencing

If work within these limits is unavoidable while burrows are active, work would only take place within the presence of a qualified monitor who would monitor to determine if the owls show signs of disturbance or, upon prior approval from CDFG a passive relocation effort (displacing the owls from the work area) may be conducted as described below, and subject to the approval of the CDFG.

Passive relocation of owls may occur during the non-breeding season (September 1 through January 31) with prior approval from CDFG. Passive relocation would include installing one-way doors on the entrances of burrows. The one-way doors would be left in place for 48 hours to ensure the owls have vacated the nest site. Owls would not be relocated during the breeding season.

Mitigation Measure Bio-11: The open ends of light-duty steel poles would be covered during storage to prevent burrowing owls or any other sensitive species from inhabiting the pole openings.

Mitigation Measure Bio-12 (Proposed to supersede APM BO-8 “Avoidance of and minimization of potential impacts to song birds, raptors and other migratory bird species”): Pre-construction bird nesting surveys for pull sites or locations of pole replacement or clearing and grading activities would be conducted before work performed between February 1 and August 15. See Avoidance and Minimization Measures (AMM) BO-5 for pre-construction survey requirements near the Santa Ynez River. Pre-construction surveys would be conducted within the ROW and from the ROW of areas visible from the ROW. To the extent possible, working in the vicinity of active nests would be avoided;

however, if avoidance is not practicable, a buffer zone, as determined by a qualified biologist, would be maintained around the active nest to prevent nest abandonment. In the event that work would take place within 50 feet (300 feet for raptors) of an active nest, a biological monitor would monitor the activity of the nesting birds during work to determine if construction activities are resulting in significant disturbance to the birds. If the qualified biologist determines that work is disrupting nesting, then work in that area would be halted until nesting is completed and the young have fledged. Monitoring guidelines would be provided in an Avian Protection Plan to be submitted to the USFWS and CDFG for review and approval prior to construction. Documentation of Plan approval would be submitted to the CPUC for recordkeeping.

Installation of the replacement power lines would conform to PG&E's most current version of Bird and Wildlife Protection Standards, and would include the use of bird guards.

American Badger, Insects, and Fish. The American badger could use open grasslands or coastal scrub habitats found throughout the project area for denning or foraging. Special-status insects could similarly be found throughout the project area. The Monarch butterfly has limited suitable roosting habitat available in and adjacent to the project area; however, the species was observed in flight during field reconnaissance. The project would avoid special-status species to the greatest extent feasible. Potential impacts to these animals would be reduced to less than significant levels with implementation of mitigation measures Bio-1 through Bio-3.

Southern steelhead habitat could occur within the Santa Ynez River or several tributaries (Alisal, Salsipuedes, and San Miguelito Creeks), in reaches upstream and downstream of the project vicinity. Construction activities could harm steelhead populations if concentrated or polluted runoff enters steelhead habitat. APM BO-4, APM BO-9, mitigation measures Bio-1 through Bio-3 and, the development and implementation of a SWPPP and an ECSTP (APMs WQ-1 and WQ-3/GM-3 are superseded by mitigation measures Hydro-1 and Hydro-2) would further reduce impacts to steelhead (discussed in Section 3.9).

Operation and Maintenance

Operation and maintenance activities for the proposed project would not change from the existing conditions; therefore, impacts to special-status species would be less than significant.

Potential Impact: Would the project substantially reduce or effect any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or the USFWS?

Construction

Riparian and wetland habitats found within the project area are known to support special-status species such as CTS and CRLF. CRLF upland habitat in the project area was estimated using a 300-foot buffer from known or potential aquatic habitats. This buffer was chosen because it generally characterizes the maximum distance CRLF adults or sub-adults are found from aquatic habitat in temperate conditions. During wet periods, CRLF can traverse longer distances from aquatic habitats, up to 1 mile. The 300-foot buffer area within the project area includes portions of existing

access roads and overland access routes, three pull and tension sites, and 10 pole work areas (Figures 3.5-1C, 3.5-2I, 3.5-2J, and 3.5-2P).

CTS upland habitat in the project area was estimated using a 600-foot buffer from known or potential aquatic habitats and includes portions of existing access roads and overland access routes, four pull and tension sites, and 18 pole work areas (Figures 3.5-1D, 3.5-1E, 3.5-2I, 3.5-2K, 3.5-2L, 3.5-2M, and 3.5-2P). Potential habitat for other amphibian or reptile special-status species such as the western spade foot toad and western pond turtle is also present within CRLF and CTS habitats.

Table 3.5-4 lists the approximate acreage for each work area type within upland habitat for CRLF, CTS, or other special-status amphibian or reptile species that may be temporarily impacted during construction.

Approximately 7.8 acres of habitat supporting special-status species would be temporarily impacted by construction activities including ground disturbance, vegetation management, and minor grading. Construction activities would be short-term and isolated to smaller segments of the overall route. Activities within pole work areas and pull and tension sites would temporarily disrupt habitats; however, the overall project footprint would not reduce the amount of critical habitat available. Work within USFWS-designated critical habitat areas (for CTS and southwestern

Table 3.5-4: Temporary Construction Impacts in Critical Habitat Areas	
California Red-legged Frog (CRLF) Upland Habitat	Approximate Area of Temporary Impact (acres)
Access Roads	0.83
Overland Access Routes	0.11
Pole Work Areas (Poles 31, 68, 69, 70, 72, 112, 113, 114, and 115)	0.68
Pull and Tension Sites (P9, P10, and P15)	0.47
Total	2.09
Access Roads	3.03
Overland Access Routes	0.58
Pole Work Areas (Poles 33, 34, 48, 49, 68, 69, 70, 71, 81, 82, 85, 86, 89, 90, 91, 114, 115, and 116)	1.45
Pull and Tension Sites (P4, P9, P12, and P15)	0.64
Total	5.7

SOURCE: CH2M Hill 2009b

willow flycatcher) would be limited to eight pole work sites, one set of pull and tension sites, existing access roads, and overland access routes through grassland or agricultural fields. No grading, vegetation removal, or tree trimming is proposed within USFWS-designated critical habitat, and all disturbances would be temporary. Habitat disturbance would be limited to impacts related to elevated noise, human disturbance, and isolated areas of ground disturbance from digging and the use of vehicles and construction equipment. Impacts to sensitive habitats would be reduced to less than significant levels with the implementation of APMs BO-1, BO-4, BO-5 “Dawn and dusk timing requirements” and “Erosion control methods” and mitigation measures Bio-1 through Bio-3 and Bio-5 through Bio-8.

Operation and Maintenance

Operation and maintenance activities for the proposed project would not change from existing conditions; therefore, impacts to special-status species would be less than significant.

Potential Impact: Would the project substantially disturb federally protected wetlands, as defined in Section 404 of the Clean Water Act (including, but not limited to, marshes, riparian woodlands, or vernal pools) through direct removal, filling, hydrological interruption, or other means?

Construction

Impacts to jurisdictional wetlands as defined by the U.S. Army Corps of Engineers would be limited to a single seasonal wetland northeast of SR 246. Work would require removing two poles (Poles 69 and 70) and replacing one pole (Pole 69) in the wetland northeast of SR 246 (Figure 3.5-1I). Pole 70 would be re-installed outside the wetland area, within the alignment, approximately 35 feet northeast of its current location. Potential adverse impacts to wetlands could occur if hazardous materials (e.g., oils and fuels) or sediment-laden runoff was accidentally released into wetlands. Pole removal would result in a net increase of aquatic habitat (approximately 2 square feet). All ground disturbance within the wetland would occur during dry conditions and timing would be dependent on seasonal rainfall. The proposed project would also follow conditions set forth in federal and state permits required for project construction. These may include a Section 404 permit for construction activities involving excavation of, or placement of fill material into, waters of the United States, and a Water Quality Certification pursuant to Section 401 of the Clean Water Act. Implementation of APMs BO-4, BO-9 and mitigation measures Bio-1 through Bio-3 and Hydro-1 and -2 (the development of a SWPPP and ECSTP) would reduce potential impacts on jurisdictional wetlands to a less than significant level.

Operation and Maintenance

Temporary disturbance of protected habitats along the power line for operation and maintenance activities would continue in accordance with existing PG&E protocols. Impacts to jurisdictional wetlands would be less than significant.

Potential Impact: Would the project substantially interfere with the movement of any resident or migratory fish or wildlife species?

Construction of the project would not impact the movement of established or migratory wildlife species. The project would only replace existing components of a 115 kV power line. Some project

activities including vegetation clearing, road grading, and pole installation could generate noise, which could disturb nearby wildlife; however, many wildlife species in the area are diurnal and generally migrate at dawn before construction would take place. Potential impacts from these activities would be less than significant due to the short-term nature of the disturbance and the abundant suitable habitat surrounding the project area for migration.

Operation and maintenance for the proposed project would not change from the existing conditions. Impacts to migration corridors resulting from operation and maintenance would be less than significant.

Potential Impact: Would the project conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Construction of the proposed project would require removing a single Cypress tree located within the ROW near Pole 124 to allow access and delivery of materials. Santa Barbara County's tree preservation policy is specific and limited solely to the preservation of oak trees. No impacts would occur because tree removal would be limited a single tree as stated in APM BO-2 "Tree removal" and would not violated Santa Barbara County's policy.

Operation and maintenance of the proposed project could require occasional tree trimming or possibly removal of trees if surrounding vegetation interfered with power line operations or created a safety hazard. Tree trimming and removal within the PG&E ROW would not conflict with local policies and ordinances.

Potential Impact: Would the project conflict with a local Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state plan?

There are no HCPs, NCCPs, or other approved local, regional, or state conservation plans for the project area. Construction and operation and maintenance activities for the proposed project would have no impact.

3.6 Cultural Resources

3.6.1 ENVIRONMENTAL SETTING

Archaeology

Prehistory

The Early Holocene (circa 8000–6000 B.C.) was a period of low population density, simple technology, and egalitarian social organization (Erlandson 1994). During this time, it appears that people subsisted largely on plants, shellfish, and some vertebrate species. The subsequent period (6000–1400 B.C.), referred to by King (1990) as the Early Period, is distinguished from the Early Holocene by technological changes. The most important technological change was the addition of *manos* and *metates* (handstones and milling slabs) to the tool kit, probably indicating a greater reliance on hard seeds from the chaparral plant community. Toward the end of the Early Period, mortars and pestles were added to the artifact inventory, probably indicating systematic exploitation of acorns (Glassow and Wilcoxon 1988).

Technological innovations during the Middle Period (1400 B.C.–A.D. 1150) included development of the *tomol* (plank canoe) and most of the sophisticated fishing technology used until historic times. The *tomol* was utilized by the Chumash south of Point Conception where ocean conditions were more favorable, and it allowed for a greater reliance on marine resources, particularly fish, for food.

Ethnography

The project lies within the ethnographic territory of the Chumash, one of the most populous and socially complex Native American groups in California. The Chumash people lived in large villages along the Santa Barbara Channel coast, with less dense populations in the interior regions, on the Channel Islands, and in coastal areas north of Point Conception. The Chumash were hunter-gatherer-fishers who relied on a variety of resources for subsistence and raw materials. The Chumash had considerable seasonal and regional variability in land use, settlement, and subsistence practices across Chumash territory; people who lived near the coast focused animal procurement activities on the marine environment, while those north of Point Conception and in the interior regions were more terrestrially focused. Trade or acquisition of various resources through expeditions was a regular occurrence. Animal remains and lithic raw materials are often found in archaeological sites at some distance from their sources.

History

The project area is within the vicinity of two Spanish missions, La Purísima Concepción in Lompoc and Santa Inés in Solvang. When Mexico won its independence from Spain in 1822, California became a Mexican territory. Over the next 20 years, mission lands were gradually transferred to private ownership via a system of land grants. Sheep and cattle ranching became the primary economic activities on these land grants. With the signing of the Treaty of Guadalupe-Hidalgo in February 1848, California became an American territory.

Rufus T. Buell, along with his brother, bought acres of the Rancho San Carlos de Jonata at the eastern end of the valley and began raising cattle. The ranch prospered until the drought of 1876–

1877, when Buell was forced to sell the ranch (Buellton Chamber of Commerce 2008). Part of the former Buell Ranch acreage became the community of Solvang, established in 1910 by a group of Danish educators from the Midwest. They purchased and developed a place that Americans of Danish descent and immigrant Danes could settle and build. Traditional Danish architecture was used to build the town of Solvang.

Construction of the Santa Ynez River Bridge in 1918 extended the Coast Highway (now US 101) through the Buell Ranch and prompted establishment of the town of Buellton in that year. Buellton developed into a service community with motels, diners, and service stations to meet the needs of highway travelers.

Paleontology

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These include mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. The fossil record is the only evidence that life on earth has existed for more than 3.6 billion years. Fossils are considered nonrenewable resources because the organisms they represent no longer exist. Once destroyed, a fossil can never be replaced.

The project area is underlain by a variety of Tertiary (65 to 1.8 million years ago) and Quaternary (1.8 million years ago to present) sedimentary units. Stratigraphic units found within the project area with potential to contain paleontological resources are listed below:

- Monterey Shale
- Sisquoc Formation
- Careaga Sandstone
- Paso Robles Formation
- Older dissected surficial sediments
- Surficial sediments

Some stratigraphic units found within the region have produced significant vertebrate fossil remains; however, these fossil types are usually rare, sporadic, and localized. Most fossil deposits in these units are common marine invertebrates.

Cultural Resources Records Search Results

A record and information search of the project area was conducted on September 5, 2008, at the Central Coast Information Center of the California Historical Resources Information System, at the University of California, Santa Barbara (CHRIS UCSB). The records search revealed 28 prior

cultural resource investigations within 0.25 mile of the project corridor¹. Most of these were small surveys. One large area survey (Van Horn 1979) encompassed the entire western half of the power line route, but the study did not include a field survey. Generally, most of the power line route has not been previously surveyed.

Five previously documented cultural resources are located within 0.25 mile of the project area. Four of these were noted by the CHRIS UCSB; the fifth (CA-SBA-2687) was discovered during investigations for the Coastal Branch Aqueduct and documented by Price et al. (2006). Previously documented cultural resources are presented in Table 3.6-1.

Field Survey for Cultural Resources

A pedestrian survey of the entire project area was conducted, between September 2008 and June 2009, to identify any archaeological or historical resources that may be impacted by the project. Archaeologists inspected the alignment along the length of the power line using linear transects spaced 10 to 15 meters apart, depending on terrain, vegetation, and ground surface visibility. Survey boundaries include the following areas:

- 300-foot buffer zones around Cabrillo Substation and Santa Ynez Switching Station to accommodate project staging areas
- 100-foot buffer zones around 10 guard structure locations
- 300-foot buffer zones around 11 poles originally thought to be pulling/tensioning sites
- 40 x 100-foot blocks around 15 additional pulling/tensioning sites
- 3 potential lay down areas for helicopter access (200 by 200 feet each)
- 4.18 miles of proposed overland access routes
- Portions of existing access roads (totaling 0.68 miles) that would be re-established for vehicle use through vegetation management and minimal grading

One previously undocumented historical site was identified during the field inventory. AE-1857-3H consists of a wooden water tank and associated concrete cattle trough, most likely dating to the mid twentieth century. The site measures 75 feet by 30 feet, as defined by the visible extent of features. No surface artifacts were observed in the vicinity. Dense mustard, fennel, and other exotic vegetation obscure much of the ground surface and visibility was low, approximately 5 percent.

Three isolated archaeological artifacts were recorded within a 1 kilometer area between poles in addition to the historical site. A description of the artifacts is presented in Table 3.6-2.

¹ Two studies were omitted from the list provided by the CHRIS UCSB. The Mission Hills-Santa Ynez Extension of the Coastal Branch Aqueduct, a part of the State Water Project, traversed the same general region as the current project and passes beneath the power line near the point where it crosses SR 246, near Pole 69. Archaeological studies for the Mission Hills-Santa Ynez extension are reported by Price et al. (2006). Additionally, the Information Center records search did not identify the report evaluating the National Register significance evaluation of CA-SBA-2687, a prehistoric archaeological site along Zaca Creek immediately north of Santa Ynez Switching Station (McKim et al. 1996), although it did retrieve information on the Phase 1 survey for the same project (McKim and Price 1996). It is unclear why these two reports are not included in the CHRIS UCSB files.

Table 3.6-1: Previously Identified Resources within 0.25 Mile of the Proposed Project

Date	Project Title	Authors	Resource
1982	Archaeological Survey of the Hauenstein Property (APN-83-080-17) in Lompoc, California	Spanne, L.	CA-SBA-1751
1992	Results of Phase One Archaeological Surface Survey for the Mission Oaks Ranch Project near Buellton, Santa Barbara County, California	Gibson, R.& Parsons, J.	CA-SBA-2639
1996	Archaeological Survey Report for the Jonata Park Road Bridges Replacement Project, Santa Barbara County, California	McKim, R.& Price, B.	CA-SBA-3387
2000	Historic American Engineering Record for Zaca Creek Bridge Number 1	Palmer, K.	P-42-040705
2006	Final Report of Archaeological Investigations, Mission Hills/ Santa Ynez Extension, Coastal Branch Aqueduct, Phase II	Price et al.	CA-SBA-2687

SOURCE: CH2M Hill 2009

Table 3.6-2: Isolated Artifacts During Field Surveys

Resource Number	Resource Description
AE-1857-1I (Primary Number P40-039793)	Chert flake tool
AE-1857-2I (Primary Number P40-039794)	Exposed rhyolite flake fragment
AE-1857-4I (Primary Number P40-039795)	Lead bullet (projectile) possibly dating to the mid-1800s

SOURCE: CH2M Hill 2009

Native American Consultation

The Native American Heritage Commission (NAHC) in Sacramento was contacted on September 19, 2008, to determine if any sites recorded in the Commission's Sacred Lands Inventory occur in or near the project area. The NAHC indicated in their response, dated September 23, 2008, that no sites have been recorded within the project area in the Sacred Lands Inventory. The NAHC provided a contact list of six local Native American tribal representatives with interests in and knowledge about the area. Informational letters were sent out to each of these tribal representatives advising them about the project and soliciting their input. The letters were followed-up with telephone calls to each of these representatives. Records of consultations are available in the PEA (CH2M Hill 2009). None of the Native American representatives consulted for the project expressed concern over potential impacts to significant cultural resources.

3.6.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

CULTURAL RESOURCES – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☒	☐	☐
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Impact Discussion

Potential Impact: Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

The field survey revealed that none of the five previously discovered sites extend into the project area and would not be impacted by work required for reconductoring the power line.

Construction has the potential to affect one newly discovered historical site identified during the field inventory. AE-1857-3H has not been evaluated for NRHP or CRHR eligibility to determine whether the site qualifies as a historical resource. To ensure that this cultural resource would not be affected, APM CR-1 and CR-2 would be implemented. APM CR-1 requires that the archaeological site is marked for avoidance. APM CR-2 would require implementing a Worker Education Program prior to the start of construction. This program would present workers with a review of applicable laws pertaining to historic preservation, discussion of site avoidance requirements, and procedures to be followed throughout project implementation for the preservation of cultural resources.

Some potential exists to encounter previously undiscovered historic resources during project implementation. If a previously undiscovered historic resource is encountered and it is eligible for listing in the NRHP, then any impacts to that resource would be potentially significant. APM CR-3 would require construction work adjacent to any unanticipated discoveries to be halted.

Implementation of APMs CR-1 through CR-3 would reduce potential impacts to historic resources to less than significant levels.

Potential Impact: Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

The project would not affect any known archaeological resources. Three isolated archaeological artifacts were identified during the survey; however, none of these would qualify as a unique archaeological resource per Section 21083.2 of the Public Resources Code.

It is unlikely that any previously undiscovered, significant archaeological artifacts or sites would be discovered during project implementation given the steep slopes, shallow soils found across much of the project area, and the limited amount of ground disturbance required. Impacts to archaeological resources would be less than significant with the implementation of APMs CR-2 and CR-3.

Potential Impact: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Several stratigraphic units within the project area have the potential to contain significant paleontological resources, such as vertebrate fossils. The power line is located in an existing corridor and other ground disturbing activities, such as road re-grading and vegetation management, would be limited to previously disturbed areas. It is very unlikely given the minimal ground disturbance required for the project that paleontological resources would be encountered during construction. In the unlikely event that paleontological resources are encountered during construction, measures are required to evaluate and protect these resources.

Mitigation measure Cultural-1 was added to specifically address impacts to paleontological resources, which were not previously covered in APMs CR-2 or CR-3. Mitigation measure Cultural-1 would be implemented to educate workers on the potential presence of paleontological resources and how to protect paleontological resources from harm during construction. Impacts would be reduced to a less than significant level with the implementation of mitigation measure Cultural-1.

Mitigation Measure Cultural-1: Environmental training would be provided to workers regarding the protection of paleontological resources and procedures to be implemented in the event fossil remains are encountered by ground-disturbing activities. This training may be combined with other environmental training for the project, provided that the program elements pertaining to cultural resources are provided by a qualified instructor meeting applicable professional qualification standards.

In the unlikely event that previously unidentified paleontological resources are uncovered during implementation of the project, all ground disturbing work would be temporarily halted or diverted away from the discovery to another location. PG&E's paleontological resources specialist or his/her designated representative would inspect the discovery and determine whether further investigation is required. If the discovery is significant, but can be avoided and no further impacts would occur, the resource would be documented in the appropriate paleontological resource records and no further effort would be required. If the resource is significant, but cannot be avoided and may be subject to further impact, PG&E

would evaluate the significance of the resources, and implement data recovery excavation or other appropriate treatment measures as recommended by a qualified paleontologist.

Potential Impact: Would the project disturb any human remains, including those interred outside of formal cemeteries?

The potential of encountering human remains within the project area is very low given the limited amount of subsurface disturbance and the nature of construction methods employed. If human remains are identified during project construction, the project would comply with all applicable federal, state, and local laws which govern the procedures involved in the notification, recovery, and handling of human remains and unmarked graves. Impacts to human remains would be less than significant.

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3.7 Geology and Soils

3.7.1 ENVIRONMENTAL SETTING

Geology and Physiography

The project area extends from the east end of the Lompoc Valley (Cabrillo Substation), across the Santa Rita Hills and southern margin of the Santa Rita Valley, and through the southern part of the Purisima Hills. The power line alignment is located in a transitional region between the Transverse Ranges Province and the Coast Ranges Province within a group of valleys and hills, north of the Santa Ynez Mountains, that have a general west to northwest trend (Dibblee 1982). The topography is characterized by flatlands, gently rolling hills, and intervening valleys, with some moderately steep terrain in the eastern half of the project area. Ground surface elevations range from approximately 100 feet above mean sea level (amsl) in the City of Lompoc to nearly 1,000 feet amsl between Crawford Canyon and Cañada de los Platos Blancos (USGS 1959a, 1959b, and 1982).

The project area is located within a geologically complex, seismically active region. It is underlain by a variety of deposits, including unconsolidated alluvium and bedrock. The project area lies in the southern part of the Santa Maria Basin, a structural wedge bounded by the Santa Lucia and San Rafael Mountains on the northeast and the Santa Ynez Mountains to the south. The region was subjected to compression and uplift during Pliocene and Quaternary times. Seismic activity, compressive earthquakes, folded Quaternary deposits, and recent geodetic measurements provide evidence that convergence is active (Namson and Davis 1990).

Geologic Units

Geologic units within the basin include a thick succession of Cretaceous- through Quaternary-age sedimentary and volcanic formations. The power line is underlain by a variety of Tertiary and Quaternary sedimentary units (Figure 3.7-1). A list of the units (from oldest to youngest) within the power line ROW is presented below:

- Monterey Formation (late Miocene age)
- Sisquoc Formation (late Miocene age)
- Careaga Formation (late Pliocene age)
- Paso Robles Formation (Pleistocene and latest Pliocene age)
- Older Dissected Surficial Sediments (Pleistocene age)
- Surficial Sediments (Holocene/Recent age)

Soil Types and Hazards

Soil Types

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service has mapped soils found in the project area. A complete list of soil units present within the project area is available in Appendix D. Major soil types identified along the alignment range from fine sandy loam to clay loam (USDA 2009). Soils are a mixture of sandy soils with low to moderate erosion potential and clay loams with severe erosion potential. A map depicting the distribution of the various soil types along the power line corridor is shown on Figure 3.7-2.

Expansive and Collapsible Soils

Expansive soils are those that contain significant amounts of clays that expand when wetted. Expansive soils can cause damage to foundations if moisture collects beneath structures. Geologic units along the alignment primarily consist of sand, with lesser amounts of silt and clay. The potential for encountering expansive soils throughout most of the project alignment is relatively low. The east end of the alignment (Poles 132 to 134), however, is underlain by Monterey Formation shale, a fine-grained unit containing expansive clays (Figure 3.7-1). Several of the soil units shown on Figure 3.7-2 consist of clay loams with moderate to high shrink-swell potential.

Soil collapse occurs when increased moisture causes chemical or physical bonds between the soil particles to weaken, which allows the structure of the soil to collapse and the ground surface to subside. Collapsible soils are generally low-density, fine-grained combinations of clay and sand left by mudflows that have dried, leaving tiny air pockets. When the soil is dry, the clay is strong enough to bond the sand particles together. When the clay becomes wet, moisture alters the cementation structure and the soil's strength is compromised, causing collapse or subsidence. Collapsible soils may be present in the project area.

Erosion

Erosion is the process by which rocks, soil, and other land materials are abraded or worn away from the earth's surface over time. The erosion rate depends on many factors, including soil type, geologic parent material, slope, soil placement, vegetation, and human activity.

Soil and bedrock materials along the power line alignment are primarily composed of weakly consolidated sandy materials and clay floodplain deposits in the lower alluvial drainages. Soil types, according to the USDA (2009) maps, are classified as clay loam to sandy loam. Fractured Monterey Formation shales are exposed near Santa Ynez Switching Station. Depending on the nature and extent of fracturing, the Monterey Formation could potentially be susceptible to erosion. The Careaga Formation, composed of soft sandstone and sand, also is susceptible to erosion. The potential for erosion varies from low in the flat-lying areas in the western part of the corridor to moderate or high in the steeper terrain in the eastern part of the corridor. Significant erosion exists adjacent to Poles 62 and 93 and is shown in Figure 3.7-1.

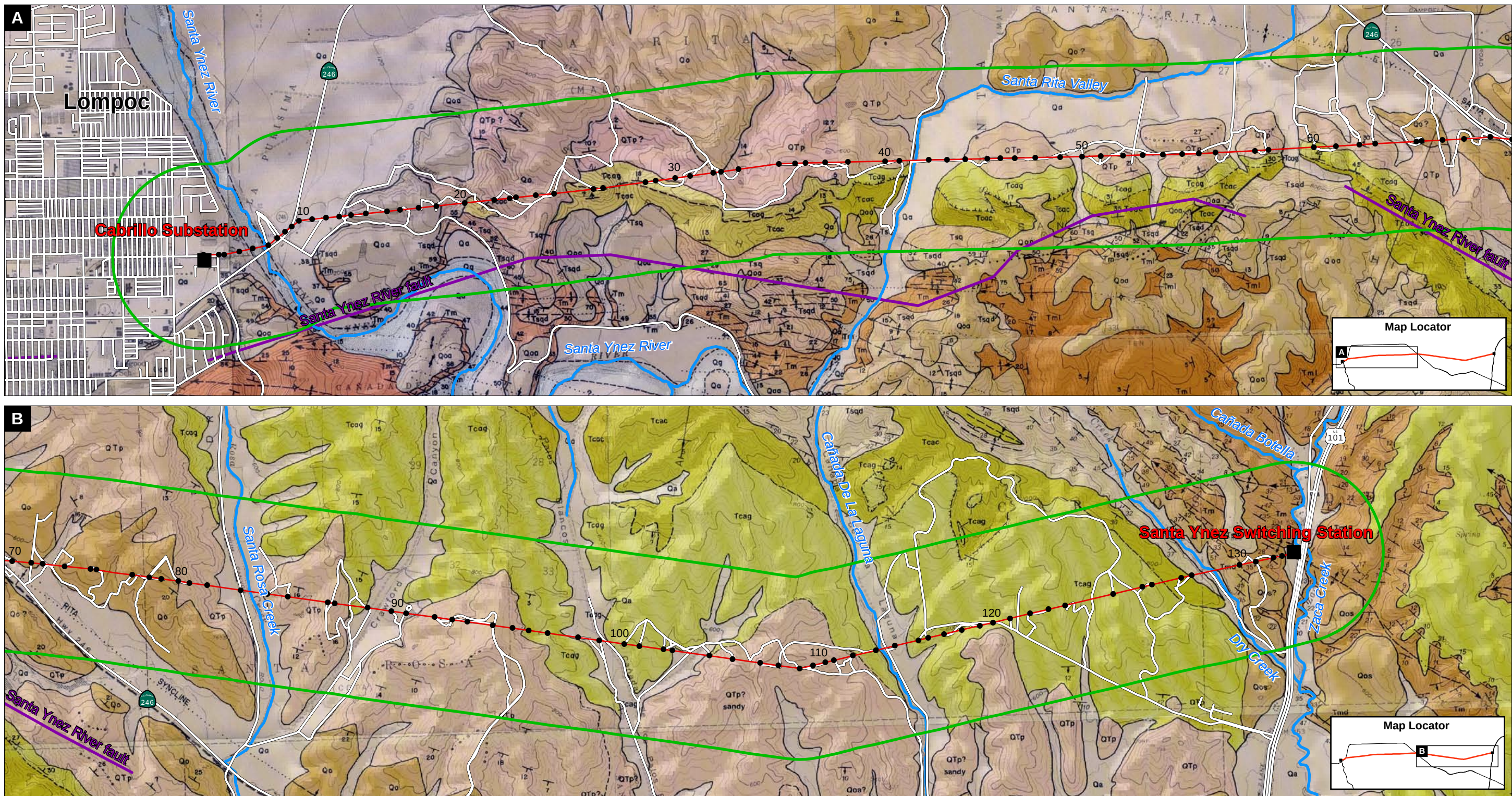
Subsidence

Subsidence is deep-seated settlement due to the withdrawal of fluid (oil, natural gas, or water). Subsidence can sometimes be measured in tens of feet and typically occurs in broad valleys underlain by thick sequences of alluvial sediments. No areas have been identified in Santa Barbara County where subsidence has been a problem (Santa Barbara County 1979).

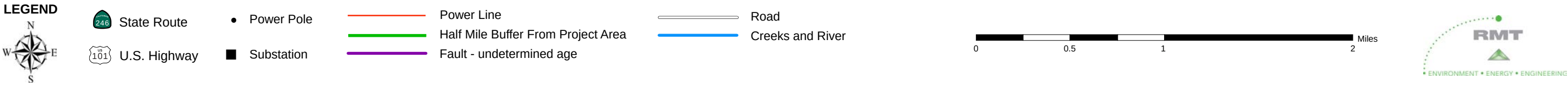
Landslides

A landslide is defined as the slipping down or flowing of a mass of land (rock, soil, and debris) from a mountain or hill. Landslide potential is high in steeply sloped areas underlain by alluvial soils, thinly bedded shale, or clay bedrock where the bedding planes are oriented in an out-of-slope direction (bedding plane angles that are greater than horizontal, but less than the slope face).

Figure 3.7-1: Geologic Features in the Project Area



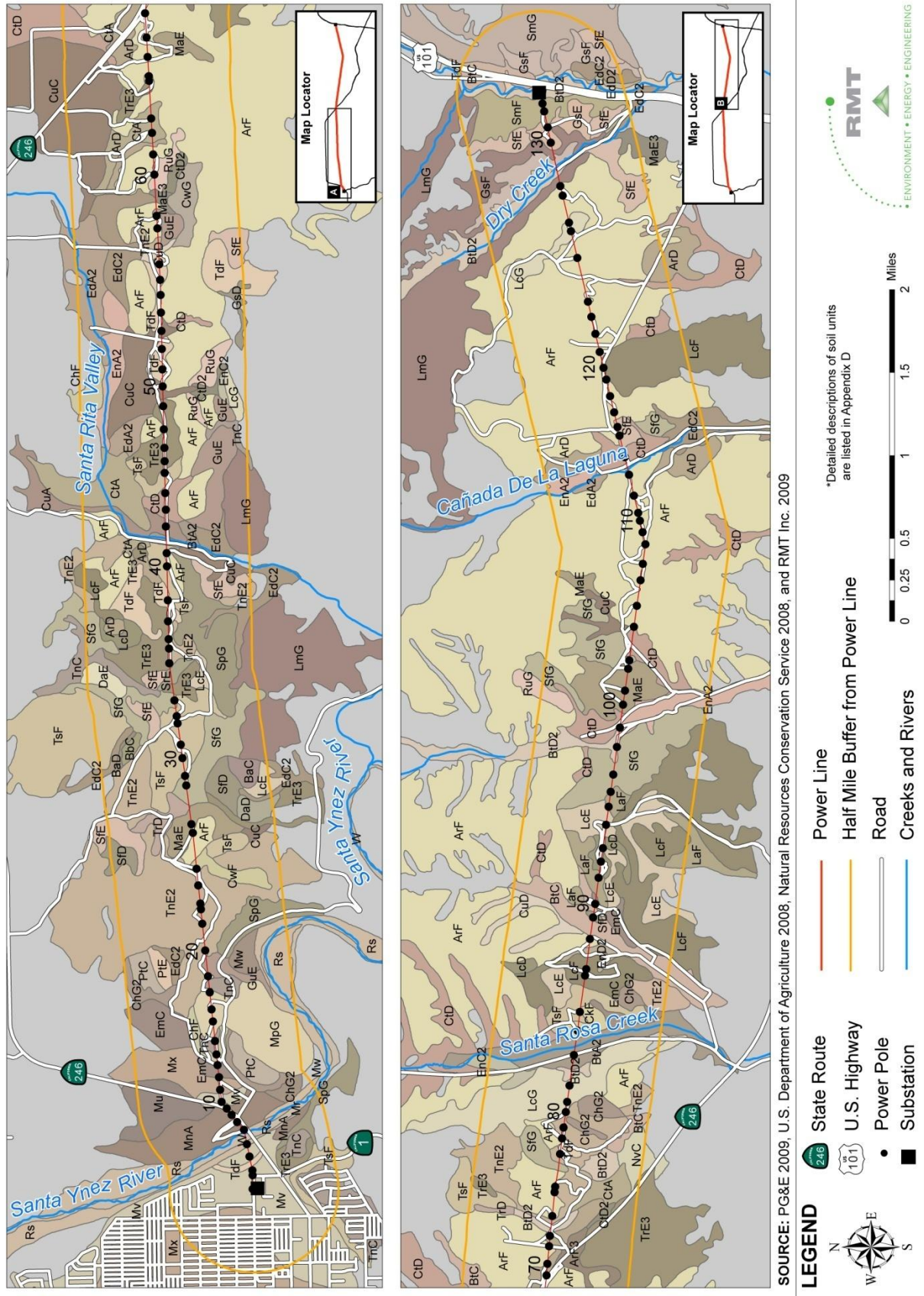
SOURCE: PG&E 2009, Dibblee 1950, U.S. Geological Survey, EROS Data Center, Sioux Falls, SD 2009, and RMT Inc. 2009



LEGEND		
	Qg - stream channel deposits of gravel, sand, and silt	
	Surficial Sediments Qa - valley, floodplain and stream channel alluvial deposits of gravel, sand, and clay; dissected by active stream channels	Formation Contact dashed where inferred or indefinite
	Landslide Debris	Member Contact between units of a formation
 	Older Dissected Surficial Sediments remnants of weakly indurated older alluvial sediments Qoa - older alluvial gravel, sand, and clay Qo - Orcutt Sand: tan to rusty brown, wind-deposited sand, locally pebbley at base	Contact Between Surficial Sediments located only approximately in places
 	Paso Robles Formation weakley consolidated valley alluvial sediments, deposited by streams that drained from rising San Rafael Mountains; Pleistocene and latest Pliocene QTps - light gray to tan pebbly sand west of Canada Laguna; with 0-66ft (0-2m) of fresh water gray-white marly limestone (Los Alamos Marl) at base; sand and limestone disappear eastward QTp - light gray conglomerate or gravel composed of white siliceous shale pebbles of Monterey shale in sandy to clayey matrix; crudely to cross-bedded, includes pebbly sand and greenish gray claystone; mostly pebbly sand and clay in Santa Rita Valley Region	Fault dashed where indefinite or inferred, dotted where concealed, queried where existence is doubtful. Parallel arrows indicate inferred relative lateral movement. Relative vertical movement is shown by U/D (U=upthrown side, D=downthrown side). Short arrow indicates dip of fault plane. Sawteeth are on upper plate of low angle thrust fault.
 	Careaga Sandstone shallow marine clastic regressive, weakley induratd; late Pliocene age Tcag - Graciosa Member: massive gray-white to tan soft sandstone or sand, in part nonmarine and wind deposited, locally pebbley at base Tcac Cebada Member: massive tan to yellow, soft, fine grained sandstone or sand, includes a thin fossiliferous calcarious layer at top locally	Folds arrow on axial trace of fold indicates direction of plunge; dotted where concealed by surficial sediments
	Foxen Claystone marine clastic; middle to late Pliocene age Tt - gray, soft, massive claystone or siltstone, crumbly where weathered	Strike and Dip of Stratified Rocks
	Sisquoc Formation marinebiogenic to clastic; late Miocene age (Late Mohnian-Delmontian Stage) Tsq - light gray, soft, slightly diatomaceous claystone Tsqd - mostly cream-white diatomaceous claystone or shale, semi-siliceous, massive to vaguely bedded, coherent, impervious, but closely fractured, crumbly where weathered; includes nearly white, somewhat punky bedded diatomite in upper part Tsqb - burned shale within basalt TSqd: once partly molten by underground combination; occurs as brown, red and yellow, frothy, subglassey rock, below Careaga tar sand at Redrock Mountain	metamorphic or igneous rock foliation or flow banding
 	Monterey Shale marine biogenic; middle and late miocene age Tmd - uppermost local unit; nearly white, soft, punky, laminated diatomite; includes thin layers (few inches or centimeters thick) of gray chert locally; probably Mohnian Stage Tm - upper shale unit: constitutes major part of Monterey Shale in Purisima Hills; siliceous shale; dark gray-brown; bituminous, weathers white, laminated, hard, thin bedded platy shale to closely fractured brittle, gray, cherty shale; includes thin layers of soft fissile shale; Mohnian Stage Tml - lower shale unit in Santa Rita Hills; semi-siliceous shale, soft, fissile to punky, thin bedded, gray-brown shale that weathers cream-white; contains abundant diatom debris, foraminifora, and fish scales; includes some hard, platy siliceous shale and occasional thin, hard, light gray to yellow-tan dolomite-limestone layers; lower Mohnian-Luisian-Relizian Stages	



Figure 3.7-2: Soils in the Project Area



Several potential landslide areas are present along the power line corridor. The surface expression of landslide-related features mapped along the power line corridor is subtle, with the exception of well-expressed recent slides located downhill of Pole 38, suggesting these features are relatively old (Figure 3.7-2). The mapped slides are potentially active and may experience movement during large earthquakes or periods of significant precipitation. Pole 95 is the only pole located within a mapped landslide (Figure 3.7-2). There is no evidence of recent movement of the landslide, but there is potential long-term concern for slope stability at this location. Poles 60, 62, and 93 are located upslope of active gullies (Figure 3.7-2) but are located on apparently stable hillside deposits. Steep slopes near the Santa Ynez Switching Station may make the area susceptible to landsliding.

Local Faults and Seismicity

Faults

The project area lies within a seismically active region with several active and potentially active faults, including blind thrust faults. There is a 97 percent chance of a M6.7 or greater earthquake and a 37 percent chance of a M7.5 or greater earthquake occurring in southern California within the 30-year period from 2009 to 2039 (2007 Working Group on California Earthquake Probabilities 2008).

The Alquist-Priolo Earthquake Fault Zoning Act designates earthquake fault zones based on the presence of a sufficiently active and well-defined fault. The California Geological Survey (CGS); previously the Division of Mines and Geology) developed criteria to classify fault activity for the Alquist-Priolo Earthquake Fault Zoning Act (Hart and Bryant 1999). By definition, an active fault is one that is “sufficiently active and well-defined,” with evidence of surface displacement within Holocene time (about the last 11,000 years). These terms are defined in Special Publication 42 (Hart and Bryant 1999).

A potentially active fault displaces Quaternary deposits (last 1.6 million years). Potentially active faults also represent possible surface rupture hazards, although to a lesser degree. In contrast to active or potentially active faults, faults considered inactive have not moved in the last 1.6 million years.

Faults that have a potential to impact the project area are listed in Table 3.7-1. These faults are within 12 miles of the project area and are recognized as active or potentially active. Approximate distances of the nearest point along the power line alignment to the faults and Maximum Credible Earthquake magnitude for each fault are also listed. The power line corridor does not cross any active or potentially active faults (Figure 3.7-1). Fault rupture potential in the project area is considered low.

Ground Motion

An earthquake along any of the fault zones listed in Table 3.7-1 is capable of generating very strong ground motion or shaking along the proposed project route. Other regional fault zones, such as the San Andreas Fault, are also capable of generating strong ground motion along the route.

Table 3.7-1: Regional Faults within 12 Miles of the Project Area

Fault Name	Approximate Distance from Project Area (mi)	Fault Length (mi)	Slip Rate (mm/yr)	Maximum Credible Earthquake Magnitude (Mw)
Santa Ynez River	0.3	37	N/A	7.50
Honda	0.9	7	N/A	6.25
Los Alamos-Baseline	3.4	30	0.7	6.75
Lion's Head	3.6	25	0.02	6.50
Santa Ynez-West	7.5	25	1.0 to 5.0	7.50
Santa Ynez-South	7.5	9	0.2 to 1.0	7.50
Pacifico	8.0	14	0.2	6.50
Santa Maria River-Foxen Canyon	10	49	N/A	6.50
Casmalia	12	29	0.3	6.75

SOURCES: USGS 2009; Mualchin 2006

Approximate ground motion parameters were estimated for both end points of the project alignment. The parameters presented in Table 3.7-2 represent a 10 percent probability of being exceeded during a 50-year period. They are expressed as a fraction of the acceleration due to gravity (g). Three ground motion values are shown: peak ground acceleration (PGA), short-period (0.2-second) spectral acceleration (S_a), and moderately long period (1.0-second) spectral acceleration. Each ground motion value is shown for three site conditions: firm rock, soft rock, and alluvium. The proposed project is underlain primarily by alluvium and possibly soft rock.

Liquefaction

Liquefaction is a phenomenon in which water-saturated, cohesionless sediments, such as sand and silt, temporarily lose their strength and liquefy. Liquefaction occurs when saturated sediments are subjected to dynamic forces, such as intense and prolonged ground shaking during an earthquake. Liquefaction typically occurs when groundwater is shallow (i.e., less than 50 feet below ground surface) and soils are predominantly granular and unconsolidated.

The potential for liquefaction in the project area is considered low to moderate. Depth to groundwater in the project area ranges from approximately 20 feet to more than 200 feet below ground surface (CDWR 2009). The highest potential for liquefaction occurs within and adjacent to the Santa Ynez River at the west end of the project area near Cabrillo Substation.

Lateral Spreading

Lateral spreading is a phenomenon that involves lateral displacement of large, intact blocks of soil down gentle slopes or toward a steep free face such as a stream bank. Lateral spreading occurs as a result of liquefaction of a shallow underlying deposit during an earthquake. It typically occurs on

Table 3.7-2: Estimated Ground Motion Parameters in the Project Area

Ground Motion	Firm Rock (g)	Soft Rock (g)	Alluvium (g)
<i>Santa Ynez Switching Station, Buellton</i>			
PGA	0.361	0.370	0.406
S _a (0.2-second)	0.848	0.881	0.964
S _a (1.0-second)	0.304	0.339	0.466
<i>Cabrillo Substation, Lompoc</i>			
PGA	0.294	0.313	0.347
S _a (0.2-second)	0.693	0.744	0.834
S _a (1.0-second)	0.241	0.304	0.385

SOURCE: CGS 2008

slopes of 0.3 to 5 percent underlain by loose sands and a shallow water table. Conditions conducive to lateral spreading include gentle surface slope, a shallow water table, and liquefiable cohesionless soil. These conditions commonly are found along streams banks, canals, or cut slopes in recent alluvial or deltaic deposits. Structures located at the head of the slide may be pulled apart and those at the toe of the slide may buckle or compress.

The potential for lateral spreading in the project area is similar to that for liquefaction (i.e., low to moderate). Likewise, the highest potential for lateral spreading occurs within and adjacent to the Santa Ynez River at the west end of the project area near Cabrillo Substation.

3.7.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

GEOLOGY AND SOILS – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map?	☐	☐	☐	☒
(ii) Strong seismic ground shaking?	☐	☐	☒	☐
(iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
(iv) Landslides?	☐	☐	☒	☐

Checklist (Continued)

GEOLOGY AND SOILS – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
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, liquefaction, lateral spreading, or subsidence?	☐	☒	☐	☐
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), or collapsible soil, creating substantial risks to life or property?	☐	☐	☒	☐
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map?

The power line corridor does not cross any active or potentially active faults, and the nearest designated Alquist-Priolo Fault Hazard Zone is a segment of the Los Alamos fault located 3.5 miles north of the power line. The risk of fault rupture is greatest in the immediate vicinity of active faults. No recognized active faults underlie the project alignment; therefore, no impacts from fault rupture are anticipated.

(ii) Strong seismic ground shaking?

Construction

The proposed project is located in a region with several active seismic fault zones with a history of strong earthquakes. Severe ground shaking has the potential to cause human injury; however, due to the short duration of construction (15 months) and the low probability of a seismic event occurring during this time, the potential for construction crews to be exposed to strong seismic ground shaking is minimal. Impacts from ground shaking would be less than significant.

Operation and Maintenance

Strong seismic ground shaking could occur during the operational lifetime of the project as a result of a moderate or greater earthquake. Peak ground acceleration would vary along the length of the corridor. Overhead power lines can accommodate strong ground shaking. Power line operation would not require personnel to be on site on a daily basis.

Maintenance crews would be working on the corridor only periodically throughout the year and for limited periods of time, minimizing the potential for exposure to strong ground shaking during a seismic event if one occurred. Impacts from ground shaking would be less than significant.

(iii) Seismic-related ground failure, including liquefaction?

Construction

The Santa Ynez River area and several of the north-oriented canyons that cross the power line have low to moderate potential for liquefaction. The highest potential for liquefaction occurs within and adjacent to the Santa Ynez River at the west end of the project area near Cabrillo Substation. Due to the short duration of construction (15 months) and the low probability of a seismic event occurring during this time, the potential for construction crews to be exposed to seismic-induced liquefaction is minimal.

Areas with liquefaction potential would be stabilized during pole installation activities with appropriate engineering methods and monitoring to reduce potential impacts that could result from structures placed on unstable soils. APM GM-2 identifies various appropriate engineering methods to stabilize soft, loose and liquefaction prone soils. Impacts would be reduced to a less than significant level with the implementation of APM GM-2.

Operation and Maintenance

Seismic-induced liquefaction could occur during the operational lifetime of the project as a result of a moderate or greater earthquake. Power line operation would not require personnel to be on site on a daily basis. Maintenance crews would be working on the corridor only periodically throughout the year and for limited periods of time, minimizing the potential for exposure to liquefaction during a seismic event if one occurred.

Liquefaction hazards to the poles and power line would be addressed through appropriate standards for excavation, grading, and compaction during construction, as set forth in APM GM-2. Potential impacts from operation and maintenance activities would be less than significant.

(iv) Landslides?

Construction

No major grading or slope alteration is proposed for this project. Grading is confined to minor resurfacing activities to re-establish existing access roads, and therefore, would not destabilize natural slopes. Visual inspection of the area identified only one pole location (Pole 96) near a landslide. Since known landslide hazards are minimal and no earthmoving activities are proposed, potential landslide impacts are less than significant. PG&E has completed the landslide survey described in APM GM-1 and incorporated the results of the survey into the project design

to avoid creating slope instability hazards as discussed in APM GM-1 and GM-4. APM GM-1 and GM-4 are no longer relevant to the project and no additional mitigation is necessary for landslide hazards.

Operation and Maintenance

Activities associated with operation and maintenance of the power line would not expose people or equipment to additional danger from landslides. Impacts from landslides would be less than significant.

Potential Impact: Would the project result in substantial soil erosion or the loss of topsoil?

Construction

Ground disturbance would result from augering new pole locations, improving select access roads, and, to a limited extent, use of existing access roads that are not paved. Hole augering and pole installation would create a minimum amount of disturbance because installation would be performed without constructing pads, footings, or foundations. Moreover, equipment used to install the poles and conductors would follow existing access roads; therefore, construction traffic would not change drainage patterns or increase erosion potential. Best Management Practices (BMPs) would be implemented to minimize erosion and direct runoff that could flow from pole construction areas to natural drainages.

Pole assembly and installation is expected to occur in approximately 40-foot by 100-foot work areas around each existing pole and within the existing easement. Construction vehicles are anticipated to access work areas on existing access roads, except at four poles sites. Due to steep terrain, these four sites would be accessed by walking to the project site from the nearest access road or along the easement. Additionally, no grading or slope stabilization activities at the pole locations are anticipated, which would minimize soil disturbance and loss of vegetation that could promote short-term increases in erosion. The potential for erosion increases as slopes become steeper and less vegetated. Erosion and loss of topsoil could cause potentially significant impacts to the project area during construction. Implementation of mitigation measure Hydro-4 (supersedes APM GM-3/WQ-3 and discussed in Section 3.9) would reduce impacts from erosion to a less than significant level.

Operation and Maintenance

Maintenance activities, equipment, and methods would not be expected to change with operation of the proposed project. Maintenance activities would include routine inspections, minor repairs and a biannual detailed ground inspection alternating with an aerial patrol in alternate years. Access to the power line for inspection and maintenance would be via existing access roads and overland traverses where roads are not available or practical. Maintenance and inspection activities are not anticipated to require any ground disturbance, vegetation removal (with the exception of routine trimming), or soil stockpiling. Accordingly, an increase in soil erosion or the loss to topsoil would not occur as a result of operation or maintenance activities associated with the project; therefore, there would be no impacts with respect to soil erosion.

Potential Impact: Would the project 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, liquefaction, lateral spreading, or subsidence?

Construction

No major grading or slope alteration is proposed for this project. Grading is confined to minor resurfacing activities to re-establish existing access roads, and therefore, would not destabilize natural slopes. A landslide survey was previously conducted and identified only one pole location (Pole 96) near a landslide. Since known landslide hazards are minimal and no earthmoving activities are proposed, potential landslide impacts are less than significant. APMs or mitigation measures are not required for landslide hazards.

The Santa Ynez River area and several of the north-oriented canyons that cross the power line have low to moderate potential for liquefaction and associated lateral spreading. These saturated loose sands and soft clays may make pole installation difficult. Where potential problems exist, appropriate measures would be implemented to avoid, accommodate, replace, or improve soft or loose soils encountered during construction.

APM GM-2 would require the avoidance, accommodation, replacement, or improvement of soft or loose soils encountered during construction. Impacts from liquefaction or lateral spreading would be less than significant with implementation of APM GM-2.

No areas of subsidence have been identified within Santa Barbara County; therefore, impacts to the power line from potential subsidence would be less than significant, and no mitigation would be required.

Operation and Maintenance

Site conditions and potential hazards relative to landslides, liquefaction, lateral spreading, and subsidence would not change as a result of operation and maintenance activities of the project; therefore, no impact would occur from project implementation.

Potential Impact: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), or collapsible soil, creating substantial risks to life or property?

The geologic units along the power line alignment are dominated by sand, with lesser amounts of silt and clay. The potential for encountering expansive or collapsible soils along most of the project alignment is relatively low; however, some portions of the alignment are located on expansive soil: The east end of the corridor (Poles 132 to 134) is underlain by Monterey Shale, which contains expansive clays, and several of the soil units in the project area include clay loams with moderate to high shrink-swell potential. Expansive soils are not expected to have a significant adverse impact because poles would be installed to depths of 11 to 13.5 feet, which would prevent shifting as a result of soil expansion or collapse. Standard construction practices would be used to mitigate hazardous soil conditions, if encountered (e.g., compact soil at pole sites to 90 percent or greater or wet sandy soils during hole augering). Impacts are anticipated to be less than significant.

Potential Impact: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No septic tanks or alternative wastewater disposal systems (e.g., leach fields) would be constructed as part of the project. No impact would occur.

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3.8 Hazards and Hazardous Materials

3.8.1 ENVIRONMENTAL SETTING

Regional

The project is located in Santa Barbara County, California, between the cities of Lompoc and Buellton. Land use along the 14.6-mile-long power line is primarily agricultural and rural residential. Cabrillo Substation is located within a light industrial area in the eastern part of the City of Lompoc. The Santa Ynez Switching Station is just west of highway US 101 within a predominantly agriculturally developed area. A rural residential community is located along the power line within 2 miles west of US 101, north of the City of Buellton. The closest Superfund site is the Casmalia Resources Hazardous Waste Management Site, located adjacent to the City of Casmalia. This Superfund site is approximately 16 miles northwest of the project area. Vandenberg Air Force Base (AFB) is located approximately 7 miles northwest of the project area. Vandenberg AFB is an active military site that uses hazardous materials and has reported hazardous waste spills within its property boundaries.

The power line route is not known to contain hazardous materials or other related risks to human health and safety and the environment from illegal dumping or contamination. Review of the Geotracker (SWRCB 2009) and Envirostor (DTSC 2009) databases indicates, with the exception of a few local leaking underground storage tank (LUST) sites, there are no hazardous waste sites within 0.5 miles of the power line corridor.

Local

Hazardous Substances

A majority of the hazardous substances that are used in the project region are used for agricultural operations and production. Pesticides and herbicides are widely used and are applied through aerial and ground application. The land uses adjacent to the power line are predominantly agricultural.

A review of the Geotracker database indicates that there are four LUST sites located within 0.5 miles of the project area. Three sites are closed cleanup sites associated with historical gasoline leaks from underground storage tanks. One site (Exxon) is currently undergoing active groundwater remediation. Table 3.8-1 summarizes the location and contaminant(s) of concern for the listed sites.

Fire Hazards

Hazardous conditions that may occur in the project area are limited to fire hazards. The power line alignment traverses areas designated with a moderate to high fire hazard potential (California Department of Forestry and Fire Protection 2007). Current practices involve clearing objects (e.g., trees) to minimize fire hazard potential. The project area is served by the Santa Barbara County Fire Department.

Table 3.8-1: Locations of LUST Sites in the Project Vicinity

Site/Owner Name	Project Location	Proximity to Project Area	Contaminant(s) of Concern
Grefco, Inc.	SR 1 and SR 246 Lompoc, California	0.16 miles	Gasoline: VOCs and heavy metals
Circle K	1421 Ocean Ave. E. Lompoc, California	0.30 miles	Gasoline: VOCs
Exxon	1500 Ocean Ave. E. Lompoc, California	0.37 miles	Gasoline: VOCs
Ultramar Fast Gas	1216 Ocean Ave. E Lompoc, California	0.45 miles	Gasoline: VOCs
Note: VOCs = volatile organic compounds			

SOURCE: SWRCB 2009

3.8.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

HAZARDS AND HAZARDOUS MATERIALS – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
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?	☐	☒	☐	☐
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?	☐	☐	☐	☒
Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☐	☐	☒	☐

Checklist (Continued)

HAZARDS AND HAZARDOUS MATERIALS – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
For a project located within the vicinity of a private airstrip, an airport land use plan, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☒	☐	☐

Impact Discussion

Potential Impact: *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Construction

The use of hazardous materials for this project would be minimal. Commonly used hazardous materials for vehicles and construction equipment include: gasoline, diesel, hydraulic oils, equipment coolants, and any generated wastes that may include these materials. These materials are considered hazardous because they are highly flammable and/or contain toxic compounds, such as VOCs and heavy metals. In addition to spills, small quantities of hazardous wastes, such as waste oil, would be generated during construction activities. Wastes considered hazardous by the State of California would be transported and disposed of according to applicable federal, state, and local regulations. Construction equipment and vehicle fuels and fluids would not be stored at the site. Fueling and routine maintenance of equipment and vehicles would be performed off site to the greatest extent feasible to limit the use of hazardous materials within the project area.

Four LUST sites within a 0.5-mile radius of the project area are known to have impacted the local soil and groundwater with gasoline components. These sites are located along Ocean Avenue/SR 1 in the City of Lompoc, south of the Cabrillo Substation. The cleanup status for three of these sites has been classified as “closed” and has been granted no further action approval by the local Regional Water Quality Control Board. The fourth site is still undergoing cleanup and is actively treating the local groundwater with an on-site groundwater pump and treat system. Because soil

disturbance during project construction activity is fairly minimal and is not expected to be conducted in areas of known contamination, it is anticipated that hazardous soils will not be encountered. Should hazardous soils be encountered during construction activities, implementation of mitigation measure Haz-1 would address the proper procedures for managing potentially contaminated soils.

Wooden poles would be removed from the site during construction and disposed of as hazardous waste. The wooden poles were treated with a wood preservative that contains hazardous compounds such as polycyclic aromatic hydrocarbons. Improper management of the wooden poles during routine transport or disposal may cause an impact to the environment. Once removed, poles would not be stored on site and would be transported off site by qualified hazardous waste haulers. Pole replacement and grading activities during the construction phase would require the disturbance of soils at the site. Though it is not anticipated that excavated soils would be classified as hazardous, there is a possibility that contaminated soils may be encountered.

APM HM-1 was designed to address potential impacts associated with hazards and hazardous materials; however, the APM lacked project-specific details to sufficiently address and mitigate potential impacts to a less than significant level. APM HM-2/WQ-2 would implement a training program to inform on-site personnel of relevant BMPs and review individual plan requirements. Mitigation measures Haz-2 and Haz-3 are included to supplement this APM. Mitigation measure Haz-2 requires the development of project-specific Health and Safety Plan (HSP), which is referenced in APM HM-2. Mitigation measures Haz-3 and Haz-4 were added to address chemical storage and other potential impacts, such as the discovery of contaminated soils during construction.

With implementation of APM HM-2/WQ-2 and mitigation measures Haz-1 through Haz-4, potential impacts would be reduced to less than significant.

Mitigation Measure Haz-1 (Proposed to supersede APM HM-1): PG&E would submit a Hazardous Substance Control and Emergency Response Plan to the CPUC for recordkeeping at least 30 days prior to project construction. The plan would identify methods and techniques to minimize the exposure of the public to potentially hazardous materials during all phases of project construction through operation. The plan would require implementing appropriate control methods and approved containment and spill-control practices (i.e., spill control plan) for construction and materials stored on-site.

All hazardous materials and hazardous wastes would be handled, stored, and disposed of, in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. With the exception of the poles, all hazardous materials would be collected in project-specific containers at the site, and transported to a PG&E service center designated as a PG&E consolidation site. Poles would be scheduled for transportation to the appropriate licensed Class 1 or a composite-lined portion of a solid waste landfill. The plan would include, but not be limited to, the following:

- Proper disposal of potentially contaminated soils
- Vehicles and equipment parking near sensitive resource areas during construction

- Emergency response and reporting procedures to address hazardous material spills

Mitigation Measure Haz-2 (Proposed to supplement APM HM-2/WQ-2): PG&E would prepare a site-specific Health and Safety Plan (HSP) to ensure that potential safety hazards would be kept at a minimum. The HSP would include elements that establish worker training and emergency response procedures relevant to project activities. The plan would be submitted to the CPUC at least 30 days prior to construction for CPUC recordkeeping.

Mitigation Measure Haz-3: If it is necessary to store chemicals on-site, they would be managed in accordance with all applicable regulations. Material Safety Data Sheets would be maintained and kept available on site.

Mitigation Measure Haz-4: In the event that soils suspected of being contaminated (based on evidence from visual, olfactory, or other means) are removed during excavation activities along the power line corridor, the excavated soil would be tested and, if contaminated above hazardous levels, would be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil would require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.

Operation and Maintenance

No hazardous materials are associated with operation of the power line other than substances associated with motor vehicles that would occasionally be used during routine power line maintenance. Gasoline, diesel, antifreeze, and lubricants are materials that, if released to the environment, could be hazardous. Operation and maintenance would not require on-site storage of these materials. All fueling and maintenance activities for equipment and vehicles would be performed off site and impacts would be less than significant.

Potential Impact: Would the project 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?

Construction

The use of hazardous materials could lead to accidental release to the environment due to reasonably foreseeable upset and/or accident conditions. Construction vehicles and equipment contain substances such as gasoline, diesel, antifreeze, and lubricants that, if accidentally released to the environment, could be hazardous. These materials have the potential to leak from the vehicles and equipment during an accidental collision or as a result of poor vehicle and equipment maintenance. Improper handling, inadequate spill response, or inadequate containment of spills could result in adverse impacts to the environment. Proper preventive and response measures would be taken with the implementation of APM HM-2/WQ-2 and mitigation measures Haz-1 through Haz-4 and would reduce potential impacts to a less than significant level.

Operation and Maintenance

Other than substances associated with motor vehicles that would be used occasionally during routine maintenance, there are no hazardous materials associated with operation of the power line. Motor vehicles contain substances such as gasoline, diesel, antifreeze, and lubricants that, if accidentally released to the environment, could be hazardous. With implementation of APM HM-2/WQ-2 and mitigation measures Haz-1 through Haz-4, the potential impact would be less than significant.

Potential Impact: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The nearest school to the project area is the El Puente Community School, located less than 160 feet southwest of the Cabrillo Substation. The project would not emit hazardous emissions at the substation. The substation would primarily serve as a storage yard for materials, vehicles, and construction equipment.

Storage of hazardous materials and equipment and vehicle maintenance activities would not occur within the substation. The project would not emit hazardous materials or substances within 0.25 miles of a school. The project would have no impact.

Potential Impact: Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

A review of information obtained from the SWRCB (Geotracker) and DTSC (Envirostor) databases (SWRCB 2009; DTSC 2009) indicates the project area is not located on a known hazardous material site. The Casmalia Resources Hazardous Waste Management Superfund Site is located several miles from the project and would not impact the project. All local LUST sites, except the Exxon site, have been remediated and would not impact the project area. The Exxon site is located approximately 0.37 miles southwest of the Cabrillo Substation. Soil and groundwater impacts from the active Exxon LUST site are fairly contained within the Exxon site property. Recent monitoring reports for the Exxon LUST site indicate that groundwater flow is southwest (i.e., away from the project area) and that monitoring wells north of the Exxon property have not detected any chemicals of concern (SWRCB 2009). Groundwater treatment activities for the Exxon site are conducted within the Exxon property boundaries and potential impacts would be less than significant.

Potential Impact: Would the project be located in the vicinity of a private airstrip, within an airport land use plan, or, where such a plan has not been adopted, within 2 miles of a public or private airport, result in a safety hazard for people residing or working in the project area?

The project is not located in the vicinity of a private airstrip or within areas supported by an airport land use plan. The nearest airport is the Lompoc City Airport, located approximately 2 miles from the project area.

Agricultural fields surround the project area and some adjacent areas could be serviced by aerial crop spraying. The existing alignment is not sprayed by crop-dusters. There would be no significant safety impacts to construction workers from aerial spraying or low-flying planes.

Construction work would not involve equipment that would interfere with any crop-dusting activities. No impacts significant would occur and no mitigation is necessary.

Potential Impact: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Traffic lanes may be temporarily closed for construction activity; however, closures would be performed in accordance with regulations and would not impede access for emergency services. The project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. Impacts would be less than significant.

Potential Impact: Would the project 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?

Construction

Project activities would require the use of vehicles and motorized heavy construction equipment. Equipment used during project activities could create sparks and ignite a fire. In addition, other potential fire hazards include worker behavior such as smoking and disposing of cigarettes or parking vehicles near dry vegetation.

APM HM-3 is superseded by mitigation measure Haz-5 which includes identification of necessary measures and methodology that should be included in the Fire Prevention and Response Plan to reduce potential impacts from fire to a less than significant level.

With implementation of APM HM-2/WQ-2 and mitigation measures Haz-1, Haz-2, and Haz-5, potential impacts would be reduced to less than significant.

Mitigation Measure Haz-5 (Proposed to supersede APM HM-3): PG&E would prepare and submit a Fire Prevention and Response Plan to the CPUC and to local fire protection authorities for notification at least 30 days prior to construction. The plan would include fire protection and prevention methods for all components of the project during construction. The plan would include procedures to reduce the potential for igniting combustible materials by preventing electrical hazards, use of flammable materials, and smoking onsite during construction and maintenance procedures. Project personnel would be directed to park away from dry vegetation; to equip vehicles with fire extinguishers; not to smoke; and to carry water, shovels, and fire extinguishers in times of high fire hazard.

Operation and Maintenance

Power lines may pose a fire hazard when a conducting object, such as a tree limb, comes in proximity to a line; however, current operations include clearing proximate objects, such as trees, during the life of the power line to minimize fire hazard potential. The proposed project also will include vegetation clearance in selected areas, as needed, prior to construction. PG&E takes into account normal and unusual structural loads, such as ice and wind, which can cause conductors to break. PG&E installs high-speed relay equipment that senses a broken line condition and actuates circuit breakers to de-energize the line within approximately 0.1 seconds. The procedure is a

proven reliable safety measure, and would be applied to the proposed project. Impacts would be less than significant.

Operation and maintenance work would require the use of vehicles and other equipment that could potentially ignite a fire. Potential impacts would be reduced to a less than significant level with the implementation of mitigation measure Haz-5 during operation.

3.9 Hydrology and Water Quality

3.9.1 ENVIRONMENTAL SETTING

Regional Setting

The project area is located within the Santa Ynez River watershed, which covers an area of approximately 900 square miles (Rodriguez and Lang 2000). Groundwater basins within the Santa Ynez River watershed lie between the San Rafael Mountains to the northeast, the Purisima Hills to the north, the Santa Ynez Mountains to the south, and the Pacific Ocean to the west. The Santa Ynez River created terraces and uplands that contain some of the primary aquifers in the region (Gibbs 2006). Existing land uses in the project area include irrigated and non-irrigated agriculture, residential and urban (industrial) development, cattle grazing, and undeveloped open space.

Precipitation

Precipitation in Santa Barbara County generally occurs between October and May with the highest amount typically occurring in January, February, and March (SBCPW 2009). Annual precipitation ranges from 15 to 21 inches, with an average of 17 inches within the Santa Ynez River Valley Basin (CDWR 2003).

Surface Water Bodies

Creeks and Rivers

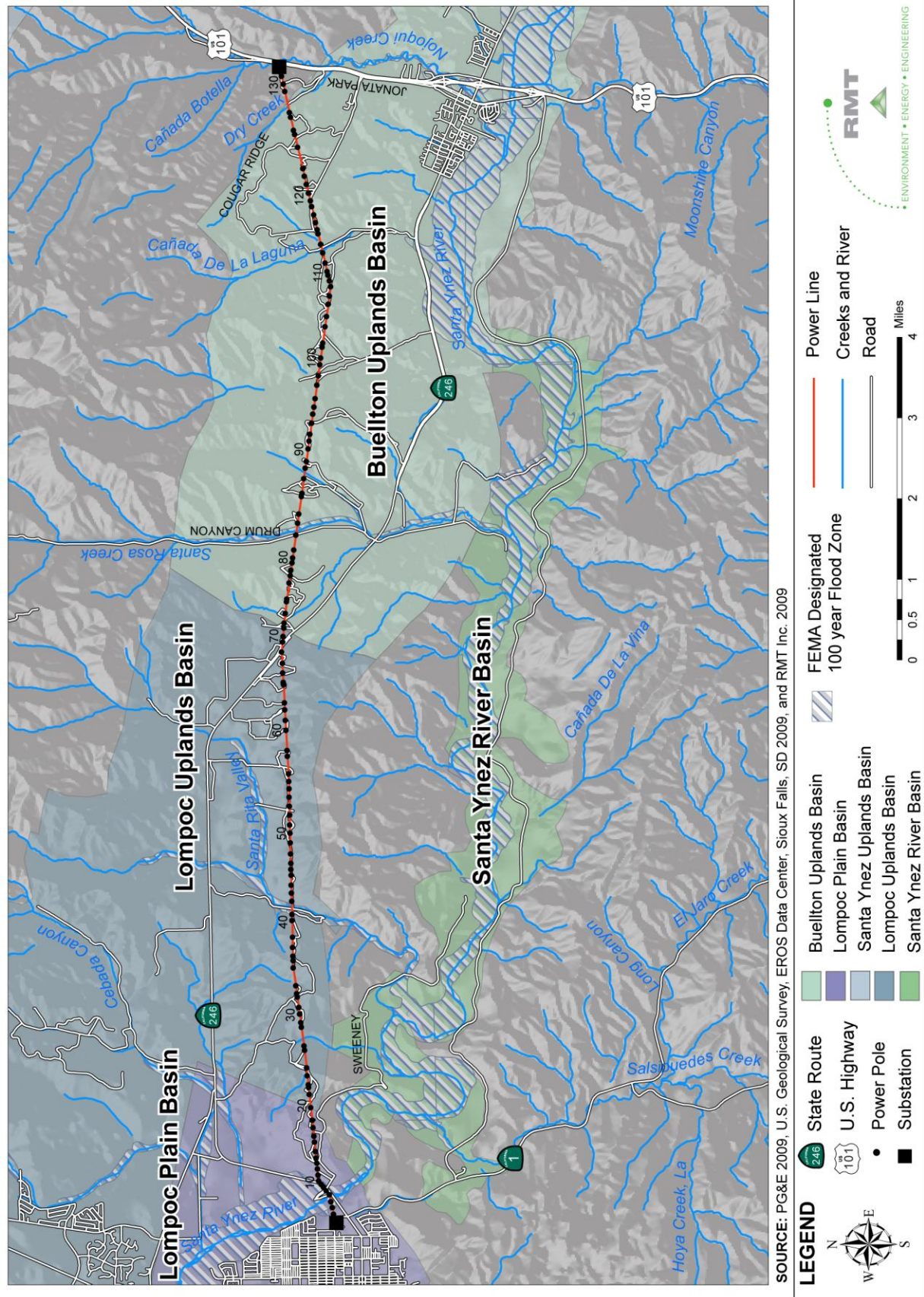
The Santa Ynez River watershed is drained by the Santa Ynez River. It originates in the San Rafael Mountains near the eastern border of Santa Barbara County and follows a westward course for about 90 miles to the Pacific Ocean (Rodriguez and Lang 2000). Terrain on the south side of the river rises steeply to the crest line of the Santa Ynez Mountains. The river is characterized by both narrow channel sections on bedrock and broad alluvial floodplains that are more than 2,000 feet wide near Lompoc (Rodriguez and Lang 2000).

Stream flow in the Santa Ynez River watershed is derived primarily from surface runoff and shallow groundwater inflow following storm events, which vary in frequency and intensity from year to year. The geology and topography of the region result in rapid runoff conditions (Rodriguez and Lang 2000), as indicated by hydrographs showing sharp responses to precipitation (Gibbs 2006). Streams and other hydrologic features in and near the project area are shown on Figure 3.9-1.

Reservoirs

Surface water flow is dependent on rainfall because there is little contribution to stream flow from groundwater discharge and snowmelt volume is insignificant in Santa Barbara County (Rodriguez and Lang 2000). Most tributary streams are dry during summer and fall months in normal years. Four reservoirs were built in Santa Barbara County to capture surface flow (Gibbs 2006). Water in the reservoirs is periodically released to recharge groundwater in downstream basins.

In the Santa Ynez River watershed, three of these reservoirs also divert Santa Ynez River water to users primarily on the southern coast of Santa Barbara County. From east to west, as shown on Figure 3.9-1, they are Jameson Lake, Gibraltar Reservoir, and Lake Cachuma.

Figure 3.9-1: Hydrologic Features of the Project Area

Jameson Lake

Jameson Lake is the smallest of the three reservoirs at approximately 138 acres. It is located in the upper reaches of the Santa Ynez River watershed, approximately 40 miles upstream, east of the project area. The reservoir has a capacity of about 5,291 acre-feet (City of Santa Barbara 2009).

Gibraltar Reservoir

Gibraltar Dam and Reservoir were constructed to provide water from the Santa Ynez River Basin to residents in the City of Santa Barbara. Gibraltar Reservoir is located upstream approximately 30 miles east of the project area. Water is conveyed through the Mission Tunnel. As of 1998, the reservoir has a capacity of 7,264 acre-feet (City of Santa Barbara 2009).

Lake Cachuma

In 1952, Bradbury Dam created Lake Cachuma, the largest of the three reservoirs in the Santa Ynez River watershed, with an area of approximately 3,108 acres. Lake Cachuma is located upstream approximately 12 miles east of the project area. The reservoir has a capacity of approximately 190,409 acre-feet. It provides water to the City of Santa Barbara, Montecito Water District, Goleta Water District, Carpinteria Valley Water District, and Santa Ynez River Water Conservation District (City of Santa Barbara 2009).

Ponds and Seasonal Wet Areas

Runoff accumulating in natural depressions and hill-slope seepage during the rainy season forms intermittent streams and seasonal ponds. There are several areas along the power line alignment that form seasonal wet areas. Biological Resources (Section 3.5) identifies the seasonal wetland areas, seasonal streams, and ponds in the project area.

Flooding Potential and Dam Failure Inundation Areas

Two major indicators of potential flooding are the presence of a Special Flood Hazard Area (SFHA) delineated by the Federal Emergency Management Agency (FEMA), and a Flood Hazard Area, as defined by Santa Barbara County (1979). An SFHA is an area of land that has a 1 percent chance of being inundated during any year, also referred to as a 100-year flood event. Flood Hazard Areas are defined as areas adjacent to watercourses where the potential for flooding may adversely affect urban development and are coincident with FEMA-designated 100-year SFHAs (Santa Barbara County 1979).

The power line crosses three FEMA-designated flood hazard areas: the Santa Ynez River near Cabrillo Substation, an unnamed south-flowing creek in the Santa Rita Valley, and the south-flowing Santa Rosa Creek (Figure 3.9-1). Four existing pole locations are below the base flood elevation (Poles 3, 6, 7, and 8).

The Santa Ynez River and adjacent areas are also subject to dam inundation hazards. The nearest major dam upstream of the project area is Bradbury Dam at Lake Cachuma, located approximately 12 miles to the east.

Groundwater

Groundwater supplies approximately 77 percent of Santa Barbara County's domestic, commercial, industrial, and agricultural water (Gibbs 2006). The Santa Ynez River Valley Groundwater Basin covers an area of approximately 204,000 acres and provides storage for an estimated 2.7 million acre-feet of groundwater. The Santa Barbara County Water Agency divides the Santa Ynez River Valley Groundwater Basin into three main basins, as shown on Figure 3.9-1: the Santa Ynez Uplands Basin, the Buellton Uplands Basin, and the Lompoc Basin. The Lompoc Basin is further subdivided into the Lompoc Plain, Lompoc Terrace, and Lompoc Uplands basins (Gibbs 2006; Rodriguez and Lang 2000).

The project power line route crosses the Lompoc Plain Basin, the Lompoc Uplands Basin, and the Buellton Uplands Basin. Depth to groundwater is 30 feet or more within the Lompoc Plain and in the Buellton area, but likely is shallower near the Santa Ynez River and its tributaries. In the project area, groundwater occurs in alluvial and terrace deposits, with the maximum thickness of water-bearing sediments ranging from 900 to more than 2,000 feet (City of Lompoc 1997; Bright et al. 1992; Dibblee 1993).

3.9.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

HYDROLOGY AND WATER QUALITY – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
Substantially alter the existing drainage pattern of the area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site?	☐	☒	☐	☐
Substantially alter the existing drainage pattern of the area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	☐	☒	☐	☐

Checklist (Continued)

HYDROLOGY AND WATER QUALITY – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
Otherwise substantially degrade water quality?	☐	☒	☐	☐
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?	☐	☐	☐	☒
Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
Cause inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project violate any water quality standards or waste discharge requirements?

Construction

Accelerated soil erosion, downstream sedimentation, and reduced surface or groundwater quality could potentially result from construction of the proposed project. Replacing existing poles and improving certain access roads would require ground-disturbing activities (e.g., excavating new post holes and minor grading). Soil disturbance and vegetation removal could accelerate soil erosion rates, causing sedimentation in downstream waterways. Surface water quality could be diminished as a result of:

- Ground disturbance, particularly on unpaved areas
- Vehicular traffic
- Scraping and grading
- Material laydown at staging or work areas
- Required grading and vegetation removal to clear access roads

If sediment-laden runoff from the construction area entered nearby waterways, it could potentially increase turbidity, increase sedimentation, and reduce the flood-carrying capacity of downstream channels. The potential for erosion increases as slopes become steeper and less vegetated.

Diesel fuel, lubrication oil, hydraulic fluids, antifreeze, and other construction-related materials could affect surface water quality in the event of a spill. Drips and spills would be contained on site before they could be released into stormwater. Stormwater from construction areas would be managed through the terms of a SWPPP, as required by local and state permitting agencies. Runoff could eventually flow to the Santa Ynez River or its tributaries; however, runoff water would likely percolate into alluvial soils before reaching drainages or surface water. The potential for water quality impacts to the Santa Ynez River and its tributaries is low, but would be further reduced or avoided through implementation of BMPs and erosion control measures during construction.

Several APMs have been superseded with mitigation measures for the purpose of fully reducing potential impacts to water quality. APM WQ-1 describes the development of a SWPPP; however, this APM has been superseded by mitigation measure Hydro-1 to improve the level of detail included in the SWPPP such as timing for the installation of erosion control measures. APM WQ-3 describes the development of an Erosion Control and Sediment Transport Plan; however, APM WQ-3 has been superseded with mitigation measure Hydro-2, to include procedures for changes to the ECSTP and details including the appropriate source of BMPs. Mitigation measure Haz-1 has superseded APM HM-1 (discussed in Section 3.8) for the purpose of creating a comprehensive Hazardous Substance Control and Emergency Response Plan with appropriate timelines and submission requirements.

APM WQ-2 would reduce impacts with the implementation of a worker environmental awareness training and monitoring program on all site-specific plans (including the SWPPP, ECSTP, HSP, and Hazardous Substance Control and Emergency Response Plan).

Impacts to water quality or waste discharge standards would be reduced to a less than significant level with the implementation of APM WQ-2 and mitigation measures Hydro-1 and Hydro-2 and Haz-1 and Haz-5.

Mitigation Measure Hydro-1 (Proposed to supersede APM WQ-1): Following project approval, PG&E would prepare and implement a SWPPP to minimize construction impacts on surface and groundwater quality. Implementation of the SWPPP would help stabilize graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be adhered to during construction activities. Erosion and sediment control measures, such as straw wattles, water bars, covers, silt fences, and sensitive area access restrictions (e.g., flagging) would be installed before the onset of winter rains or any anticipated storm events. Mulching, seeding, or other suitable stabilization measures would be used to protect exposed areas during construction activities, as necessary. During construction, measures would be in place to ensure that contaminants are not discharged from the construction sites.

Mitigation Measure Hydro-2 (Proposed to supersede APM WQ-3/GM-2): PG&E would prepare an Erosion Control and Sediment Transport Plan (ECSTP) as an element of the

SWPPP describing BMPs, to be used during construction. The plan would address construction in or near sensitive areas described in Section 3.5 Biological Resources. BMPs, where applicable would be designed based on specific criteria from recognized BMP design guidance manuals. Erosion-minimizing efforts may include measures such as:

- Avoiding excessive disturbance of steep slopes
- Defining ingress and egress within the project area
- Implementing a dust control program during construction
- Restricting access to sensitive areas
- Using vehicle mats in wet areas
- Revegetating disturbed areas where applicable following construction
- Proper containment of stockpiled soils (including construction of berms in areas near water bodies, wetlands, or drainage channels)

Erosion control measures identified in the ECSTP would be installed in an area before clearing begins during the wet season in that area and before the onset of winter rains or any anticipated storm events. Temporary measures such as silt fences or wattles, intended to minimize sediment transport from temporarily disturbed areas, would remain in place until disturbed areas have stabilized.

The ECSTP would be submitted to the CPUC for review at least 30 days prior to the commencement of construction. The plan would be revised and updated as needed and re-submitted to the CPUC if construction activities evolve to the point that the existing approved ECSTP does not adequately address the project.

Operation and Maintenance

Operation and maintenance activities would use existing access routes and would not involve any new ground disturbance that could cause erosion and sedimentation. The potential risk of contamination from the release of chemicals from equipment into existing water drainages during operation or maintenance activities would be negligible. Impacts to water quality standards or waste discharge requirements would be less than significant.

Potential Impact: Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?

The proposed project would not create any new impermeable surfaces that could reduce groundwater absorption rates or deplete groundwater supplies, nor would the project include any facilities that use groundwater. The proposed project would not deplete or interfere with groundwater supply or recharge. No impacts to groundwater would occur.

Potential Impact: Would the project substantially alter the existing drainage pattern of the area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or sedimentation on or off site?

Construction

Construction of the proposed project would involve road grading, vegetation removal, and excavation activities that could potentially affect the existing drainage pattern in the project area. Construction activities would be temporary and drainage patterns would not be significantly altered by construction as to induce substantial erosion or sedimentation. The implementation of mitigation measures Hydro-1, Hydro-2, and Haz-1 (Section 3.8) would reduce potential impacts to a less than significant level.

Operation and Maintenance

Project operation and maintenance activities would not involve activities that would result in substantial disturbance of soil. The project would not alter existing drainage patterns and would not result in substantial erosion or sedimentation on or off site; therefore, no impact would occur.

Potential Impact: Would the project substantially alter the existing drainage pattern of the area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?

Construction

Construction activities would be short in duration, but could affect drainage patterns due to ground disturbance from road grading, vegetation removal, and augering holes for pole installation. Though little runoff is anticipated from the proposed project, mitigation measures Hydro-1 and Hydro-2 would require the development and implementation of a SWPPP and ECSTP to minimize effects to waterways. Implementation of these measures would reduce impacts to less than significant levels.

Operation and Maintenance

Project operation and maintenance activities would not result in alteration of existing drainage patterns or change the rate or amount of surface runoff; therefore, no impact would occur.

Potential Impact: Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Construction

The proposed project would not be anticipated to generate runoff water during construction activities. Small amounts of water would be used for dust control and sandy soil stabilization during pole augering. The depth to groundwater at most locations along the power line alignment is estimated to be 20 feet or more below ground surface. The poles would be installed at a depth ranging from 11 to 13.5 feet below ground surface. The proposed project would not contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or produce additional sources of polluted runoff with the implementation of mitigation measures Hydro-1, Hydro-2, and Haz-1 (Section 3.8). Impacts will be reduced to less than significant levels.

Operation and Maintenance

Project operation and maintenance activities would require negligible amounts of water and would not produce surface runoff. No impacts would occur.

Potential Impact: Would the project otherwise substantially degrade water quality?

Construction

Construction activities have a remote potential to transport sediments from ground-disturbing and excavation activities. A hazardous material spill could potentially impact nearby waterways or drainages. To prevent impacts to water quality, mitigation measures Hydro-1, Hydro-2, and Haz-1 (Section 3.8) would prevent contamination of nearby waterways through the preparation and implementation of a SWPPP, an ECSTP, and a Hazardous Substance Control and Emergency Response Plan, as well as through installation of erosion control measures specified in the ECSTP. With the implementation of these measures, impacts to water quality would be less than significant.

Operation and Maintenance

Project operation and maintenance activities are not expected to result in any actions that would degrade water quality. No impacts would occur.

Potential Impact: Would the project 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?

The project does not involve building or placement of any new housing. There would be no impact.

Potential Impact: Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

Existing Poles 3, 6, 7, and 8 are located within the 100-year floodplain of the Santa Ynez River. The project does not generate any new impacts that do not already exist with the current power line because new poles would only replace existing poles. Installation of the new poles would not impede or redirect flood flows; therefore, no impacts would occur.

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

Existing Poles 3, 6, 7, and 8 are located within the 100-year floodplain of the Santa Ynez River. In the unlikely event of a dam failure upstream of the project area, flood waters would inundate the Santa Ynez River and adjacent lands, including a portion of the power line. Poles would be installed at a depth of 11 to 13.5 feet below ground surface and would likely be able to withstand a flooding event. Impacts from flooding with implementation of the project would not expose people or structures to a significant risk of loss, injury, or death. Impacts would be less than significant.

Potential Impact: Would the project cause inundation by seiche, tsunami, or mudflow?

The risk of inundation from a tsunami is greatest along an exposed coast and greatly decreases with distance from the coast. The western-most segment of the proposed project is located approximately 10 miles from the Pacific Ocean; therefore, impacts from tsunamis in the project area are unlikely. Seiches are free or standing-wave oscillations of the water surface in an enclosed or semi-enclosed basin, such as a lake, bay, or harbor. No large lakes or other inland basins are found within the project vicinity; therefore, impacts from seiches in the project area are unlikely.

Impacts from mudflow are not likely because there are no steep slopes directly abutting the project area that have the potential to be transformed into mudflows during periods of heavy and prolonged rain. Implementation of the proposed project would not result in inundation by a seiche, tsunami, or mudflow; therefore, no impact would occur from project implementation.

3.10 Land Use

3.10.1 ENVIRONMENTAL SETTING

Overview

The 14.6-mile Cabrillo-Santa Ynez 115 kV power line connects Cabrillo Substation to Santa Ynez Switching Station. The proposed project elements are located within either unincorporated Santa Barbara County or the City of Lompoc. Zoning designations for the entire project alignment are shown on Figure 3.10-1.

City of Lompoc

The power line connects to Cabrillo Substation, at the eastern border of the City of Lompoc. This area is designated and zoned “Industrial” by the City of Lompoc General Plan (Figure 3.10-1) (City of Lompoc 1997).

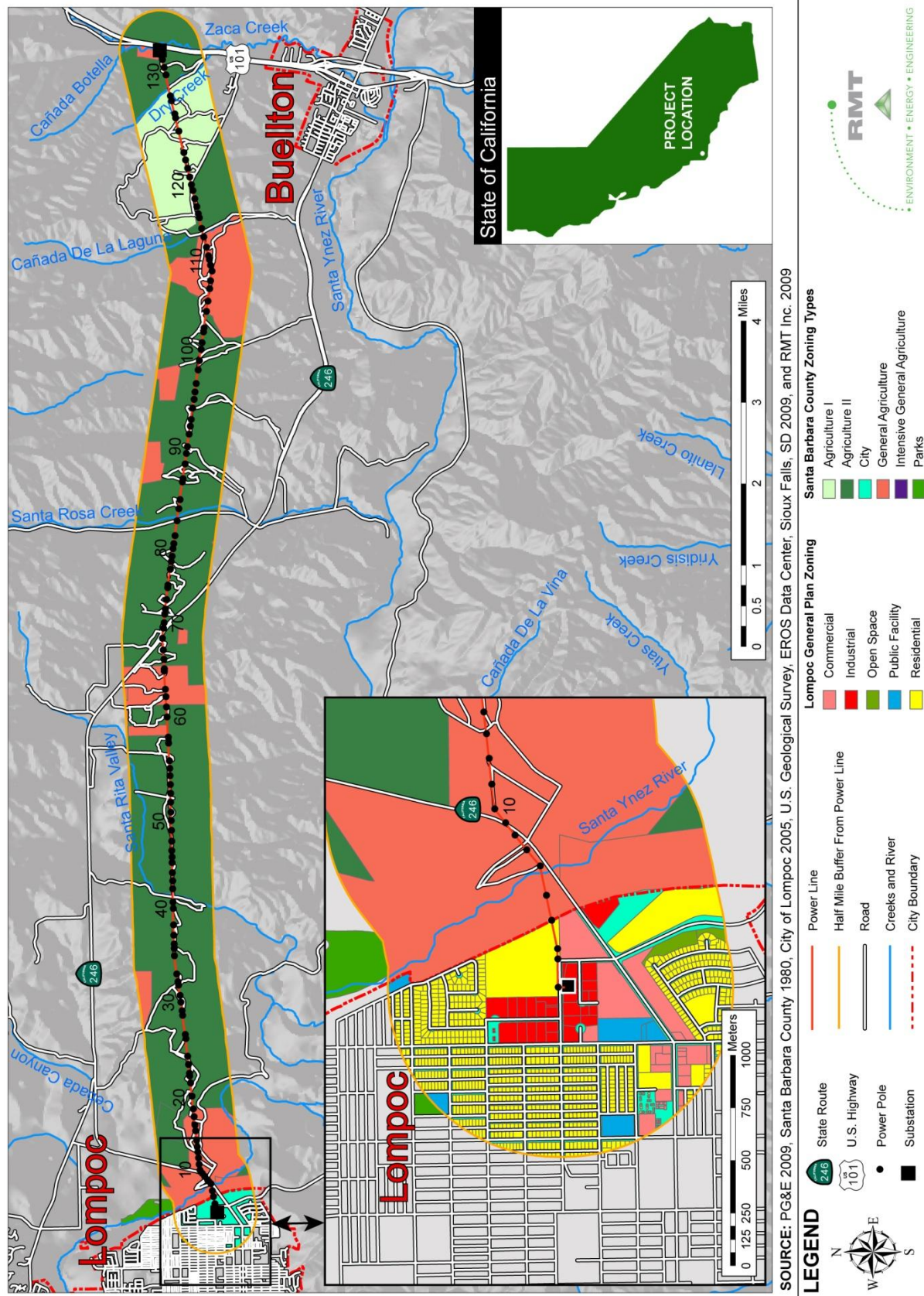
Santa Barbara County

The existing power line traverses rolling hills and valleys on land designated and zoned for agricultural use. The county has three zoning designations for agricultural land, two of which are in the project area. Land zoned as Agricultural I (Ag-I) is prime and non-prime agricultural land located within urban, inner rural, and rural neighborhoods. The Agricultural II (Ag-II) designation applies to farm lands and agricultural uses located outside of urban, inner rural, and rural neighborhood areas. It allows for livestock operations, grazing, and beef production, as well as more intensive agricultural practices (Santa Barbara County 1991). The proposed project area would be within a 40-foot-wide PG&E ROW through county land zoned as Ag-I and Ag-II.

Bluebird Glen Road residential subdivision is located on lands zoned Ag-II by Santa Barbara County. The subdivision is located approximately 0.6 miles west of the Santa Ynez Switching Station and is the only location along the power line alignment with residences located within 0.5 mile of the power line. The power line crosses 13 parcels located within the Bluebird Glen Road residential subdivision (Figure 3.10-1).

The Santa Ynez Switching Station is located within unincorporated Santa Barbara County, approximately 2 miles north of the City of Buellton on the east side of US 101. The station is located on lands designated Ag-II.

Figure 3.10-1: Project Area Zoning Designations



3.10.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

LAND USE – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Create physical division of an established community?	☐	☐	☐	☒
Conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project?	☐	☐	☐	☒
Conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP)?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project create physical division of an established community?

The alignment of the new power line would not change significantly from that of the existing line. The line does not currently divide an established community and project activities would not change this situation. The project would not create a physical division of an established community; therefore, the project would have no impact.

Potential Impact: Would the project conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project?

The project would be consistent with applicable plans and policies. The majority of the project area would be located within an existing PG&E ROW.

Additional easements would be required for project activities may include a franchise easement with the City of Lompoc, a traffic control permit from Santa Barbara County, and a highway encroachment permit from Caltrans for overhead crossings of a highway. These easements would be obtained prior to construction. The project would have no impact.

Potential Impact: Would the project conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP)?

The project would not conflict with any HCP or NCCP. There are currently no existing plans that apply to the project area. No impact would occur.

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3.11 Mineral Resources

3.11.1 ENVIRONMENTAL SETTING

Mineral Resources

Areas known for the production of crushed stone and diatomite, a soft, friable, siliceous sedimentary rock with a number of industrial applications, are located in Santa Barbara County in the region that includes the project area (USGS 2009). Diatomite operations are concentrated in the southern portion of the county, approximately 15 miles from the coast, near the City of Lompoc. Crushed stone operations are concentrated in the south-central portion of the county. An older quarry, characterized as gravel pits, is located near the west end of the power line south of Poles 12 to 18. No other active mines, quarries, or potential mineral resources occur along or near the power line.

3.11.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

MINERAL RESOURCES – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?

An inactive quarry is located near the west end of the power line near the Santa Ynez River. No other active mines, quarries, or potential mineral resources are found within or near the power line alignment. Construction of the proposed project would not result in the loss of availability of a known mineral resource. No impact would occur to known mineral resources.

Potential Impact: Would the project 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?

Other than one older quarry located near the west end of the power line, there are no active mines, quarries, or potential mineral resources within or near the power line alignment. No known locally important mineral resource recovery sites have been delineated in the Santa Barbara

Comprehensive Plan or other applicable land use plan. The proposed project would not result in the loss of availability of a locally important mineral resource recovery site; therefore, no impact would occur.

3.12 Noise

3.12.1 ENVIRONMENTAL SETTING

General Background

Noise is defined as unwanted and objectionable sound. The objectionable nature of sound can be caused by its pitch (the height or depth of a sound) or its loudness. Sounds with higher pitch sound louder to humans than sounds with lower pitch. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. The method commonly used to quantify environmental sounds consists of evaluating all frequencies of a sound in accordance with a filter that reflects the fact that human hearing is less sensitive at very low and very high frequencies compared to mid-range frequencies. This is called “A” weighting, and the dB level measurement is called the A-weighted sound level (dBA).

A-weighted sound level (dBA) is expressed on a logarithmic (power of 10) scale using a frequency-weighted pattern that duplicates the human ear’s sensitivity to sound. A 70 dBA sound level is approximately twice as loud as a 60 dBA sound level and four times as loud as a 50 dBA sound level. Table 3.12-1 lists the definitions of various acoustical terms used in this analysis.

Ground-borne Vibrations

Vibrating objects in contact with the ground radiate energy through the ground. Vibrations from large and/or powerful objects are perceptible by humans and animals. The rumbling sound caused by vibrating room surfaces is called ground-borne noise. Ground motion caused by vibration is measured as particle velocity in inches per second, and in the United States is referenced as vibration decibels (VdB) (Caltrans 1998).

The background vibration velocity level in residential and educational areas is usually approximately 50 VdB. The vibration velocity level threshold of perception by humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.

Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible. Ground-borne vibrations generally lie within the range of approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the threshold where minor damage can occur in fragile buildings (Caltrans 1998).

Regional Noise Environment

No studies have been conducted on ambient noise levels in the project area. The power line connects Cabrillo Substation to Santa Ynez Switching Station and roughly parallels SR 246 between SR 1 in Lompoc and US 101 north of Buellton. Land use along the power line and in the vicinity of Santa Ynez Switching Station is primarily agricultural and rural-residential. Cabrillo Substation is within a light industrial area in the eastern extent of the City of Lompoc. The baseline noise level of agricultural and rural-residential land is approximately 30 dBA, whereas commercial use and urban areas have an average baseline noise level between 60 and 70 dBA (Figure 3.12-1).

Table 3.12-1: Definitions of Acoustical Terms

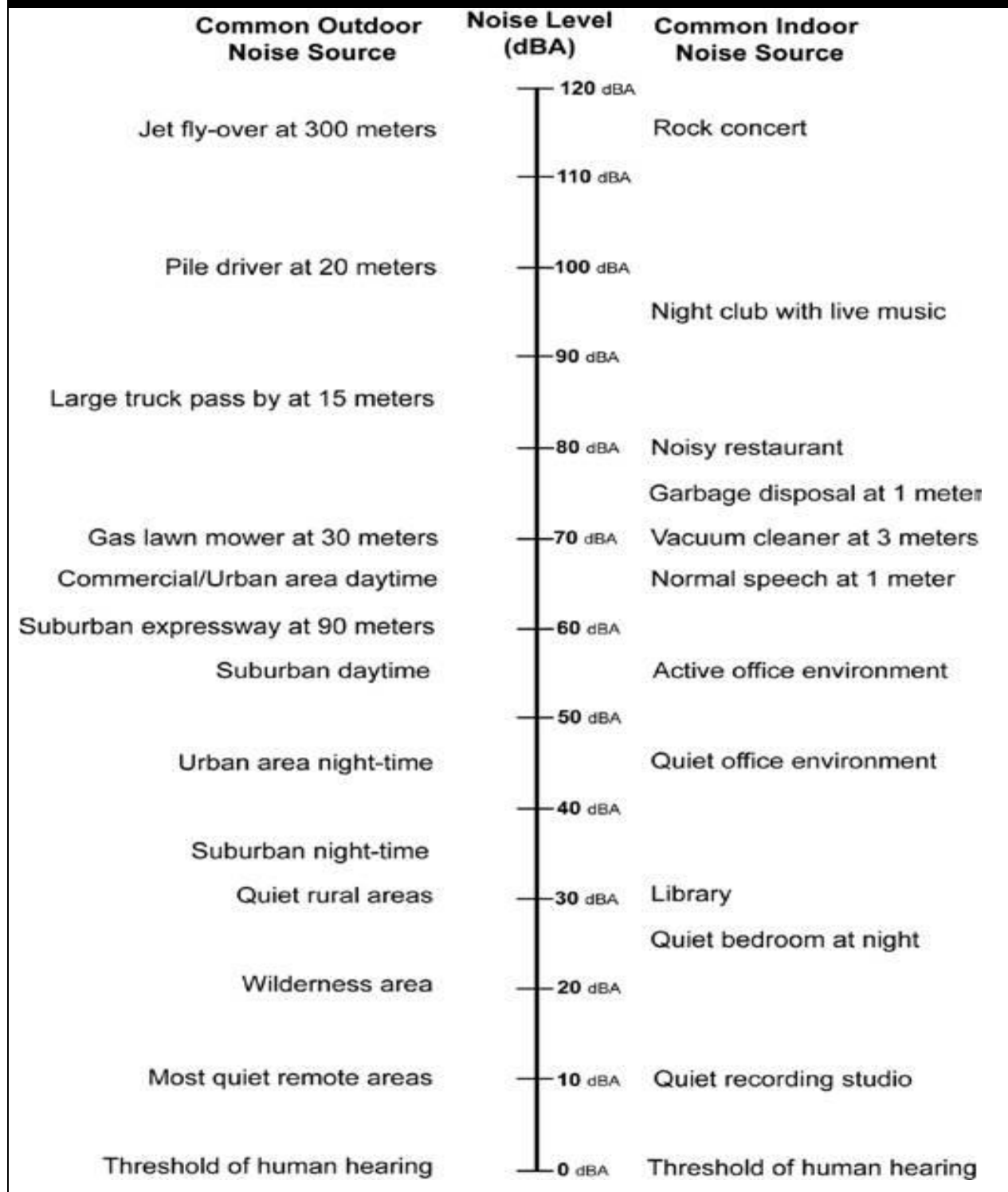
Term	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound to the reference pressure. The reference pressure for air is 20.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise.
Equivalent Noise Level, Leq	The average A-weighted sound level during the measurement period. The hourly Leq used for this document is denoted as dBA Leq.
Community Noise Equivalent Level, CNEL	The average A-weighted sound level during a 24-hour day, obtained after addition of 5 decibels to sound levels in the evening from 7:00 pm to 10:00 pm and addition of 10 decibels to sound levels in the night from 10:00 pm to 7:00 am.
Day/Night Noise Level, Ldn	The average A-weighted sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels measured in the night from 10:00 pm to 7:00 am.
L01, L10, L50, L90	The A-weighted sound levels that are exceeded 1 percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period, respectively.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	Noise that intrudes over and above the existing ambient noise level at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

SOURCE: Caltrans 1998

Sensitive Receptors

Noise exposure goals for different types of land uses reflect the varying noise sensitivities associated with those uses. Churches, schools, guest lodging, and libraries are particularly sensitive to noise intrusion and, therefore, have more stringent noise exposure targets than manufacturing or agricultural use areas.

Sensitive receptors found in Santa Barbara County include residences in the Santa Ynez Valley Community and various locations and buildings within the City of Lompoc. Table 3.12-2 identifies the sensitive receptors within a 0.5-mile buffer of the project area.

Figure 3.12-1: Typical Noise Levels in the Environment

SOURCE: Caltrans 1998

Table 3.12-2: Noise-Sensitive Receptors in the Project Area

Receptor	Location	Distance from Project Area
2 residences	Santa Ynez Valley Community	200 feet
6 residences	Santa Ynez Valley Community	400 feet
16 residences	Santa Ynez Valley Community	1,000 feet
1 residence	Santa Barbara County	400 feet
9 residences	Santa Barbara County	1,000 feet
1 residence	City of Lompoc	700 feet
Visitors to River Park	City of Lompoc	723 feet
Visitors to Pioneer Park	City of Lompoc	2,343 feet
Congregation of First Presbyterian Church	City of Lompoc	2,022 feet

No airports or private airstrips are located within 2 miles of the proposed project area. The Santa Ynez Airport is located approximately 7 miles southeast of the Santa Ynez Switching Station.

Noise Standards

CEQA does not specify a numerical threshold for “substantial increases” in noise and there are no federal regulations that limit overall environmental noise levels; however, there are federal guidance documents that address environmental noise and regulations for specific sources (e.g., aircraft or federally funded highways).

Table 3.12-3 summarizes federal guidelines and regulations for exterior noise.

Table 3.12-3: Summary of Federal Guidelines and Regulations for Exterior Noise (dBA)

Agency	Leq	L _{dn}
Federal Energy Regulatory Commission	[49]	55
Federal Highway Administration (FHA)	67	[67]
Federal Aviation Administration (FAA)	[59]	65
U.S. Department of Transportation—Federal Rail and Transit Authorities ^{a, b}	Sliding scale, dependent on land use type	Sliding scale, dependent on land use type
U.S. Environmental Protection Agency (USEPA) ^c	[49]	55
U.S. Department of Housing and Urban Development ^d	[59]	65
Note: [] indicates calculated equivalent standard. Because FHA regulates peak noise level, the L _{dn} is assumed to be equivalent to the peak noise hour.		

SOURCES: Federal Railroad Administration 1998; FTA 2006; EPA 1974; FHA 2006

The City of Lompoc General Plan requires that noise levels not exceed 75 dBA near any noise-sensitive land uses such as parks, schools, hospitals, and residences (City of Lompoc 1997). The County of Santa Barbara General Plan Noise Element has adopted the California Office of Noise Control Land Use Compatibility Designations for Community Noise Environments. These designations limit maximum exterior noise exposures compatible with noise-sensitive areas to 65 dBA. Land zoned for industrial, manufacturing, utility, or agriculture are limited to a normally acceptable level of 75 dBA and a conditionally acceptable noise level of 80 dBA (Santa Barbara County 1986).

3.12.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

NOISE - <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Result in 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?	☐	☐	☒	☐
Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Impact Discussion

Potential Impact: Would the project result in 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?

Construction

Construction activities associated with the proposed project would result in an increase in noise, but would not expose sensitive receptors to noise levels in excess of standards established in the local general plans or by federal agencies. Overall noise associated with construction would be dominated by the closest and loudest equipment, which would include augers, trucks, graders, and a helicopter. The types and numbers of construction equipment near any specific receptor location will vary over time for the project.

A model scenario was created to provide conservative estimates of construction noise from the project based on reference noise levels of project equipment, usage factors, and distance from source. The results of the scenario determined a baseline construction noise level of 79 dBA at 100 feet, which would attenuate to 74 dBA at 200 feet and 63 dBA at 800 feet (USDOE et al. 2008).

Helicopter noise levels heard at approximately 500 feet range from 77 to 84 dBA during takeoff and from 72 to 77 dBA during landing (Spector 1978). Sound pressure levels for a helicopter in level flight, traveling at an altitude of 500 feet with an airspeed of about 60 knots, would range from about 77 to 94 dBA for 4 seconds before and after passing directly overhead (USDOE et al. 2008).

Helicopter operations would be temporary and of short duration, and impacts would be limited to laydown areas, pole sites (i.e., Poles 82, 95, 96, and 97), and flight paths. The helicopter would be used in relatively undeveloped areas with few sensitive noise receptors. The helicopter would be refueled and kept overnight at the Santa Ynez Airport, if needed. The closest receptors to this area (Pole 82) are three residences located approximately 2,000 feet away. Poles 95, 96, and 97 are located approximately 1.5 miles from the nearest residence.

General construction noise is not regulated by federal agencies; however, the FTA provides guidelines for reasonable criteria for assessment of construction noise (FTA 2006). Construction noise that exceeds a 1-hour L_{eq} of 90 dBA or an 8-hour L_{eq} of 80 dBA during the day would provoke adverse community reaction. The nearest residence is located approximately 200 feet from the project area. Average construction noise levels would decline from 79 dBA at 100 feet from the construction area to 74 dBA at 200 feet. These noise levels are elevated compared to the existing baseline noise environment, but do not violate any applicable federal standards or ordinances.

Construction noise would also not exceed any city or county noise guidelines due to the attenuation of noise over distance. The closest receptors to construction activity in the City of Lompoc, a residence and two parks are located within 700 feet of the project area. Sensitive receptors would not experience noise in excess of applicable thresholds. Impacts from construction of the power line would comply with both the City of Lompoc General Plan and Santa Barbara County noise thresholds (Table 3.12-4) and would be less than significant.

Table 3.12-4: Noise Impacts to Sensitive Receptors in the Project Area

Plan	Noise Threshold	Distance to Closest Sensitive Receptor	Noise Level at Sensitive Receptor
City of Lompoc	75 dBA	700 feet	<69 dBA
Santa Barbara County	75 dBA	400 feet	69 dBA

SOURCE: Santa Barbara County 1986; City of Lompoc 1997

Noise impacts from construction activities would have a less than significant impact on federal, county, and city noise standards based on the level, duration, and timing of activities and the distance from existing residences. Implementation of APM-1 through APM-5 would further reduce noise impacts to nearby receptors.

APM Noise NO-1: Noise minimization with portable barriers. Compressors and other small stationary equipment will be shielded with portable barriers in proximity to residential areas.

APM NO-2: Noise minimization with “quiet” equipment. “Quiet” equipment (i.e., equipment that incorporates noise-control elements into the design—compressors have “quiet” models) will be used during construction whenever possible.

APM NO-3: Noise minimization through direction of exhaust. Equipment exhaust stacks and vents will be directed away from buildings.

APM NO-4: Noise minimization through truck traffic routing. Truck traffic will be routed away from noise-sensitive areas where feasible.

APM NO-5: Noise disruption minimization through residential notification. PG&E will coordinate with the City of Lompoc and the County of Santa Barbara to notify residents that are located near the power lines of the timeframe for the construction activities.

Operation and Maintenance

Noise during project operation and maintenance would not change from the current conditions of ongoing operation and maintenance of the existing power line due to the use of equivalent equipment and methods (i.e., off-road utility vehicles and walking to poles inaccessible by vehicle). Any existing access roads re-established during the project would continue to be used for project maintenance. No impact would result from operation and maintenance.

***Potential Impact:** Would the project result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?*

Construction

Construction activities (e.g., ground-disturbing activities, including grading and the use of heavy construction equipment) may generate temporary localized ground-borne vibration. Construction activities would only occur during daytime hours and would result in short-term (i.e., no more than one or two days) impacts from vibration. Vibration impacts would be localized, negligible, and less than significant to nearby receptors as shown in Table 3.12-5.

Table 3.12-5: Expected Vibration Levels During Project Construction	
Construction Activity	Vibration Level at 25 feet (VdB)
Ground Drilling and Excavation	104
Trucks Bearing Heavy Loads	103

SOURCE: RMT, Inc. 2009

Operation and Maintenance

Operation and maintenance activities of the project could potentially cause low levels of ground-borne noise and vibration from truck trips during inspections or repair work; however, these impacts would be minimal and would be imperceptible to neighboring receptors. Impacts from vibration would be less than significant.

Potential Impact: Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Permanent increases in ambient noise levels in the project vicinity would not occur. Project construction is anticipated to be completed in 15 months. Pole replacement and hardware upgrading would not generate a new or different source of permanent noise. Operation and maintenance activities would be consistent with activities conducted prior to implementation of the project. No perceptible permanent impact to the noise environment would occur from the project.

Potential Impact: Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

Construction would be temporary with a target start date of April 2010 and a completion date of June 2011. The majority of construction activities would occur outside the summer months of June, July, and August 2010. Any increases in ambient noise levels in the project vicinity during construction would be short-term, intermittent, and less than significant. Pole removal and replacement would occur over a few hours on one or two days at each pole site. Noise would be further reduced with the implementation of APM-1 through APM-5.

Operation and Maintenance

Temporary and periodic noise generated during project operation would occur from maintenance activities, primarily from vehicle trips and minor repair work. The project is expected to cause a decrease in maintenance requirements; consequently, operational and maintenance-related temporary noise would also be decreased from the noise levels already resulting from maintenance work performed on the existing power line.

Impacts from temporary noise resulting from operation and maintenance activities for the proposed project would be less than significant.

3.13 Population and Housing

3.13.1 ENVIRONMENTAL SETTING

Population

The project is located in western Santa Barbara County. The 2007 population estimate for Santa Barbara County was 404,197 (USCB 2008). Population and housing centers in Santa Barbara County are largely located in the incorporated cities, which include Buellton, Carpinteria, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, and Solvang. Primary population centers in the project area are in Lompoc and Buellton. Lompoc had a population of 41,099 (city-data.com 2008a) and Buellton had a population of 4,292 (city-data.com 2008b) in 2008.

Housing

The City of Lompoc had 13,621 housing units, including single family, multiple family, and mobile homes, with a vacancy rate of 4.1 percent in 2000. The City of Buellton had 1,483 housing units, with a vacancy rate of 3.4 percent. Santa Barbara County, in total, had 142,901 housing units, with an overall vacancy rate of 4.4 percent in 2000 (California Department of Finance 2007). There are 35 residences within 1,000 feet of the project area. Two residences are 200 feet from the project area in the Santa Ynez Valley Community and five residences are between 50 and 1,000 feet from the project area in the Bluebird Glen Road subdivision.

3.13.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

POPULATION AND HOUSING – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Induce substantial population growth in an area, either directly or indirectly?	☐	☐	☐	☒
Displace substantial numbers of existing housing units or people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project induce substantial population growth in an area, either directly or indirectly?

Construction

The project would not create additional housing, businesses, or infrastructure. The proposed project would not induce substantial population growth in the area. Construction workers would be drawn from existing PG&E staff in the local area or commute from neighboring cities. Construction duration is short and the local PG&E workforce is anticipated to be sufficient to

complete the project. It is not expected that the construction workforce would relocate to the area; therefore, no impact is anticipated.

Operation and Maintenance

Operation and maintenance activities would be performed by workers from the local area and would have no potential to induce substantial population growth. Reconductoring would not indirectly cause population growth because no additional capacity is being added with the proposed project, only increased reliability; therefore, no impact on population and housing would occur.

Potential Impact: Would the project displace substantial numbers of existing housing units or people, necessitating the construction of replacement housing elsewhere?

The project would not displace any existing housing or people. The power line would replace an existing line. No impact would occur to housing.

3.14 Public Services

3.14.1 ENVIRONMENTAL SETTING

Fire Protection and Emergency Services

Santa Barbara County Fire Department (SBCFD)

The Santa Barbara County Fire Department (SBCFD) provides fire protection and paramedic services to the unincorporated portions of the project area. The SBCFD staffs 15 fire stations throughout the county and is designated as the first responder for all incidents in unincorporated areas. Emergency calls are primarily directed to SBCFD, but may be routed to the City of Lompoc depending on the location and severity of the incident (Aspen Environmental Group 2008). Two county fire stations would serve the project area: Station Nos. 31 and 51.

Station No. 31, located at 168 West Highway 246 in Buellton, provides fire protection, paramedic, and hazardous material services for the City of Buellton. Station No. 51, located at 3510 Harris Grade Road near Lompoc, provides fire and paramedic services for much of central Santa Barbara County.

The SBCFD strives to meet a 5-minute response time to fires and paramedic calls within its coverage area; however, no response time has been established for rural areas like those present in the project area.

City of Lompoc Fire Department

Fire protection services are provided within city limits by the City of Lompoc Fire Department. The department strives to meet a 5-minute response time within the city limits. Two fire stations are located within the city, at 115 South G Street (Station No. 1) and 1100 North D Street (Station No. 2). Station No. 1 is closest to the project area, located approximately 1 mile southwest of Cabrillo Substation. Station No. 1 includes the following equipment and personnel (Robert Olson Associates 2007):

- One engine
- One aerial ladder truck in reserve
- Four personnel and one chief, although staffing fluctuates with three or four personnel on duty

The City of Lompoc does not employ paramedics, relying instead on a private ambulance company, American Medical Response (AMR), and the SBCFD for emergency paramedic services. The AMR station that serves the city is located at 701 E. North Avenue.

Police Services

Santa Barbara County Sheriff's Department (SBCSD)

The SBCSD is responsible for providing police protection in unincorporated county areas and the City of Buellton. The SBCSD is staffed with more than 700 regular employees and more than 200 volunteers (SBCSD 2009).

Although the SBCSD does not maintain formal mutual aid agreements with other law enforcement agencies, it relies on other agencies to assist in responding to calls, as needed. The Santa Barbara County Office of Emergency Services works with the SBCSD to coordinate a large-scale, multiagency response in the event of a major disaster (Aspen Environmental Group 2008).

City of Lompoc Police Services

The city has a dedicated police force of 51 full-time and 16 part-time officers, 22 staff, and 40 volunteers. The police station is located within city limits at 107 Civic Center Plaza, approximately 1.5 miles from Cabrillo Substation (Organizational Effectiveness Consulting 2006).

Schools

Lompoc Unified School District

Lompoc Unified School District provides elementary through high school education to the City of Lompoc and surrounding areas. Elementary schools in the region include Buena Vista, Clarence Ruth, Crestview, Leonora Fillmore, Hapgood, La Cañada, La Honda, Los Berros, and Miguelito. Middle schools include Lompoc Valley and Vandenberg. High schools include Cabrillo, Lompoc, and Maple. The Lompoc Unified District school closest to the project area is Leonora Fillmore Elementary, located approximately 0.6 miles from the project area.

Buellton Union School District

Buellton Union School District includes one elementary school, Oak Valley School, serving kindergarten through grade 5. Jonata School serves grades 6 through 8. Both Buellton schools are located approximately 2 miles from the project area.

Santa Ynez Valley Union High School District

Santa Ynez Valley Union High School District includes two high schools, Refugio High School and Santa Ynez Valley Union High School, which are located approximately 5 miles from the project area.

Santa Barbara County Community Schools

The El Puente Community School is located approximately 160 feet from the Cabrillo Substation in the City of Lompoc. The school serves four types of students: those who are criminal law violators transitioning back to school, probation-referred status offenders, social service referrals, and district expulsions (SBCEO 2009).

Parks

Santa Rosa Park

Santa Rosa Park is located midway between Lompoc and Buellton near SR 246, approximately 2 miles from the power line and 10.8 miles southeast of the Cabrillo Substation. This small, multi-level park is rich with live oak, native ferns, and wildflowers. Picnic areas, a horseshoe pitching area, a playground, and a volleyball court are available for recreationalists.

Pioneer Park

The park is located approximately 2,300 feet northwest of the Cabrillo Substation. This neighborhood park has the following amenities:

- A regulation-sized baseball field
- Spectator areas
- A playground
- Park benches
- A small pre-school building
- Open turf areas
- Large mature trees providing wind breaks and shade areas

River Park

River Park is a linear park consisting of 45 developed acres, which lie adjacent to the Santa Ynez River on the eastern border of Lompoc. River Park is located approximately 2,000 feet northeast of the Cabrillo Substation.

La Purísima Mission State Historic Park

La Purísima Mission State Historic Park is considered the most completely restored mission in California, with 10 of the original buildings fully restored and furnished, including the church, shops, living quarters, and blacksmith shop. The visitor center features information, displays, and artifacts, and has a self-guided tour covering a period of California's history. It is located 1.6 miles from the power line and approximately 2 miles north of the Cabrillo Substation.

3.14.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT**Checklist**

PUBLIC SERVICES AND RECREATION – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
(i) Fire protection?	☐	☐	☐	☒
(ii) Police protection?	☐	☐	☐	☒
(iii) Schools?	☐	☐	☐	☒
(iv) Parks?	☐	☐	☒	☐

Impact Discussion

Potential Impact: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

(i) Fire protection?

The proposed project would not require additional fire services in the area and would not impact fire protection and fire suppression objectives. The reductored power line would reduce the potential for failure, thereby reducing the potential for fire. The project would have no impacts to fire protection.

(ii) Police protection?

The proposed project would not require additional police services during construction or operation and maintenance. No impacts to police services would occur.

(iii) Schools?

The nearest school to the project area is the El Puente Community School, located less than 160 feet southwest of the Cabrillo Substation. The project would not create a need for new schools. Any construction workers not drawn from the local area are expected to commute from neighboring areas and would not likely relocate their families. There would be no impact to schools associated with the project.

(iv) Parks?

Several parks are located in the region. The closest park, River Park, is located approximately 2,000 feet from Cabrillo Substation and approximately 1,000 feet from the nearest pole location. Recreationists could be impacted or disturbed by construction activities or noise. The impacts to parks and recreational resources would be temporary given the distance and short-term disturbance at each pole installation site. Impacts would be less than significant.

3.15 Recreation

3.15.1 ENVIRONMENTAL SETTING

Parks

Santa Rosa Park

Santa Rosa Park is located midway between Lompoc and Buellton near SR 246, approximately 2 miles from the power line and 10.8 miles southeast of the Cabrillo Substation. This small, multi-level park is rich with live oak, native ferns, and wildflowers. Picnic areas, a horseshoe pitching area, a playground, and a volleyball court are available for recreationalists (recreationparks.net 2009a).

Pioneer Park

The park is located approximately 2,300 feet northwest of the Cabrillo Substation. This neighborhood park has the following amenities (recreationparks.net 2009b):

- A regulation-sized baseball field
- Spectator areas
- A playground
- Park benches
- A small pre-school building
- Open turf areas
- Large mature trees providing wind breaks and shade areas

River Park

River Park is a linear park consisting of 45 developed acres, which lie adjacent to the Santa Ynez River on the eastern border of Lompoc (lompoc-ca.com 2008). River Park is located approximately 2,000 feet northeast of the Cabrillo Substation.

La Purísima Mission State Historic Park

La Purísima Mission State Historic Park is considered the most completely restored mission in California, with 10 of the original buildings fully restored and furnished, including the church, shops, living quarters, and blacksmith shop. The visitor center features information, displays, and artifacts, and has a self-guided tour covering a period of California's history (lapurisimamission.org 2009). It is located 1.6 miles from the power line and approximately 2 miles north of the Cabrillo Substation.

3.15.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

RECREATION – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Create an increase in the use of existing parks or other recreational facilities such that physical deterioration of the facility would be accelerated?	☐	☐	☐	☒
Create construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project create an increase in the use of existing parks or other recreational facilities such that physical deterioration of the facility would be accelerated?

Four parks are located within the project region; however, project activities would not encroach upon the parks or encourage increased usage of the facilities. Construction traffic or deliveries of equipment may temporarily slow access to these areas. The majority of the project area is located on privately owned agricultural land. No increases in park or other recreational facilities usage would be associated with reconductoring the power line; therefore, the project would have no impacts on existing parks or recreational facilities.

Potential Impact: Would the project create construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The project is primarily located within an agricultural area with limited recreational facilities. Four parks are located within the project vicinity; however, project activities would not increase the use of these parks or require their expansion. No impacts would occur.

3.16 Traffic and Transportation

3.16.1 ENVIRONMENTAL SETTING

Regional Transportation Setting

The roadway system that would be used for the project is located throughout western Santa Barbara County, and consists of an interconnected network of federal, state, city, and county roads.

Highways

One freeway (US 101) and three regional highways (SR 1, SR 135, and SR 246) are located in the project vicinity.

US 101

US 101 is one of California's primary western arteries, linking San Francisco to Los Angeles. The SR 246 interchange and the SR 1 interchange for both northbound and southbound traffic provide access to and from US 101 in the vicinity of the project area. US 101 carries 20,700 vehicles on average per day at the SR 246 interchange (Caltrans 2007). Peak traffic volume is 2,175 vehicles at the SR 246 interchange. Truck traffic accounts for 14.7 percent of total traffic.

State Route 1

SR 1, also known as Cabrillo Highway, diverges from US 101 south of the City of Buellton and passes through the coastal cities of Lompoc, Guadalupe, and Grover City before rejoining US 101 at Pismo Beach. SR 1 carries an average of 14,800 vehicles per day near the southern intersection with SR 246 (Caltrans 2007). Peak traffic volume is 1,500 vehicles at the SR 246 south intersection. Truck traffic accounts for 11 percent of total traffic. SR 1 is also known as Ocean Avenue (between 12th Street and H Street) within the City of Lompoc.

State Route 135

SR 135 runs north-south and is also known as Orcutt Expressway. SR 135 connects US 101 to SR 1 via Betteravia Road in Santa Maria. SR 135 carries an average of 40,000 vehicles per day near the intersection of Betteravia Road (Caltrans 2007). Truck traffic accounts for 4.5 percent of total traffic.

State Route 246

This two-lane highway runs from Santa Ynez, at State Route 154, to the Pacific Coast. The portion of the route that runs through the City of Lompoc is between H Street and 12th Street and is called Ocean Avenue. The portion of SR 246 west of Lompoc is named Buellton Road. SR 246 carries an average of 9,300 vehicles per day at the intersection with SR 1 and 17,300 vehicles at the US 101 interchange (Caltrans 2007). Peak traffic volume is 1,000 vehicles at the SR 1 intersection and 1,750 vehicles at the US 101 interchange. Truck traffic accounts for 3.8 percent and 8.5 percent at the two locations, respectively.

Local Roads

The local transportation network for the project area consists of a number of two-lane city-maintained roads, county-maintained roads, and private roads, as described here.

City of Lompoc Roads

Two roads are maintained by the City of Lompoc in the project area: East Laurel Avenue and River Park Road. East Laurel Avenue has an estimated daily traffic volume of less than 8,000 vehicles. Both roads would be used for overhead crossing (i.e., reconductoring of the line over a road) (Caltrans 2007; Kitteringham pers. comm. 2009).

Santa Barbara County Roads

Five roads are maintained by Santa Barbara County in the project area: Sweeney Road, Hapgood Road, Campbell Road, Drum Canyon Road, and Jonata Park Road. Sweeney, Hapgood, Campbell, and Jonata Park Roads would be potential access roads for the project. Drum Canyon Road would be used for overhead crossing (Caltrans 2007; Kitteringham pers. comm. 2009).

Private Roads

There are five private roads in the project area: Bluebird Glen Road, Bobcat Springs Road, Canyata de Laguana, Cougar Ridge Road, and Rolling Meadow Lane. These roads would primarily be used for overhead crossing, though Bobcat Springs Road may be used as an access road. The daily traffic volumes of these roads are unknown (Caltrans 2007; Kitteringham pers. comm. 2009).

Existing Traffic Volumes and Levels of Service (LOS)

Roadways and intersections are rated at varying levels of service (LOS). LOS is a measure of roadway operating conditions, ranging from LOS A, which represents the best range of operating conditions, to LOS F, which represents the worst. Basic definitions are presented in Table 3.16-1. LOS can be estimated based on volume-to-capacity (v/c) ratio, the intersection capacity utilization (the ratio of the number of vehicles actually traveling on a roadway to the number of vehicles it was designed to convey), or the average delay experienced by vehicles on the roadway.

The majority of roadways and highways in the project area operate at LOS B or better, meaning that motorists on most roadways do not experience substantial delays, even during peak travel hours. Caltrans considers a LOS D or better on state highway segments to be acceptable for

Table 3.16-1: Level of Service (LOS) Criteria for Roadways

LOS	v/c	Traffic Flow Characteristics
A	0.00-0.60	Free flow; insignificant delays
B	0.61-0.70	Stable operation; minimal delays
C	0.71-0.80	Stable operation; acceptable delays
D	0.81-0.90	Approaching unstable flow; queues develop rapidly (no excessive delays)
E	0.91-1.00	Unstable operation; significant delays
F	>1.00	Forced flow; jammed conditions

SOURCE: Transportation Research Board 2000

planning purposes. US 101 between San Luis Obispo and Santa Maria is the only roadway operating at an unacceptable level, LOS F.

Alternative Transportation

Bicycle Facilities

The 2008 City of Lompoc Bicycle Transportation Plan (City of Lompoc 2008) identifies bikeways present within city limits. Bikeway classifications include both Class II and Class III bike lanes. Class II bike lanes provide a right-of-way within the paved roadway designated for exclusive or semi-exclusive bicycle use (i.e., through-traffic by pedestrians and motor vehicles is prohibited). Class III bike lanes also provide a right-of-way within the paved area of a road, but are shared with pedestrians and motor vehicles (City of Lompoc undated).

A Class II bicycle path is located on 7th Street, and a Class III bikeway is located on Laurel Avenue. Santa Barbara County's Bike Map designates SR 246 as an alternate route and McMurray Road as a Class II bike lane (Santa Barbara County 2009).

Transit and Rail Services

Public transit options in the project region include train and bus systems. Amtrak provides train service between Santa Barbara and San Luis Obispo, with stops in Santa Maria and Surf/Lompoc (Amtrak 2009). There are five bus providers in Santa Barbara County that use roads within the project area: Breeze Bus, Clear Air Express, the City of Lompoc bus system ("COLT"), Regional Transit Authority-South County Area Transit (RTA-SCAT), and the City of Santa Maria bus system ("SMAT") (breezebus.com 2009; cleanairexpress.com 2009; City of Lompoc 2009; RTA 2009; City of Santa Maria 2009).

Air Traffic

Vandenberg Air Force Base (VAFB)

The 14th Air Force is headquartered at the VAFB, 7.5 miles west of Cabrillo Substation. The main (Santa Maria) gate to the airbase is 18 miles north of Cabrillo Substation off of SR 1. VAFB is involved with spacelift operations and the Missile Defense Program initiative (VAFB 2009).

Lompoc Airport

This airport is located 2.4 miles north of Cabrillo Substation and serves as a general aviation facility in the Lompoc Valley. Lompoc Airport has a 4,600-foot-long runway, and averaged approximately 83 aircraft operations per day as of October 2007 (airnav.com 2009a).

Santa Ynez Airport

This airport is located approximately 20.4 miles east of Cabrillo Substation and would be used for the project's helicopter overnight area, if needed. The Santa Ynez Airport has a 2,812-foot-long runway, and averaged approximately 83 aircraft operations per day as of July 2007 (airnav.com 2009b).

3.16.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

TRAFFIC AND TRANSPORTATION – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Cause an increase in traffic that 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 (v/c) ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☒	☐
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
Result in inadequate emergency access?	☐	☒	☐	☐
Result in inadequate parking capacity?	☐	☐	☒	☐
Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts or bicycle racks)?	☐	☒	☐	☐

Impact Discussion

Potential Impact: Would the project cause an increase in traffic that 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 (v/c) ratio on roads, or congestion at intersections)?

Construction

Project trip generation is presented in Table 3.16-2 and was calculated based on an estimated maximum requirement of 10 crews of two to five workers for pole removal/installation and power line reconductoring activities during peak construction times. Trucks would transport crews and materials necessary to perform the work, with each crew requiring two trucks for transportation

Table 3.16-2: Existing and Estimated Daily Peak-Hour Traffic Conditions on Project Roadways

Roadway	Segment	Existing Peak-Hour Traffic (Vehicles)	Construction Peak-Hour Project Traffic (Vehicles)	Existing Peak-Hour v/c Ratio	Construction Peak-Hour v/c Ratio	Existing LOS/ Projected LOS
US 101	Between Templeton and San Luis Obispo	5,400	10	0.68	0.68	B/B
US 101	Between San Luis Obispo and Pismo Beach	8,200	20	1.03	1.03	F/F
US 101	Between Pismo Beach and Santa Maria	9,400	30	1.18	1.18	F/F
SR 135	Between Santa Maria and Orcutt	4,000	25	0.83	0.84	D/D
US 101	Between Santa Maria and Orcutt	3,900	15	0.49	0.49	A/A
SR 1	Between Orcutt and San Antonio Creek Road	1,950	25	0.41	0.41	A/A
SR 1	Between San Antonio Creek Road and Lompoc	2,150	25	0.45	0.45	A/A
SR 246	Between junction with SR 1 and Domingus Road	1,000	25	0.63	0.64	B/B
SR 246	Between Domingus Road and junction with US 101	1,750	25	0.36	0.37	A/A
US 101	Between junction with SR 246 and Buellton	2,050	10	0.26	0.26	A/A
Note: A PCE factor of 2.5 was applied to the number of truck trips. Peak-hour project traffic was estimated by calculating the maximum number of trucks that would travel during peak construction multiplied by the PCE factor.						

SOURCE: CH2M Hill 2009

from PG&E work yards to the power line work area. Truck trips were converted using a conservative passenger car equivalent (PCE) factor of 2.5 to account for differences in size and reduced speeds of project trucks compared to passenger vehicles.

Two crews would come from each of the five work yards in Templeton, San Luis Obispo, Pismo Beach, Santa Maria, and Buellton. Eight crews in 16 trucks, originating north of the project area, would use US 101 southbound to access the project area. At Santa Maria, six trucks likely would continue on US 101 to the Los Padres Service Center, and 10 trucks likely would use SR 1 via SR 135 to Cabrillo Substation. Crews originating from Buellton (i.e., two crews in four trucks) would use US 101 northbound to park at the Buellton Service Center. Trucks would load materials needed for construction at the PG&E work yards and use local roads to reach the project area.

Project traffic would not appreciably alter existing v/c ratios or significantly add to existing traffic on project roadways. Table 3.16-2 provides a summary of the anticipated project-related impacts to existing traffic levels on selected state roadways based on trip generation and trip distribution associated with project construction. The most congested segments, US 101 between San Luis Obispo and Pismo Beach and US 101 between Pismo Beach and Santa Maria, would experience the most project traffic during peak hours (i.e., 20 to 30 one-way truck trips); however, construction-related trips would account for 0.3 percent of the peak-hour traffic volume. The projected v/c ratio and LOS for these road segments would remain the same, 1.18 and LOS F, respectively. The increase in traffic volume would be negligible compared to the existing traffic volumes for these segments.

Temporary road closures (rolling stops) could occur along sections of the line requiring overhead crossings. Road closures on private and county roads would not exceed 5 minutes in duration. The CHP and Caltrans would be contacted to organize 5-minute rolling stops for SR 246 crossings. Helicopter operation may require highway, roadway, or trail closures. Any necessary encroachment permits would be obtained from the affected agencies. Potential impacts to roadway capacities and increased traffic trips associated with the project would be less than significant.

Operation and Maintenance

No impacts would occur from operation or maintenance activities. The proposed project would not change the current number, frequency, and timing of vehicles accessing the project area for operation and maintenance of the existing power line; no impact would occur.

Potential Impact: Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Construction

LOS standards for roadways potentially affected by project traffic would not change from existing conditions. The Santa Barbara County Association of Governments (SBCAG) considers an impact significant if, during or after project implementation, any roadway at LOS A or LOS B decreases by two LOS, or any roadway at LOS C decreases to LOS D or worse. For any roadway already congested (LOS D or worse), the SBCAG guidelines restrict peak project-related vehicle trips to a

maximum of 100 peak trips if the roadway operates at LOS D, or 50 peak trips if the roadway operates at LOS E or LOS F (SBCAG 2003).

The LOS for roadways in the proposed project area could be affected by increased traffic and road closures during construction. However, the maximum number of trips generated by the proposed project would be 30 trips, which is less than the SBCAG significance threshold and would not exceed the allowable additional peak vehicle trip limits. Projected LOS standards are not expected to change as a result of project traffic (Table 3.16-2). Impacts to roadway LOS associated with the project would be less than significant.

Operation and Maintenance

Operation and maintenance activities would require occasional visits to the power line. These activities would result in temporary traffic increases, primarily from a single crew and vehicle accessing the power line for minor repair work and inspections. Impacts from these activities would be less than significant because the amount of traffic would not change the LOS for project roadways, and these increases in traffic would be negligible compared to existing traffic conditions.

Potential Impact: Would the project 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?

Construction

Construction of the proposed project would require using a helicopter for delivering and installing Poles 82, 95, 96, and 97. A temporary material laydown area for the helicopter is located near Pole 99. Helicopter use would create temporary additional air traffic. Delivery and installation via helicopter would present additional safety risks to workers as well as the pilot. Impacts to air traffic patterns would be minimal because the work area is far from any local airports and helicopter operations are typically conducted at low altitude.

APM TT-2 requires the development of a Helicopter Lift Plan; however, the APM is no longer necessary because helicopter work has been limited to four remote pole locations with no nearby residences. The FAA would not require the preparation of a Helicopter Lift Plan. Potential adverse impacts from helicopter use would be less than significant.

Operation and Maintenance

Operation and maintenance would not require the use of a helicopter and would have no impact on air traffic patterns.

Potential Impact: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction

Project construction has been planned to minimize impacts to traffic to the greatest extent possible. Construction activities could temporarily interfere with the normal function of roadways and the potential exists for increased traffic safety hazards during project construction from:

- Conflicts between construction vehicles (with slower speeds and wider turning radii than passenger vehicles) and private vehicles, bicyclists, or pedestrians using the roadways
- Conflicts between typical traffic movement and construction activities, particularly where traffic is routed into the travel lane adjacent to the work zone
- Driver distraction related to construction activities

During construction, long, heavy trucks would be used to deliver up to 36 poles per trip to project staging and material laydown areas. These trucks may drive slowly and may not be able to turn at some intersections without special maneuvers. Construction vehicles may use existing overland routes to access individual pole sites, which in some conditions could be hazardous to access. APM TT-1 requires the development of a Traffic Management Plan (TMP), which would reduce impacts from traffic; however, the APM has been superseded by mitigation measure Traffic-1 for the purpose of creating a project-specific TMP that addresses all topical elements necessary to fully reduce potential impacts to a less than significant level and to facilitate mitigation monitoring. Potential impacts associated with road hazards and overland use from the project would be reduced to a less than significant level with the implementation of mitigation measure Traffic-1.

Mitigation Measure Traffic-1 (Proposed to supersede APM TT-1): PG&E would develop a project-specific TMP, which would be submitted to the CPUC for review at least 30 days prior to construction. The TMP would conform to the California Joint Utility Traffic Control Committee's *Work Area Protection and Traffic Control Manual*. The TMP would include the following:

- Standard safety practices, including installation of appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices.
- Flaggers and/or signage would be used to guide vehicles through or around construction zones using proper construction techniques.
- Provision that all equipment and materials would be stored in designated staging areas on or adjacent to the work sites in a manner that minimizes traffic obstructions and maximizes sign visibility.
- Acceptable vehicle speeds on project roadways. Vehicle speeds would be limited to safe levels as appropriate for all roads, including access roads and overland routes without existing, posted speed limits.

Operation and Maintenance

There would be no change in traffic-related hazards from operation and maintenance activities because the nature of these activities would not substantially change from current practices; no impact would occur.

Potential Impact: Would the project result in inadequate emergency access?

Construction

Routes for emergency vehicles would be maintained throughout project construction; however, construction activities may cause occasional delays for emergency vehicles on roadways in the

project area. Project activities could slow emergency response times during construction (e.g., during delivery or removal of large construction equipment using slow-moving trucks). Impacts to emergency response vehicle access would be reduced to a less than significant level with the implementation of mitigation measure Traffic-1.

Operation and Maintenance

Operation and maintenance activities would not likely impede emergency access to any significant degree. Emergency repairs would likely occur less frequently with project implementation compared to current conditions.

Potential Impact: Would the project result in inadequate parking capacity?

Construction

Personal vehicles would be parked in PG&E work yards and crews would carpool to the power line in PG&E trucks to the project area to the greatest extent feasible during construction activities. Formal parking is not available to any great extent along the project area; therefore, parking capacity would not be impacted and impacts to parking would be less than significant.

Operation and Maintenance

Crews would continue to park in PG&E work yards and carpool to the project area for operation and maintenance activities. Existing parking capacity is sufficient for existing operation and maintenance activities; therefore, the continued operation and maintenance of the power line would not result in reduced parking capacity.

Potential Impact: Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts or bicycle racks)?

Construction

The proposed project would not conflict with plans, policies, or programs supporting development of alternative transportation. The proposed project may cause temporary conflicts during construction (e.g., with construction vehicles moving at slower speeds and with wider turning radii than passenger vehicles) with buses, bicyclists, or pedestrians using the roadways, but would not permanently remove bicycle lanes or conflict with alternative transportation routes. Helicopters delivering construction materials could temporarily block trails used by pedestrians.

Construction activities could temporarily interfere with normal roadway and trail functions and create conflicts between construction vehicles (with slower speeds and wider turning radii than passenger vehicles), including helicopters, and alternative transportation vehicles, bicyclists, or pedestrians using the roadways or trails; however, this would be reduced to a less than significant impact with the implementation of mitigation measure Traffic-1.

Operation and Maintenance

No impacts would occur from operation or maintenance activities. The project would not conflict with any regional or local alternative transportation programs.

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3.17 Utilities and Service Systems

3.17.1 ENVIRONMENTAL SETTING

Utilities

Water Supply

Groundwater is the primary source of potable water in Santa Barbara County, supplying the cities of Lompoc and Buellton, as well as much of the surrounding unincorporated area and Vandenberg Air Force Base, with a drinkable water source (Santa Barbara County 2007). The City of Lompoc relies on nine wells, which pump water from the Lompoc Groundwater Basin. The basin is recharged by precipitation and flows from the Santa Ynez River. The U.S. Bureau of Reclamation's Cachuma Project also occasionally releases water for the purpose of recharging the basin (City of Lompoc 2005). Four major reservoirs store water for Santa Barbara County (Santa Barbara County 2007):

- Cachuma Reservoir
- Twitchell Reservoir
- Gibraltar Reservoir
- Jameson Reservoir

Individual properties in rural valley areas are served by private water wells, which are under the jurisdiction of the Environmental Health Services Division of the Santa Barbara County Public Health Department.

Electricity

PG&E provides electrical power to the northern portions of Santa Barbara County. The southern portion of the county is served by Southern California Edison. The City of Lompoc acts as its own electrical utility and provides power to users within city limits. Power is provided by PG&E to customers outside Lompoc city limits, including consumers along the power alignment and within Buellton city limits.

Natural Gas

Southern California Gas Company provides natural gas throughout Santa Barbara County.

Service Systems

Wastewater

Wastewater produced in the cities of Lompoc and Buellton are treated by the Lompoc Regional Wastewater Treatment Plant (WWTP) and the Buellton WWTP, respectively. Santa Barbara County has 11 wastewater treatment facilities. Rural properties use private septic systems, which are under the jurisdiction of the Environmental Health Services Division of the Santa Barbara County Public Health Department.

Stormwater

Stormwater is controlled by the Public Works Departments of the cities of Buellton and Lompoc. Storm drains and flood control within the city limits of Lompoc, Solvang, and Buellton are maintained by each city. Flood control catch basins and channels are maintained by Santa Barbara County. The Santa Barbara County Division of Building and Safety issues permits for storm drain facilities. Stormwater in rural unincorporated areas typically flows to the nearest water course or to on-site private storm drains.

Solid Waste Disposal

Garbage service for the cities of Lompoc and Buellton is provided by Waste Management, Inc., a franchised waste hauler. The City of Lompoc also operates its own sanitary landfill. Service includes removing regular household waste, recyclable materials, and green waste material. The City of Buellton uses the Tajiguas Landfill, which is owned and operated by Santa Barbara County. The Santa Barbara County Public Works Department is responsible for waste collection in unincorporated areas of Santa Barbara County. Santa Barbara County also owns and operates the Santa Ynez Valley Recycling and Transfer Station, the South Coast Recycling and Transfer Station, the New Cuyama Transfer Station, and the Ventucopa Transfer Station (Aspen Environmental Group 2008).

Communication Services

Telephone communication service is provided by Verizon to residents in the Lompoc Valley, including residents of Solvang and Buellton. The City of Lompoc also operates its own wireless internet service, LompocNet, through the city's Broadband Division. Cable television services within the City of Lompoc are provided by Comcast Cable.

3.17.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT**Checklist**

UTILITIES AND SYSTEM SERVICES – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
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?	☐	☐	☒	☐
Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

Checklist (Continued)

UTILITIES AND SYSTEM SERVICES – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
Have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements?	☐	☐	☒	☐
Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Impact Discussion

Potential Impact: Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Construction

Minimal amounts of wastewater would be generated during construction. Wastewater generated would be limited to portable sanitary facilities and would be transported to the nearest WWTP. Wastewater generated by the project would not exceed treatment capacity at any regional facilities. The addition of the project's minimal amounts of wastewater to existing wastewater treatment plants would not overburden any wastewater treatment facility in the region or cause it to exceed wastewater treatment requirements of the RWQCB. Impacts on wastewater treatment facility requirements would be less than significant.

Operation and Maintenance

The generation of wastewater would be minimal with the implementation of the project; therefore, no impacts are anticipated.

Potential Impact: Would the project 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?

Construction

Water would be primarily used for dust control activities to maintain air quality, as specified in Section 3.3 Air Quality and personal consumption for workers during construction. Workers would transport water from nearby sources for dust control. Personal supplies of water for

employees or construction workers (i.e., drinking water) would be transported to project work sites by individuals. Water demands and wastewater production from project construction would not require the construction of new, or expansion of an existing, water or wastewater facility; therefore, the impact on facilities is less than significant.

Operation and Maintenance

Operation and maintenance activities would not change the existing needs for water or wastewater treatment service in the project area; therefore, no impacts are anticipated.

Potential Impact: Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The proposed project would not require the construction of new stormwater drainage facilities or expansion of existing facilities. The project involves reconductoring of an existing power line, which requires no stormwater drainage facilities. The power line alignment would remain the same and no impacts to stormwater drainage are anticipated.

Potential Impact: Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements?

Construction

The majority of the water required for construction would be used for dust control and stabilizing sandy soils during hole augering. Water supplies required for the project would be minimal and supplied from local sources, as needed. Potable water for construction workers would be available at Cabrillo Substation and Buellton Service Center Yard and would be transported to project work sites with construction equipment. The project would have a less than significant impact on water supplies during construction.

Operation and Maintenance

Operation and maintenance activities would require minimal amounts of water. Water supplies would be transported to project work sites from local sources and would not exceed available supplies. Sufficient existing water supplies would be readily available; therefore, no impact to water supplies would result.

Potential Impact: Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction

During construction, the proposed project would generate small amounts of wastewater from portable sanitary facilities provided for workers. Sanitary waste would be disposed of at licensed facilities with adequate capacity. Regional wastewater facilities in the area have wastewater disposal capacities capable of supporting the project's requirements. Impacts to wastewater facilities would be less than significant.

Operation and Maintenance

Operation and maintenance activities would not change regional wastewater treatment facilities' available capacity; therefore, no impacts are anticipated.

Potential Impact: Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction

Waste generated by the project would consist of construction debris, including wood poles and sawdust generated from cutting the poles. Approximately 2 cubic yards of food, glass, paper, plastic, and packing materials would be generated for every month of construction activity. Construction debris would be transported on a line truck with a trailer to the PG&E Santa Maria Service Center, as needed, for recycling or disposal. Wood poles removed as part of the project would be taken to a licensed Class 1 landfill or a composite-lined portion of a solid waste landfill. Impacts from the proposed project on existing landfills would be less than significant.

Operation and Maintenance

Operation and maintenance activities would not generate substantial amounts of waste. All landfills that would be used by the project have adequate capacity and solid waste disposal capabilities available to serve the proposed project. Impacts from the proposed project on existing landfills would be less than significant.

Potential Impact: Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The project would produce solid waste, but all waste generated from construction, operation, or maintenance activities would be disposed of according to all applicable federal, state, and local statutes and regulations related to solid waste. No impacts are anticipated.

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3.18 Mandatory Findings of Significance

3.18.1 ENVIRONMENTAL IMPACTS AND ASSESSMENT

Checklist

MANDATORY FINDINGS OF SIGNIFICANCE – <i>Would the Project:</i>	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐
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.)	☐	☐	☒	☐
Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Impact Discussion

Potential Impact: *Would 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?*

The project includes one-for-one replacement of similar diameter utility poles and, therefore, would not substantially increase the permanent footprint of the project area. Construction activities would have a temporary impact on the project area. Impacts would be reduced to a less than significant level by implementing APMs and mitigation measures for the protection of biological resources including natural habitats and special-status species. Mitigation has been identified for the explicit protection of special-status species such as, but not limited to, CRLF, CTS, western spade foot toad, western pond turtle, southwestern willow flycatcher, least Bell's

vireo, western burrowing owl, and other migratory bird species. Work within USFWS-designated critical habitat areas would be limited to:

- Eight pole work sites
- One set of pull and tension sites
- Existing access roads
- Overland access routes through grassland or agricultural fields

No grading, vegetation removal, or tree trimming is proposed within USFWS-designated critical habitat. Impacts to sensitive habitats would be less than significant with implementation of mitigation.

The permanent project footprint within wetland habitat would be reduced with project completion. Work in wetland habitat is limited to the removal of two poles (Poles 69 and 70) and replacement of one pole (Pole 69) in the wetland located northeast of SR 246 (Figure 3.5-2I). Pole 70 would be replaced outside the wetland, approximately 35 feet northeast of its current location within the alignment. All ground-disturbing work at this location would be performed in dry conditions and timing would be dependent on seasonal rainfall. No additional grading, vegetation removal, or tree trimming would occur within wetland areas.

Project construction would include ground-disturbing activities that could result in the loss of integrity of cultural deposits, the loss of cultural and/or historical information, and the alteration of site setting to a historical resource, if these resources are present. Documented cultural resources and newly discovered resources found in the survey would be avoided to the greatest extent feasible; however, if avoidance of the resource is not possible, then the resource will be evaluated for CRHR or NRHP eligibility, per the APMs discussed in Section 3.6. The project has potential for discovery of previously undiscovered significant cultural resources. Impacts to cultural resources would be reduced to a less than significant level with the implementation of APMs CR-1 through CR-3.

Potential Impact: Would 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.)

Related Projects

A list of cumulative projects used for this analysis is provided in Table 3.18-1. The list includes projects in the vicinity of the project area in the cities of Lompoc and Buellton and in the unincorporated areas of Santa Barbara County. The projects were reviewed to identify whether the proposed project could contribute to cumulatively significant impacts when evaluated in combination with other projects. The majority of the projects are located in northern or western Lompoc, at least 1 mile or more from the Cabrillo Substation in Lompoc.

Figure 3.18-1 shows the locations of projects analyzed for cumulative impacts in relation to the proposed project area.

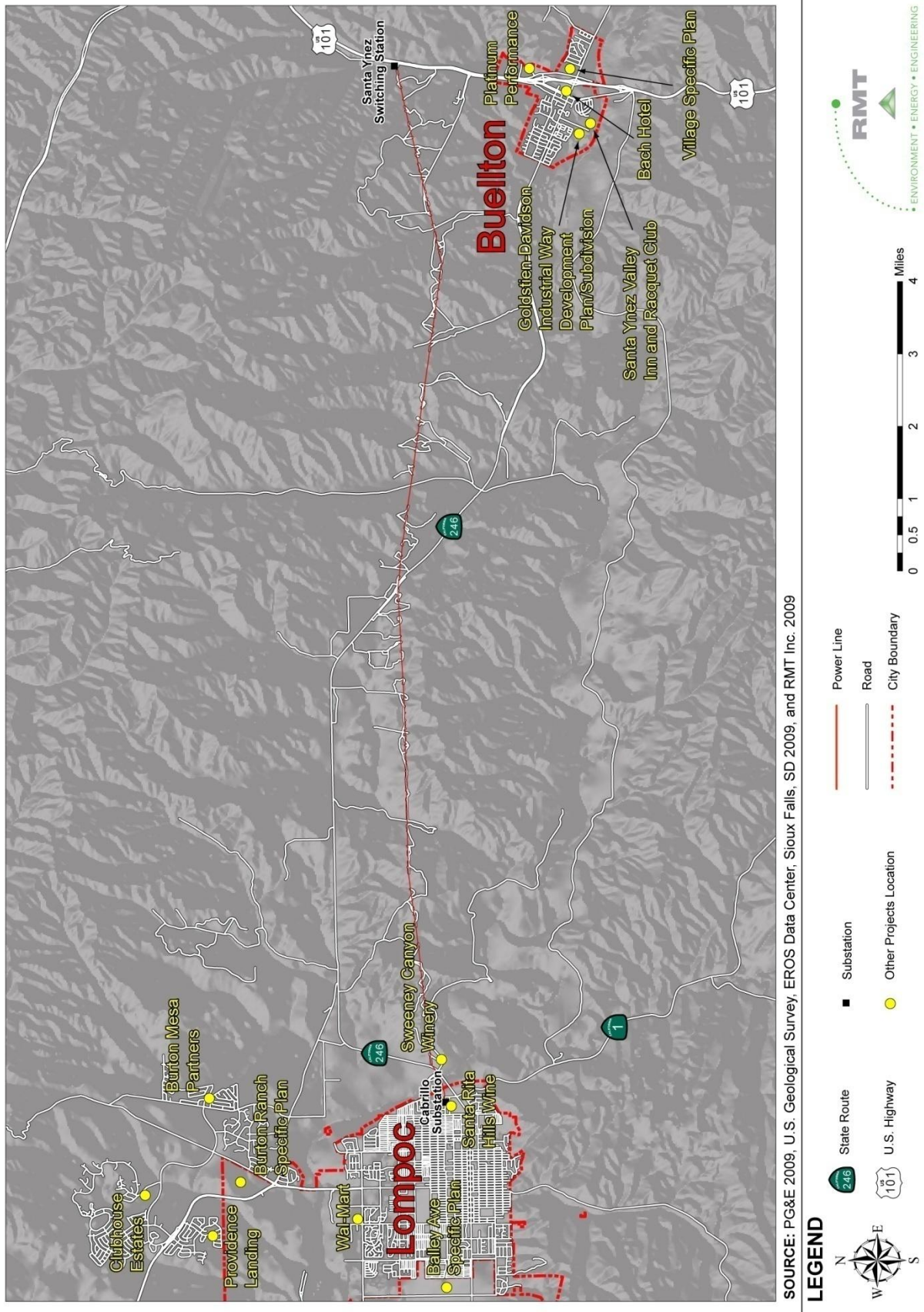
Figure 3.18-1: Cumulative Projects in the Project Vicinity

Table 3.18-1: Cumulative Projects in the Project Vicinity

Project Name	Project Components	Location	Status
<i>Santa Barbara County</i>			
Providence Landing	284 single-family dwellings and 72 low-income housing units on 141 acres	South Vandenberg Village in the unincorporated area of Santa Barbara County	Partially constructed; building permits issued for 66 affordable units and 179 single-family dwellings
Clubhouse Estates	53 housing lots and one open space lot on 162.31 acres	Vandenberg Village Country Club	Site has been graded and three model units have been approved
Burton Ranch Specific Plan	Annexation for incorporation of 149 acres of the Burton Ranch Specific Plan area into the City of Lompoc's City Limit line	Unincorporated area of Santa Barbara County between SR 1 and Harris Grade Road	Approved by the City of Lompoc Planning Commission
Bailey Avenue Specific Plan	Development of 270 acres into the Bailey Avenue Corridor, which would include expanding the City of Lompoc's boundaries, providing a range of land uses within the project area, and establishing a permanent open space buffer	Unincorporated area of Santa Barbara County between North Avenue, Olive Avenue, Bailey Avenue, and Z Street	Preparation of Specific Plan and Environmental Impact Report (EIR)
Burton Mesa Partners, LLC	Amendment of land use designation and subdivision of the 3.56-acre site into 14 residences	1400 block of East Burton Mesa Blvd north of the City of Lompoc	Under review
<i>City of Lompoc</i>			
Walmart Expansion Project	Demolition of 188 square-feet of floor area and addition of 38,050 square-feet to the existing Walmart store	701 West Central Avenue	Environmental review completed
Santa Rita Hills Wine Facility	Development of a 55-room resort hotel, which includes construction of two 2-story buildings for commercial use, office space, dining rooms, and a wine tasting area; existing four industrial warehouses on site would be developed into a wine processing and storage facility; parking and landscaping are included in the project	300 North 12 th Street	City Council certified Final EIR, approved General Plan amendment, zone change, parcel map, and development plan

Table 3.18-1 (Continued): Cumulative Projects in the Project Vicinity

Project Name	Project Components	Location	Status
<i>City of Lompoc</i>			
Sweeney Canyon, LLC, Winery	Construction of a winery with an annual production of 10,000 cases, with public wine tasting and special events	2050 Sweeney Road	Under review
<i>City of Buellton</i>			
Santa Ynez Valley Inn and Racquet Club	Development of a commercial recreation facility, including a 19,296 square-foot clubhouse, tennis courts, pools, and 120 residential/guest lodging units	Property east of Industrial Way and south of River Grove Mobile Home Park	City Council has approved the project
Village-Specific Plan	Development of 244 residential units, approximately 50,000 square-feet of commercial space, and a 150,000 square-foot hotel	Property northeast of corner of SR 246 and McMurray Road	City Council has approved the project
Platinum Performance	Development of a 31,187-square-foot industrial building	Property east of US 101 and Thomas Road	City Council has approved the project
Goldstien-Davidson Industrial Way Development Plan/Subdivision	Development of 12 industrial buildings on separate lots totaling 65,792 square-feet	South end of Industrial Way	Project is under construction
Bach Hotel	Construct a 68,867-square-foot hotel with restaurant and meeting facility space	412 and 450 Avenue of Flags	City Council has approved the project

SOURCE: City of Lompoc 2009; Santa Barbara County 2009; City of Buellton 2009

Cumulative Impacts

Aesthetics

The project would be located within an existing power line alignment. The impacts from the replacement of utility poles would be minimal because the new poles would be similar in color and texture to the existing wooden poles. The majority of the new utility poles replaced would be approximately the same height as existing poles, and would typically be placed approximately within 5 feet of the existing pole locations. The power line is visible from designated scenic highways; however, the reductored power line would be no more visible than the existing power line. Construction and operational impacts would not require a significant amount of

nighttime lighting. Impacts from glare are less than significant but would be further reduced with use of a less reflective conductor, as specified in APM AE-1.

None of the other proposed development projects would be located adjacent to or in close proximity to the proposed project area (Figure 3.18-1). Furthermore, none of these projects would be located within the same viewshed as the proposed project. Other projects in the region are contributing to increased development and urbanization; however, the proposed project would not contribute to any visual changes associated with such land use changes. The proposed project has a minimal visual impact and would not make a significant contribution to an overall cumulatively significant visual impact.

Agricultural Resources

Construction activities for the proposed project would temporarily affect agricultural land use while providing access to the pole sites. The lands would be returned to their former use once construction is completed. No land currently used for agricultural purposes would be permanently removed from agricultural use. The other projects identified would not impact the same agricultural lands as the proposed project; therefore, the proposed project would not significantly contribute to a cumulatively significant impact on agricultural resources.

Air Quality

Implementation of mitigation measure AQ-1 would reduce air emissions during construction of the proposed project to a less than significant level based on Appendix G of the CEQA guidelines and the significance thresholds defined by the SBCAPCD.

Construction schedules for an estimated five development projects (two in the vicinity of Lompoc and three in the vicinity of Buellton) could potentially overlap the construction schedule of the proposed project. Each of the cumulative projects would be required to adhere to applicable regulations, and would be required to implement mitigation to further reduce air emissions during construction. Measures would likely include fugitive dust control, use of low-emission fuels, and installation of filters on heavy equipment. Any potential adverse cumulative air quality impacts would be short-term (lasting only the duration of construction) and would not be cumulatively considerable, and, therefore, are less than significant.

Operation and maintenance activities would be minor and typically would involve one or two PG&E staff driving a pickup truck to inspect the power line. Impacts to air quality would be the same as current operation and maintenance practices; therefore, no contribution to cumulative impacts would occur.

Greenhouse Gases

Construction of the project would result in emissions of GHGs from on-site construction equipment and off-site worker trips. The most common GHGs associated with fuel combustion are CO₂, CH₄, and N₂O. Impacts from the proposed project would be less than significant because GHG emissions for the project fall so far below existing numerical significance thresholds. Five projects listed in the cumulative project list could potentially be constructed during the same time as the proposed project. Construction of these projects would create similar GHG emissions from

construction vehicles and equipment. These projects would be subject to evaluation of potential impacts from GHG emissions and, where appropriate, to the implementation of BMPs and project-specific mitigation measures. Any potential adverse cumulative GHG impacts would be short-term and not cumulatively considerable; therefore, GHG emissions would have a less than significant cumulative impact.

Operation of the project would result in the generation of a small amount of GHG emissions from vehicle travel during periodic inspection and maintenance of the power line. The amount of GHG emissions from operation and maintenance would be the same as current operation and would not contribute to cumulative impacts.

Biological Resources

Potential impacts to biological resources could occur from construction, including impacts to special-status species and native plant communities. Potential impacts from the proposed project would be less than significant with the implementation of APMs and mitigation measures discussed in Section 3.5 and the preceding question, above.

Five additional projects could begin construction in the surrounding communities at the same time as the proposed project. Implementation of these projects could result in short-term cumulative impacts to biological resources in the project region, particularly to native plant communities and wildlife habitat, through vegetation removal. Any potential adverse cumulative biological resource impacts from the proposed project would be short-term (lasting only the duration of construction) and are not cumulatively considerable, and, therefore, are less than significant.

Operation and maintenance of the reconductored power line would require routine inspection and minor repairs, consistent with current practices. This work would require minimal access to the project area and would not have a substantial impact on biological resources; therefore, the project would not contribute to a cumulative impact.

Cultural Resources

Neither short-term construction nor operation and maintenance activities would affect any known cultural resources with the implementation of APM CR-1 and mitigation measures discussed in Section 3.6, which would mark and avoid a historical site or significant fossils from potential impacts. Project-specific APMs would require that work would be halted and redirected in the event any previously unidentified cultural resources are discovered. No cultural resources would be affected and no contribution to cumulative impacts would occur.

Geology and Soils

Anticipated impacts to geologic features are less than significant. The project would not increase potential risks associated with a seismic event or impacts from collapsible or expansive soils. Short-term construction impacts to soils have the potential to occur, including landslides and erosion; however, implementation of APMs and mitigation measures described in Section 3.7 would reduce the impact to a less than significant level.

Five projects listed in Table 3.18-1 could be constructed during the same time as the proposed project. These projects are located more than 1 mile from the proposed project area. Impacts to

local geology and soils could result from erosion or landslides during construction and implementation of the proposed project. However, these impacts could not cumulatively combine with similar impacts from other projects due to intervening distance between projects. Potential cumulative impacts to geology and soils would be less than significant.

Hazards and Hazardous Materials

The use of hazardous materials for the project would be minimal during construction and operation. Hazardous materials would be stored and used in compliance with applicable regulations. The project would not result in an increase in usage of hazardous materials. Impacts from routine use, transportation, and disposal, accidental spillage of hazardous materials, or the potential to induce wildland fires would be reduced to a less than significant level with implementation of APMs and mitigation measures discussed in Section 3.9.

Five projects listed in the cumulative project list are estimated to be constructed during the same time as the proposed project. These projects are located more than 1 mile from the proposed project area. Hazards or hazardous materials from the proposed project would be contained and impacts would be mitigated before impacts could cumulatively combine with the other projects to create a significant impact. All projects are required to comply with federal, state, and local safety regulations to minimize risk to the surrounding public. Impacts from potential cumulative hazards and hazardous materials would be less than significant based on the location of the proposed project in relation to other cumulative projects and the implementation of APMs and mitigation measures to reduce impacts from hazards or hazardous materials.

Hydrology and Water Quality

The proposed project has the potential for temporary impacts to nearby waterways and water quality during construction. These impacts could include erosion, increased runoff and sedimentation, or the accidental release of hazardous materials. These temporary impacts would be less than significant with implementation of identified APMs and mitigation measures. Operational impacts would not affect hydrology or water quality because all activities would be conducted on existing paved or graded areas.

No other projects would affect drainages or waterways in the region of the proposed project and, therefore, would not contribute to a cumulatively significant impact on the hydrology of the project area.

Land Use

The project is located within an existing utility corridor, and would not conflict with any applicable land use policies or regulations; therefore, the project would not contribute to cumulative impacts to land use.

Mineral Resources

No mineral resources are known to exist within the project area and the proposed project would not result in the loss of availability of a known mineral resource; therefore, the project would not contribute to potential cumulative impacts that may result in the loss of mineral resources.

Noise

The proposed project is not expected to contribute to a long-term cumulative impact on ambient noise levels in the project area. Noise from construction activities would be limited to daytime hours and would be short-term in nature. Impacts from noise are less than significant. The implementation of the APMs listed in Section 3.12 would further minimize noise heard by nearby receptors.

Five projects listed in the cumulative project list could be constructed during the same time as the proposed project. These projects are located more than 1 mile from the proposed project area. Noise from the proposed project would attenuate and would not combine with noise from other projects, were construction schedules to coincide. Potential cumulative noise impacts during construction would be less than significant based on the location of the proposed project in relation to other cumulative project and the location of sensitive receptors.

Population and Housing

The proposed project would not result in impacts to population and housing. Construction workers would be drawn from existing local PG&E staff, which is anticipated to be sufficient to complete the project. The project would not displace any existing housing or people. The proposed project would not contribute to significant cumulative impacts because it would have no impacts on population and housing.

Public Services

The proposed project would not result in impacts to public services. The proposed project would not require the cessation or interruption of fire or police protection services, schools, parks, or other public facilities. The project would have no effects on public services and would not contribute to cumulative effects associated with other projects.

Recreation

The proposed project would not result in impacts recreation. The proposed project would not cause a substantial increase in the use of or physical deterioration of parks or recreational facilities. The project would have no effects on recreation and would not contribute to cumulative effects associated with other projects.

Transportation and Traffic

Construction of the proposed project would have the potential for temporary impacts to traffic volumes, LOS standards, road hazards, and emergency access. These temporary impacts would be reduced to less than significant levels with implementation of APMs and mitigation measures listed in Section 3.16. Given the location of the project area in relation to other development projects in the region, the transportation network is sufficient to successfully distribute construction traffic to avoid significant impacts to any one area. Five projects could potentially be constructed during the same time as the proposed project; however, these projects are located more than 1 mile from the proposed project area and would require the use of different local roadways. Potential cumulative traffic impacts would be less than significant based on the location of the proposed project in relation to other cumulative projects.

The proposed project would require the use of a helicopter during construction for pole deliveries and installation at select pole locations. Temporary impacts to air traffic patterns would be less than significant with implementation of a mitigation measure requiring the development of a Helicopter Lift Plan. Potentially concurring cumulative projects would be located more than 1 mile from the proposed project area; and cumulative air traffic impacts would be less than significant based on the distance of the proposed project from other cumulative projects.

Operation and maintenance of the project would result in the generation of a small amount of traffic from vehicle travel for periodic inspections and maintenance of the power line. The amount of traffic from these activities would be similar to current conditions; therefore, no contribution to cumulative impacts would occur from operation of the project.

Utilities and Service Systems

Implementation of other development projects could result in potential cumulative impacts to utilities, particularly local water supplies and wastewater facilities. In contrast, construction of the proposed project would require a minimal water supply and generate minimal amounts of wastewater. Construction would require the disposal of a less than significant amount of all types of waste. No expanded facilities or services would be needed for the project, and use and disposal of all water and waste products would comply with all applicable laws and regulations. Operation of the project would have a less than significant impact on all utilities and services systems because it would not routinely require the use of these services. The proposed project would not cause a cumulatively or incrementally significant effect on utilities and service systems.

Corona and Induced Current Effects

Induced current effects would not change from existing conditions because voltage and current capacity would not change with project implementation. None of the other proposed projects in the area would generate corona; therefore, no cumulative effects would occur.

Potential Impact: Would the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

The project would not adversely affect human beings directly or indirectly. Environmental parameters with particular potential to impact human health would include impacts from changes to air quality and existing hazards and hazardous material use. Potential impacts from hazards and hazardous materials or air quality, and the other environmental resources that could affect human beings, would be reduced to a less than significant level with the implementation of APMs and mitigation measures. The project would have a beneficial effect on residents in the area by providing more efficient and reliable transmission line services.

3.19 Corona and Induced Current Effects

3.19.1 ENVIRONMENTAL SETTING

Corona

The proposed project would replace the existing power line with larger-diameter conductors (715 MCM AAC, 0.97 inch diameter). The corona effect is the physical manifestation of discharged energy into very small amounts of sound, radio noise, heat, and chemical reactions with air components. It is a phenomenon associated with all energized electrical devices, but is especially common with high-voltage power lines.

The amount of corona produced by a power line is a function of the voltage of the line, the diameter of the conductors, the locations of the conductors in relation to each other, the elevation of the line above sea level, the condition of the conductors and hardware, and the local weather conditions. Corona typically becomes a design concern for power lines at 345 kV and higher (transmission lines) and is less noticeable for lines that are operated at lower voltages (subtransmission and distribution-sized lines). The electric field gradient is greatest at the surface of the conductor. Larger-diameter conductors have lower electric field gradients at the conductor surface, and therefore, lower corona than smaller conductors.

Induced Currents

Small electric currents can be induced by electric fields in metallic objects close to power lines. An electric current can flow when an object has an induced charge and a path to ground is presented. The amount of induced current that can flow is important to evaluate because of the potential for nuisance shocks to people and the possibility of other effects, such as fuel ignition.

3.19.2 ENVIRONMENTAL IMPACTS AND ASSESSMENT

There are no significance criteria provided by the CEQA Guidelines for evaluating significant impacts from corona or induced current effects. Corona and induced current could have a significant impact on the following:

- Audible noise
- Radio and television interference
- Fuel ignition
- Cardiac pacemakers
- Computer interference

The proposed project would replace the existing conductor with a larger-diameter conductor; therefore, the only change that would occur would be a reduction in the existing corona produced by the line. Conductor replacement would result in a reduction of existing audible noise, as well as radio and TV interference, which may be present with the existing power line.

Induced current effects would not change from existing conditions because voltage and current would not change with project implementation. The chances of ignition of nearby fuel sources would remain unlikely and are unchanged from existing conditions. Cardiac pacemaker interference would be unlikely because modern pacemakers are designed to revert to

asynchronous operation when the sensing circuitry from the heart detects interference. The field strength needed to cause interference with a computer monitor is very high, and would not occur near the power line. The project would generate no new impacts related to corona and would have no change in impacts associated with induced currents.

Chapter 4:

Mitigation Monitoring Plan

4.1 Mitigation Monitoring Implementation

Pacific Gas & Electric Company proposes to reconductor the Cabrillo-Santa Ynez 115 kV power line. An Initial Study was prepared to assess the project's potential environmental effects. The Initial Study was prepared based on information in the PEA, project site visits, responses to data requests, and supplemental research. The majority of the project's impacts would occur during project construction. Within PG&E's application, APMs were proposed to reduce potentially significant adverse impacts related to project construction and operation.

The purpose of this Mitigation Monitoring Plan is to ensure effective implementation of each APM, as well as the mitigation measures identified by the Initial Study and imposed by the CPUC as part of project approval.

This Mitigation Monitoring Plan is presented below in Table 4.1-1 and includes:

- APMs and mitigation measures that PG&E must implement as part of the project;
- Actions required to implement these measures;
- Monitoring requirements; and
- Timing of implementation for each measure.

A CPUC-designated environmental monitor will carry out all construction field monitoring to ensure full implementation of all measures. In all instances where non-compliance occurs, the CPUC's designated environmental monitor will issue a warning to the construction foreman and PG&E's project manager. Continued non-compliance shall be reported to the CPUC's designated project manager. Any decisions to halt work due to non-compliance will be made by the CPUC. The CPUC's designated environmental monitor will keep a record of any incidents of non-compliance with mitigation measures, APMs, or other conditions of project approval. Copies of these documents shall be supplied to PG&E and the CPUC.

4.1.1 PROJECT VARIANCES

The CPUC, along with its environmental monitors, will ensure that any project variance or deviation from the procedures identified under the monitoring program is consistent with CEQA requirements; no project variance will be approved by the CPUC if it creates new significant impacts. A variance should be strictly limited to minor project changes that will not trigger other permit requirements, that does not increase the severity of an impact or create a new impact, and that clearly and strictly complies with the intent of the mitigation measure. If a proposed change to the project has the potential for creating significant environmental effects, it will be evaluated to determine whether supplemental CEQA review is required. Any proposed deviation from the approved project, adopted mitigation measures, adopted APMs, or correction of such deviations, will be reported immediately to the CPUC and the environmental monitor assigned to the project

area during construction for their review and approval. In some cases, a variance may also require approval by a CEQA responsible agency.

4.1.2 DISPUTE RESOLUTION

It is expected that the Mitigation Monitoring Plan will reduce or eliminate many potential disputes. However, even with the best preparation, disputes may occur. In such an event, the following procedure will be observed.

- **Step 1.** Disputes and complaints (including those of the public) should be directed first to the CPUC-designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.
- **Step 2.** Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the proposed project or adopted Mitigation Monitoring Plan.
- **Step 3.** If a dispute or complaint regarding Mitigation Monitoring Plan implementation or evaluation cannot be resolved informally, or through enforcement or compliance action by the CPUC, any affected participant in the dispute or complaint may file a written “notice of dispute” with the CPUC Executive Director. This notice should be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the Executive Director or designee(s) shall meet or confer with the filer and other affected participants for purposes of resolving the dispute. The Executive Director shall issue an Executive Resolution describing his/her decision, and serve it on the filer and other affected participants.
- **Step 4.** If one or more of the affected parties is not satisfied with the decision as described in the Resolution, such party or parties may appeal it to the Commission via a procedure to be specified by the Commission.

Parties may also seek review by the Commission through existing procedures specified in the CPUC Rules of Practice and Procedure for formal and expedited dispute resolution, although a good faith effort should first be made to use the foregoing procedure.

Table 4.1-1: Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
<i>Aesthetics</i>			
APM AE-1	APM Aesthetics (AE)-1: New source of substantial light or glare avoidance. PG&E will replace the existing conductor with a non-specular conductor for the specific purpose of minimizing the reflectivity of any new project facilities.	Ensure conductor is non-specular	Prior to ordering conductor and during construction
<i>Agricultural Resources</i>			
APM LU-1	APM Land Use (LU)-1: Agriculture impacts avoidance. To avoid potential impacts to agriculture, PG&E will work with farmers and ranchers to conduct its work between their harvest and planting periods where and whenever possible. In areas containing permanent crops (i.e., grape vines, tree orchard, etc.) that must be removed and replaced to gain access to poles sites for construction purposes, PG&E will provide compensation to landowners for crop loss and other reasonable and associated costs as soon as practicable after completion of construction. Access across active crop areas will be negotiated with the owners in advance of any construction activities	Verify remediation for lost crops	During construction and post-construction
<i>Air Quality</i>			
APM AQ-1	Mitigation Measure AQ-1 (Proposed to supersede APM AQ-1): The following fugitive dust control measures would be implemented unless otherwise approved by the SBCAPCD. Copies of the finalized dust control measures would be submitted to the CPUC for recordkeeping. PG&E would use water trucks or sprinkler systems during construction on all active construction and disturbed areas to keep areas of vehicle and equipment movement sufficiently damp to prevent dust from leaving the site. At a minimum, this would include wetting down these areas in the late morning and after work is completed for the day. Watering frequency would increase whenever the wind speed exceeds 15 miles per hour (mph).	Ensure areas are watered to stabilize dust emissions Confirm use of appropriate equipment and stockpiles are covered	During construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	- Reclaimed water will be used whenever possible; however, reclaimed water will not be used in or around crops for human consumption. - Construction equipment and related vehicles, including personal vehicles, would be limited to a maximum speed of 15 mph on unpaved roads - All exposed soil stockpiles (e.g., soil and sand) would be covered. - Gravel pads, bamboo mats, or a suitable equivalent would be installed at all access points to prevent tracking mud on to public roads, as discussed in the project's Stormwater Pollution Prevention Plan (SWPPP) - PG&E would designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent dust transport off site. Monitor duties would include holiday and weekend periods when work may be in progress. The name and telephone number of the monitor would be provided to the SBCAPCD prior to project construction		
Greenhouse Gases			
APM GHG-1	APM Greenhouse gas (GHG)-1: GHG emissions minimization. The following measures will be implemented during construction to minimize GHG emissions. Park-and-ride facilities in the Project vicinity will be identified and construction workers will be encouraged to carpool to the job staging area to the extent feasible. The ability to develop an effective carpool program for the Proposed Project will depend upon the proximity of carpool facilities to the staging area, the geographical commute departure points of construction workers, and the extent to which carpooling will not adversely affect worker arrival time and the Project's construction schedule. Crew transportation to the Project site is discussed in Section 4.10, Traffic and Transportation.	Workers should carpool when possible Minimize construction vehicle idling time Confirm equipment in good working order	During construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	- Unnecessary construction vehicle idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a “common sense” approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a “common sense” approach to vehicle use. - Construction equipment will be maintained in good working order, per manufacturing specifications. Low-emission construction equipment will be used where feasible to further minimize the minimal short-term increase in GHG emissions. With implementation of APM GHG-1, the entire construction effort for this project is forecasted to create 379 metric tons of CO₂ which represents a small fraction of the emissions limit set by AB322020 (427 million metric tons CO₂e).		
Biological Resources			
APM BO-1	APM Biological Resources (BO)-1: General avoidance of biological resources impacts. - Litter and trash management. All food scraps, wrappers, food containers, cans, bottles, and other trash from the Project area will be deposited in closed trash containers. Trash containers will be removed from the Project area at the end of each working day. - Parking. Vehicles and equipment will be parked on pavement, existing	Ensure all trash is collected and removed daily Ensure parking is kept to pavement or previously disturbed or	During construction and operation

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	roads, and previously disturbed or developed areas or work areas as identified in this document. Off-road parking shall only be permitted in previously identified and designated work areas. - Route and speed limitations. Vehicles will be confined to established roadways and pre-approved access roads, overland routes and access areas. Access routes and temporary work areas will be limited to the minimum necessary to achieve the Project goals. Routes and boundaries of work areas, including access roads, will be clearly mapped prior to initiating Project construction. Vehicular speeds will be kept to 15 mph on unpaved roads. - Maintenance and refueling. All equipment will be maintained such that there will be no leaks of automotive fluids such as fuels, solvents, or oils. All refueling and maintenance of vehicles and other construction equipment will be restricted to designated staging areas located at least 100 feet from any down gradient aquatic habitat unless otherwise isolated from habitat. Proper spill prevention and cleanup equipment shall be maintained in all refueling areas. - Minimization of fire hazard. During fire season in designated State Responsibility Areas, all motorized equipment driving off paved or maintained gravel/dirt roads will have federal or state approved spark arrestors. All off-road vehicles will be equipped with a backpack pump filled with water and a shovel. All fuel trucks will carry a large fire extinguisher with a minimum rating of 40 B:C, and all equipment parking and storage areas will be cleared of all flammable materials. - Pets and firearms. No pets or firearms will be permitted at the Project site.	developed areas Confirm vehicles obey speed limit and stay within established work boundaries Ensure no equipment leaks allowed to occur. Restrict staging and parking away from aquatic habitat Confirm presence of spark arrestors and water and shovel in off road vehicles Confirm extinguishers of appropriate rating available No pets or firearms allowed on-site	
APM BO-2	APM BO-2: Avoidance of impacts to natural habitats Minimization of grading and vegetation removal along access roads and	Ensure no trees other than the one identified	During construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	pole work areas. Clearing and grading will be limited to previous access roads that have become overgrown with vegetation. Overland access routes and work areas around pole locations will not require any grading or vegetation removal other than minimal tree trimming as described in the Project description. ▪ Tree removal. A single tree, a Leland Cypress, is planned for removal as described in the Project description. No other tree removal is planned. ▪ Re-vegetation. Since clearing and grading is limited to re-establishment of existing roads, no re-vegetation is needed for the Project. Temporarily disturbed vegetation is expected to recover without the need for reseeding.	are removed Confirm areas to be graded and those that require vegetation management	
APM BO-4	APM BO-4: General avoidance and minimization of impacts to aquatic or wetland habitat. Timing and extent of work in aquatic or wetland habitat. Work in aquatic or wetland habitat is limited to the removal of two poles and replacement of one pole in the wetland northeast of SR 246. All ground-disturbing work at this location will take place in dry conditions. The timing is dependant on seasonal rainfall; in winter 2008-2009, ground was dry even in January.	Confirm no other wetland areas are impacted	During construction
APM BO-5	APM BO-5: Avoidance of impacts to California red-legged frog, California tiger salamander, western spade foot toad and western pond turtle in proximity to identified suitable breeding ponds or aquatic habitat. ▪ Dawn and dusk timing restrictions. Construction activities within 600 feet of suitable aquatic habitat shall not begin prior to 30 minutes after sunrise and will cease no later than 30 minutes before sunset. ▪ Erosion control materials. Only tightly woven netting or similar material shall be used for all geo-synthetic erosion control materials such as coir rolls and geo-textiles. No plastic monofilament matting will be used.	Confirm construction time requirements for aquatic habitat. Ensure netting material is made of suitable material	During construction Prior to ordering material and during application of material

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
APM BO-9	APM BO-9: Avoidance of and minimization of potential impacts to wetlands and water resources. Stormwater Pollution Prevention Plan and erosion control measures. As described in Section 4.8, APMs WQ-1 and WQ-3, a Stormwater Pollution Prevention Plan (SWPPP) will be developed that describes sediment and hazardous materials control, fueling and equipment management practices, and other factors deemed necessary for the Project. Erosion control measures will be implemented where necessary to reduce erosion and sedimentation in wetlands, waters of the United States, and waters of the state, as well as aquatic habitat occupied by sensitive species. Erosion control measures will be monitored on a regularly scheduled basis, particularly during times of heavy rainfall. Corrective measures will be implemented in the event erosion control strategies are inadequate. Sediment/erosion control measures will be continued at the Project site until such time that soil stabilization is deemed adequate. Brush or other similar debris material will not be placed within any stream channel or on its banks. No Project work activity is planned within the limits of any stream channel.	Confirm erosion control measures conform to those in the SWPPP and are in place	Prior to construction
MM Bio-1	Mitigation Measure Bio-1 (Proposed to supersede APM BO-1 “Development and implementation of a Worker Environmental Awareness Program”): A qualified biologist would conduct an environmental awareness program for all construction and on-site personnel prior to the beginning of construction activities. Training would include a discussion of avoidance and minimization measures being implemented to protect biological resources as well as the terms and conditions of the Biological Opinion and other permits. Training would include information on the federal and state Endangered Species Acts and the consequences of noncompliance with these acts. Under this program, workers would be informed about the presence, life history, and habitat requirements of all special-status species with a potential to be affected within the project area. Training would include information on state and federal laws protecting nesting birds, wetlands, and other water resources. An educational brochure would be produced for construction crews working on the project. The brochure would include color photos of sensitive species as well as a discussion of mitigation measures.	Provide proof of completion of an Environmental Awareness Program for special status species and receipt of a brochure from all on-site personnel	Prior to construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
MM Bio-2	Mitigation Measure Bio-2 (Proposed to supersede APM BO-1 “Biological monitor on-site during construction activities in sensitive areas” and “Reporting and communication”): A qualified biological monitor would be on site during all ground-disturbing construction activities in or near sensitive habitats previously identified by a qualified biologist. The monitor would ensure implementation of and compliance with all avoidance and mitigation measures. The monitor would have the authority to stop work or determine alternative work practices in consultation with agencies and construction personnel as appropriate if construction activities are likely to impact sensitive biological resources. The biological monitor would document monitoring activities in daily logs to document construction activities and environmental compliance. The daily logs would be included in the project report submitted to the appropriate agencies following completion of construction. The biological monitor would be responsible for reporting any capture and relocation, harm, entrapment, or death of a listed species to the USFWS and/or the CDFG and for reporting any permit violations in a timely manner and as indicated in their respective permits. Weekly monitoring reports would be submitted to CPUC, and to any resource agencies (upon request), throughout construction. A final project summary report would be submitted to the CPUC 90 days after the completion of construction activities.	Confirm qualification of the monitor Collect and review weekly monitoring reports from the monitor and summary report from the monitor	Prior to construction and throughout construction
MM Bio-3	Mitigation Measure Bio-3 (Proposed to supersede APM BO-1 “Identification and marking of sensitive resource areas”): Sensitive resources identified during pre-construction surveys in the project vicinity would be mapped and clearly marked in the field. Such areas would be avoided during construction to the extent practicable and/or additional measures specific to sensitive species types as described herein and that may be required by the USACE, FWS, CDFG, and RWQCB permits, would be implemented to avoid or minimize impacts.	Map, identify, and mark to avoid sensitive resources	Prior to construction and throughout construction
MM Bio-4	Mitigation Measure Bio-4 (Proposed to supersede APM BO-2 “Weed management”): All project vehicles would be washed before arrival on site at PG&E’s Santa Maria, Lompoc, or Buellton PG&E wash facilities or otherwise approved wash-down location. Vehicles will also be cleaned at the completion of the project or when off-road use for that vehicle has	Confirm vehicles are washed thoroughly prior to arriving on-site and at the completion	During construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	been completed.	of use on-site.	
MM Bio-5	Mitigation Measure Bio-5 (Proposed to supersede APM BO-3 “Avoidance of and minimization of potential impacts to special-status plants”): A pre-construction survey would be conducted by a qualified botanist or biologist prior to commencement of construction in each area. All rare plant populations would be appropriately marked or flagged for exclusion, or as appropriate, the limits of construction will be marked between the population and the work area. Surveys and marking or flagging must be completed no more than 30 days prior to construction. In the event that any previously unidentified listed plants, or CNPS List 1-3 plants cannot be avoided, PG&E would consult with the USFWS and/or the CDFG (depending on whether the species is on the federal or state list of sensitive species) to determine appropriate measures to minimize effects to the species and its habitat during construction of the project, as well as during operation and maintenance. The CPUC would be informed of the results of any agency consultations.	Review survey results and ensure necessary marking or flagging is in place. Confirm and report results of agency consultations to CPUC if necessary	Prior to and throughout construction
MM Bio-6	Mitigation Measure Bio-6 (Proposed to supersede APM BO-5 “Pre-construction surveys and relocation of species”): Pre-construction surveys for special-status amphibians and aquatic reptiles would be conducted no more than two weeks prior to the commencement of construction. Surveys would include work areas within 600 feet of suitable CTS breeding habitat and work areas within 300 feet of suitable CRLF aquatic habitat. Surveys would be conducted by a qualified, agency-approved biologist. Potential habitat for western spadefoot toad and western pond turtle exists in similar locations to those for CRLF and CTS. The biologist would relocate any special-status species to a location previously agreed upon by the USFWS and the CDFG. Before the start of work each morning, the biologist would check under any equipment and stored construction supplies left in the work area overnight within 600 feet of suitable habitat. All pole holes would be backfilled or covered at the end of the work day to prevent entrapment of special-status species.	Review survey results and ensure buffer zone is established around appropriate breeding habitat. Determine suitable relocation methods and site with appropriate agency Check construction areas daily prior to work Ensure dug pole holes covered daily	Prior to and throughout construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
MM Bio-7	Mitigation Measure Bio-7 (Proposed to supersede APM BO-5 “Seasonal timing restrictions”): All ground-disturbing construction activities within 600 feet of suitable habitat for CFLF, CTS, western spade foot frog, and western pond turtle would be limited to May 1 through October 31, to the greatest extent feasible. For work in these areas, a qualified biologist would conduct a pre-construction survey of the work area immediately preceding construction activities. All potential habitat areas including burrows, woody debris piles, wetlands, riparian areas, and edges of ponds within the work area would be thoroughly checked. Any special-status species found would be captured and relocated to a FWS and CDFG approved location type (e.g., a small mammal burrow) and area, prior to the start of construction.	Ensure no work occurs within 600 feet of habitat during May 1 through Oct 31 Check habitat area daily during construction Gain agency approval for re-location prior to construction	Prior to and throughout construction
MM Bio-8	Mitigation Measure Bio-8 (Proposed to supersede APM BO-5 “Minimization of burrow disturbance”): Plywood sheets would be used to temporarily cover potentially active burrows in work areas within 600 feet of suitable breeding habitat. Burrows would be covered after re-location has taken place, if necessary, or otherwise specified in the Biological Opinion.	Ensure identified burrows are covered after relocation or according to BO protocol	During construction
MM Bio-9	Mitigation Measure Bio-9 (Proposed to supersede APM BO-6 “Avoidance of and minimization of potential impacts to southwestern willow flycatcher and least Bell’s vireo”): Work anticipated within 300 feet of the potential nesting habitat for these species and the designated critical habitat for southwestern willow flycatcher includes the use of pull site P1 and insulator replacement at Poles 4, 5, and 6. Insulator replacement and use of the pull site would be restricted to the non-nesting season. For the purposes of this measure, the nesting season for these species is considered to be March 15 to September 15. Additionally, the raptor nesting season extends from February 1 through August 15. Work within the period of February 1 to September 15 in this area would only occur if pre-construction surveys determine these species are not actively nesting within 300 feet of the work areas, or a qualified biologist is present during all activities to monitor for potential nest disturbance per an Avian Protection Plan as described in Avoidance and Minimization Measures (AMM) BO-8	Confirm work only occurs during appropriate times given results of surveys Ensure work and monitoring conform to details in Avian Protection Plan	Prior to construction and throughout construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
MM Bio-10	Mitigation Measure Bio-10 (Proposed to supersede APM BO-7 “Avoidance of and minimization of potential impacts to western burrowing owl”): Pre-construction surveys would be conducted by a qualified biologist for burrowing owls for all project work areas that provide suitable nesting or wintering habitat (annual grasslands and pastures). Although burrowing owls are no longer known to nest in Santa Barbara County, the potential for nesting owls cannot be precluded. The work area surveys would take place within the ROW, covering the work area and surrounding areas visible from the ROW. The survey would include checking for the burrowing owl and owl signs (e.g., white wash at burrow entrances). If ground-disturbing activities in suitable habitat are delayed or suspended for more than 30 days after the pre-construction surveys, the site would be resurveyed. If no burrowing owls are detected, no further mitigation is necessary. If active burrows are found near a work area, work in the vicinity of the burrows would be limited as follows: ▪ No disturbance would occur within approximately 160 feet (50 meters) of occupied burrows during the non-breeding season of September 1 through January 31, or within approximately 250 feet (75 meters) during the breeding season of February 1 through August 31. ▪ The limits of the exclusion zone in the project work area will be clearly marked with signs, flagging and/or fencing. If work within these limits is unavoidable while burrows are active, work would only take place within the presence of a qualified monitor who would monitor to determine if the owls show signs of disturbance or, upon prior approval from CDFG a passive relocation effort (displacing the owls from the work area) may be conducted as described below, and subject to the approval of the CDFG. Passive relocation of owls may occur during the non-breeding season (September 1 through January 31) with prior approval from CDFG. Passive relocation would include installing one-way doors on the entrances of burrows. The one-way doors would be left in place for 48	Review results of survey and ensure appropriate avoidance buffers are in place. Confirm proper protocols are used and disturbance buffers are maintained if necessary	Prior to and throughout construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	hours to ensure the owls have vacated the nest site. Owls would not be relocated during the breeding season.		
MM Bio-11	Mitigation Measure Bio-11: The open ends of light-duty steel poles would be covered during storage to prevent burrowing owls or any other sensitive species from inhabiting the pole openings.	Ensure stored steel pole ends are covered	During construction
MM Bio-12	Mitigation Measure Bio-12 (Proposed to supersede APM BO-8 “Avoidance of and minimization of potential impacts to song birds, raptors and other migratory bird species”): Pre-construction bird nesting surveys for pull sites or locations of pole replacement or clearing and grading activities would be conducted before work performed between February 1 and August 15. See AMM BO-5 for pre-construction survey requirements near the Santa Ynez River. Pre-construction surveys would be conducted within the ROW and from the ROW of areas visible from the ROW. To the extent possible, working in the vicinity of active nests would be avoided; however, if avoidance is not practicable, a buffer zone, as determined by a qualified biologist, would be maintained around the active nest to prevent nest abandonment. In the event that work would take place within 50 feet (300 feet for raptors) of an active nest, a biological monitor would monitor the activity of the nesting birds during work to determine if construction activities are resulting in significant disturbance to the birds. If the qualified biologist determines that work is disrupting nesting, then work in that area would be halted until nesting is completed and the young have fledged. Monitoring guidelines would be provided in an Avian Protection Plan to be submitted to the USFWS and CDFG for review and approval prior to construction. Documentation of Plan approval would be submitted to the CPUC for recordkeeping. Installation of the replacement power lines would conform to PG&E’s most current version of Bird and Wildlife Protection Standards, and would include the use of bird guards.	Confirm proper protocols have been used according to AMM BO-5 Review survey results and ensure avoidance buffer has been accurately established if nesting birds are found Ensure work and monitoring conform to details in Avian Protection Plan	Prior to and throughout construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
<i>Cultural</i>			
APM CR-1	APM Cultural Resources (CR)-1: Archaeological site avoidance. To ensure that A-1857-3H is not inadvertently damaged during implementation of the Project, the limits of the work areas listed in Potential Impact CR-1 will be marked with readily visible flagging tape and the construction crews will be instructed that there will be no vehicle access, travel, equipment staging and storage, or other construction-related work outside of the flagged work areas when working at Pole 13.	Ensure area is adequately marked and avoidance of the area is maintained	During construction
APM CR-2	APM CR-2: Pre-construction Worker Education Program. PG&E will design and implement a Worker Education Program that will be provided to all Project personnel who may encounter and/or alter historical resources or unique archaeological properties, including construction supervisors and field personnel. No construction worker will be involved in field operations without having participated in the Worker Education Program. The Worker Education Program shall include, at a minimum: A review of archaeology, history, prehistory and Native American cultures associated with historical resources in the Project vicinity. A review of applicable local, state and federal ordinances, laws and regulations pertaining to historic preservation. A discussion of site avoidance requirements and procedures to be followed in the event that unanticipated cultural resources are discovered during implementation of the Project. A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and PG&E policies. A statement by the construction company or applicable employer agreeing to abide by the Worker Education Program, PG&E policies and other applicable laws and regulations. The Worker Education Program may be conducted in concert with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified instructor meeting applicable	Provide proof of completion of an Worker Education Program from all on-site personnel Confirm all subject matter was covered during training	Prior to construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	professional qualifications standards.		
APM CR-3	APM CR-3: Unanticipated discoveries management. In the unlikely event that previously unidentified cultural resources are uncovered during implementation of the Project, all work within 165 feet (50 meters) of the discovery will be halted and redirected to another location. PG&E's cultural resources specialist or his/her designated representative will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, the resource will be documented on State of California Department of Parks and Recreation cultural resource records and no further effort will be required. If the resource cannot be avoided and may be subject to further impact, PG&E will evaluate the significance and CRHR eligibility of the resources, and implement data recovery excavation or other appropriate treatment measures if warranted.	Halt work, if necessary and contact PG&E specialist. Confirm evaluations before work can resume	During construction
MM Cultural-1	Mitigation Measure Cultural-1: Environmental training would be provided to workers regarding the protection of paleontological resources and procedures to be implemented in the event fossil remains are encountered by ground-disturbing activities. This training may be combined with other environmental training for the project, provided that the program elements pertaining to cultural resources are provided by a qualified instructor meeting applicable professional qualification standards. In the unlikely event that previously unidentified paleontological resources are uncovered during implementation of the project, all ground disturbing work would be temporarily halted or diverted away from the discovery to another location. PG&E's paleontological resources specialist or his/her designated representative would inspect the discovery and determine whether further investigation is required. If the discovery is significant, but can be avoided and no further impacts would occur, the resource would be documented in the appropriate paleontological resource records and no further effort would be required. If the resource is significant, but cannot be avoided and may be subject to further impact, PG&E would evaluate the significance of the resources, and implement data recovery excavation or other appropriate treatment measures as recommended by a qualified paleontologist.	Halt work, if necessary and contact PG&E specialist. Confirm evaluations before work can resume Provide proof of completion of paleontological training from all on-site personnel Confirm subject matter was covered during training	During construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
<i>Geology and Soils</i>			
APM GM-1	APM Geology and Mineral Resources (GM)-1: Appropriate design measures implementation. A landslide survey of the planned Project alignment will be conducted, which will include a reconnaissance to identify potential problems at planned pole locations. Appropriate design features will be developed where potential problems are found to exist. Appropriate design features may include excavation of potentially problematic soils during construction and replacement with engineered backfill, relocation of poles to avoid problematic soils or landslide areas, and pole depth specifications.	APM no longer necessary given confirmation that no additional engineering would be required.	N/A
APM GM-2	APM GM-2: Soft or loose soils during construction minimization. Where soft or loose soils are encountered during construction, appropriate measures will be implemented to avoid, accommodate, replace, or improve soft or loose soils encountered during construction. Such measures may include: ▪ Locating construction facilities and operations away from areas of soft and loose soil. ▪ Over-excavating soft or loose soils and replacing them with engineered backfill materials. ▪ Increasing the density and strength of soft or loose soils through mechanical vibration and/or compaction. Treating soft or loose soils in place with binding or cementing agents. Construction activities in areas where soft or loose soils are encountered will be scheduled for the dry season to allow safe and reliable equipment access.	Confirm action has been taken in soft of loose soils	During construction
APM GM-4	APM GM-4: Slope instability during construction minimization. Temporary construction slopes and existing natural or constructed slopes impacted by construction operations will be evaluated for stability. In developing grading plans and construction procedures for access roads and power poles, the stability of both temporary and permanent cut, fill, and otherwise impacted slopes will be analyzed. Construction slopes and grading plans will be designed to	APM no longer necessary given confirmation that grading will be limited to minor road	N/A

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	limit the potential for slope instability and minimize the potential for erosion and flooding during construction. During construction, slopes affected by construction operations will be monitored and maintained in a stable condition. Construction activities likely to result in slope instability will be suspended, as necessary, during and immediately following periods of heavy precipitation when unstable slopes are more susceptible to failure.	resurfacing activities to re-establish existing access roads.	
Hazards and Hazardous Materials			
APM HM-2	APM HM-2/WQ-2: Environmental Training and Monitoring Program (ETMP) development and implementation. An environmental training program will be established to communicate to all field personnel any environmental concerns and appropriate work practices, including spill prevention and response measures and Best Management Practices (BMPs). The training program will emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of flow paths to nearest waterbodies) and will include a review of all site-specific plans, including but not limited to the Project's SWPPP, Erosion Control and Sediment Transport Plan, Health and Safety Plan, and Hazardous Substances Control and Emergency Response Plan. A monitoring program will also be implemented to ensure that the plans are followed throughout the construction period. BMPs, as identified in the Project SWPPP and Erosion Control and Sediment Transport Plan, will also be implemented during the Project to minimize the risk of an accidental release and to provide the necessary information for emergency response.	Provide proof of completion of Environmental Training and Monitoring Program for all on-site personnel Confirm monitoring program in place	Prior to construction
MM Haz-1	Mitigation Measure Haz-1 (Proposed to supersede APM HM-1): PG&E would submit a Hazardous Substance Control and Emergency Response Plan to the CPUC for recordkeeping at least 30 days prior to project construction. The plan would identify methods and techniques to minimize the exposure of the public to potentially hazardous materials during all phases of project construction through operation. The plan would require implementing appropriate control methods and approved containment and spill-control practices (i.e., spill control plan) for construction and materials stored on-site.	Confirm Plan covers all appropriate topic matter	30 days prior to construction and throughout construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	All hazardous materials and hazardous wastes would be handled, stored, and disposed of, in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. With the exception of the poles, all hazardous materials would be collected in project-specific containers at the site, and transported to a PG&E service center designated as a PG&E consolidation site. Poles would be scheduled for transportation to the appropriate licensed Class 1 or a composite-lined portion of a solid waste landfill. The plan would include, but not be limited to, the following: ▪ Proper disposal of potentially contaminated soils ▪ Vehicles and equipment parking near sensitive resource areas during construction ▪ Emergency response and reporting procedures to address hazardous material spills		
MM Haz-2	Mitigation Measure Haz-2 (Proposed to supplement APM HM-2/WQ-2): PG&E would prepare a site-specific Health and Safety Plan (HSP) to ensure that potential safety hazards would be kept at a minimum. The HSP would include elements that establish worker training and emergency response procedures relevant to project activities. The plan would be submitted to the CPUC at least 30 days prior to construction for CPUC recordkeeping.	HSP must be complete and on-site	During construction and operations
MM Haz-3	Mitigation Measure Haz-3: If it is necessary to store any chemicals on-site, they would be managed in accordance with all applicable regulations. Material Safety Data Sheets would be maintained and kept available on-site, as applicable.	Confirm proper storage of hazardous materials and location of MSDS	During construction and operations
MM Haz-4	Mitigation Measure Haz-4: In the event that soils suspected of being contaminated (based on evidence from visual, olfactory, or other means) are removed during excavation activities along the power line corridor, the excavated soil would be tested and, if contaminated above hazardous levels, would be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil would require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.	Confirm qualifications of person testing soils Suspected contaminated soil must be contained and disposed of properly at	During construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
		licensed facility	
MM Haz-5	Mitigation Measure Haz-5 (Proposed to supersede APM HM-3): PG&E would prepare and submit a Fire Prevention and Response Plan to the CPUC and to local fire protection authorities for notification at least 30 days prior to construction. The plan would include fire protection and prevention methods for all components of the project during construction. The plan would include procedures to reduce the potential for igniting combustible materials by preventing electrical hazards, use of flammable materials, and smoking onsite during construction and maintenance procedures. Project personnel would be directed to park away from dry vegetation; to equip vehicles with fire extinguishers; not to smoke; and to carry water, shovels, and fire extinguishers in times of high fire hazard.	Ensure Fire Prevention and Response Plan is developed and covers all topic matter identified Confirm receipt of plan	30 days prior to construction
Hydrology and Water Quality			
APM WQ-2/HM-2	APM WQ-2/HM-2: Environmental Training and Monitoring Program (ETMP) development and implementation. Worker environmental awareness will communicate environmental issues and appropriate work practices specific to this Project. This awareness will include spill prevention and response measures and proper BMP implementation. The SWPPP training will emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of flow paths to nearest waterbodies) and will include a review of all site-specific water quality requirements, including applicable portions of , the Erosion Control and Sediment Transport Plan, Health and Safety Plan, and PG&E's Hazardous Substances Control and Emergency Response program.	Provide proof of completion of Environmental Training and Monitoring Program for all on-site personnel Confirm monitoring program in place	Prior to construction
MM Hydro-1	Mitigation Measure Hydro-1 (Proposed to supersede APM WQ-1): Following project approval, PG&E would prepare and implement a SWPPP to minimize construction impacts on surface and groundwater quality. Implementation of the SWPPP would help stabilize graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be adhered to during construction activities. Erosion and sediment control measures, such as straw wattles, water bars, covers, silt fences, and sensitive area access restrictions (e.g., flagging) would be installed before the onset of winter rains or	Ensure development of SWPPP and incorporation of BMPs	Prior to construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	any anticipated storm events. Mulching, seeding, or other suitable stabilization measures would be used to protect exposed areas during construction activities, as necessary. During construction, measures would be in place to ensure that contaminants are not discharged from the construction sites.		
MM Hydro-2	Mitigation Measure Hydro-2 (Proposed to supersede APM WQ-3/GM-2): PG&E would prepare an Erosion Control and Sediment Transport Plan (ECSTP) as an element of the SWPPP describing BMPs, to be used during construction. The plan would address construction in or near sensitive areas described in Section 3.5 Biological Resources. BMPs, where applicable would be designed based on specific criteria from recognized BMP design guidance manuals. Erosion-minimizing efforts may include measures such as: ▪ Avoiding excessive disturbance of steep slopes ▪ Defining ingress and egress within the project area ▪ Implementing a dust control program during construction ▪ Restricting access to sensitive areas ▪ Using vehicle mats in wet areas ▪ Revegetating disturbed areas where applicable following construction ▪ Proper containment of stockpiled soils (including construction of berms in areas near water bodies, wetlands, or drainage channels) Erosion control measures identified in the ECSTP would be installed in an area before clearing begins during the wet season in that area and before the onset of winter rains or any anticipated storm events. Temporary measures such as silt fences or wattles, intended to minimize sediment transport from temporarily disturbed areas, would remain in place until disturbed areas have stabilized. The ECSTP would be submitted to the CPUC for review at least 30 days prior to the commencement of construction. The plan would be revised and updated as needed, and re-	Ensure ECSTP is developed and minimizes erosion Confirm receipt of plan	30 days prior to construction

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
	submitted to the CPUC if construction activities evolve to the point that the existing approved ECSTP does not adequately address the project.		
Noise			
APM NO-1	APM Noise (NO)-1: Noise minimization with portable barriers. Compressors and other small stationary equipment will be shielded with portable barriers in proximity to residential areas.	Confirm equipment shielded	During construction
APM NO-2	APM NO-2: Noise minimization with “quiet” equipment. “Quiet” equipment (i.e., equipment that incorporates noise-control elements into the design—compressors have “quiet” models) will be used during construction whenever possible.	Confirm equipment operated in “quite” mode	During construction
APM NO-3	APM NO-3: Noise minimization through direction of exhaust. Equipment exhaust stacks and vents will be directed away from buildings	Confirm venting of stacks and vents	During construction
APM NO-4	APM NO-4: Noise minimization through truck traffic routing. Truck traffic will be routed away from noise-sensitive areas where feasible.	Schedule truck traffic away from noise sensitive areas	During construction
APM NO-5	APM NO-5: Noise disruption minimization through residential notification. PG&E will coordinate with the City of Lompoc and the County of Santa Barbara to notify residents that are located near the power lines of the timeframe for the construction activities.	Notify residents	Prior to construction
Transportation and Traffic			
APM TT-2	APM TT-2: Lift Plan development and implementation. A Lift Plan will be prepared and approved by the FAA prior to all construction helicopter operations. PG&E does not anticipate that residents will be required to temporarily vacate their homes. In the unlikely event that final construction plans and the Lift Plan require otherwise, PG&E will coordinate with potentially affected residents (providing a minimum of 30 days notice) to minimize the duration of the necessary work and any resultant inconvenience. The implementation of this measure will minimize impact TT-2 to a less than significant level.	APM no longer necessary given remote location and no nearby residents	N/A

Table 4.1-1 (Continued): Mitigation Monitoring Plan

Impact	Applicant Proposed Measure (APM) or Mitigation Measure (MM)	Monitoring Requirement	Time of Action
MM Traffic-2	Mitigation Measure Traffic-1 (Proposed to supersede APM TT-1): PG&E would develop a project-specific TMP, which would be submitted to the CPUC for review at least 30 days prior to construction. The TMP would conform to the California Joint Utility Traffic Control Committee's <i>Work Area Protection and Traffic Control Manual</i>. The TMP would include the following: ▪ Standard safety practices, including installation of appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices. ▪ Flaggers and/or signage would be used to guide vehicles through or around construction zones using proper construction techniques. ▪ Provision that all equipment and materials would be stored in designated staging areas on or adjacent to the work sites in a manner that minimizes traffic obstructions and maximizes sign visibility. Acceptable vehicle speeds on project roadways. Vehicle speeds would be limited to safe levels as appropriate for all roads, including access roads and overland routes without existing, posted speed limits.	Confirm all points outlined in the TMP are fully implemented Confirm receipt of TMP Plan	Prior to and throughout construction

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None

2.0 PROJECT DESCRIPTION

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3.19 CORONA AND INDUCED CURRENT EFFECTS

None

4.0 DRAFT MITIGATION MONITORING PLAN

None

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Chapter 6:

Report Preparation

6.1 List of Preparers

This section lists those individuals who either prepared or participated in the preparation of this IS/MND.

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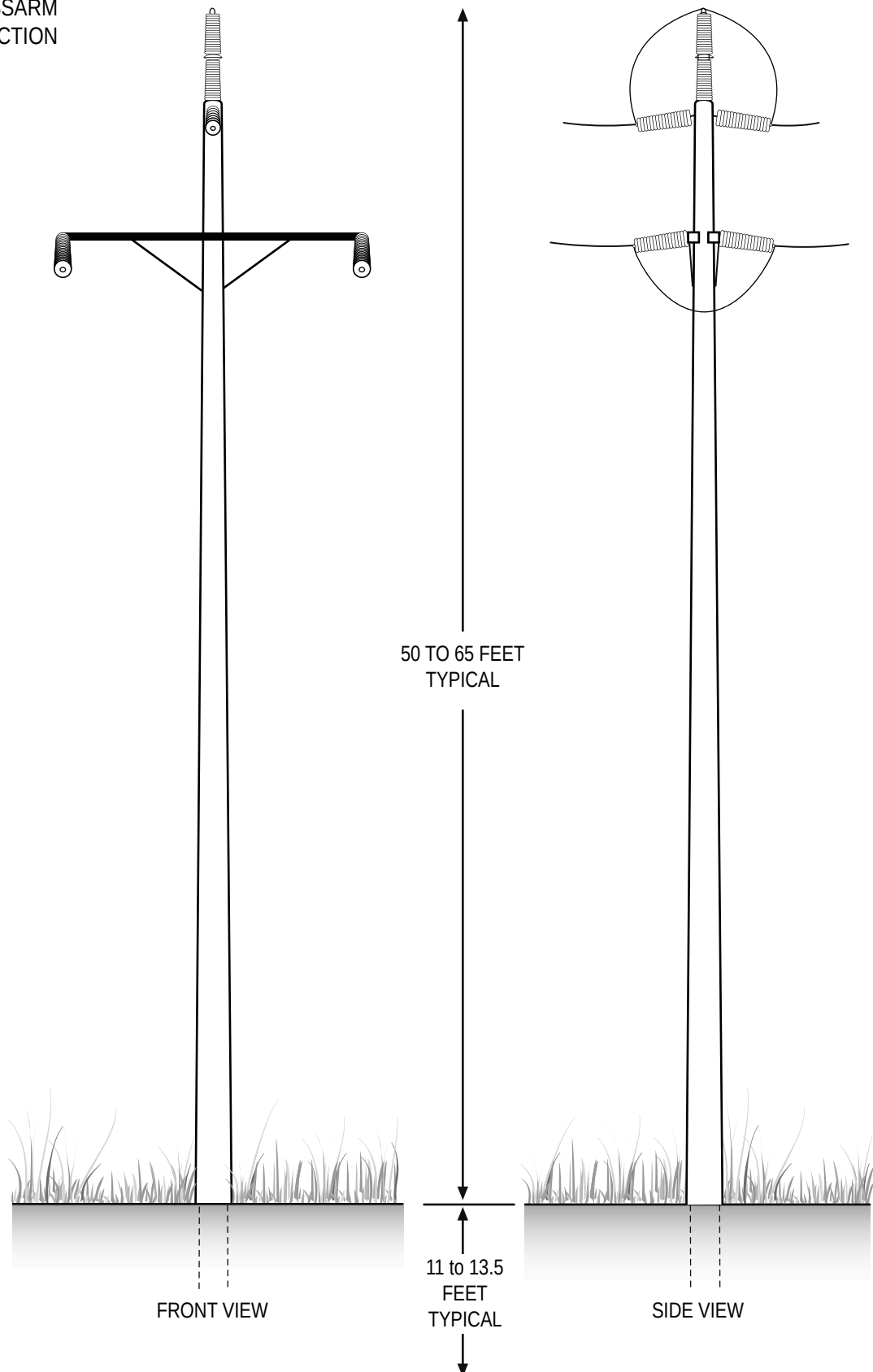
Andrea Adams

United States Fish and Wildlife Service

APPENDIX A:

POLE CONFIGURATIONS

TPD CROSSARM
CONSTRUCTION

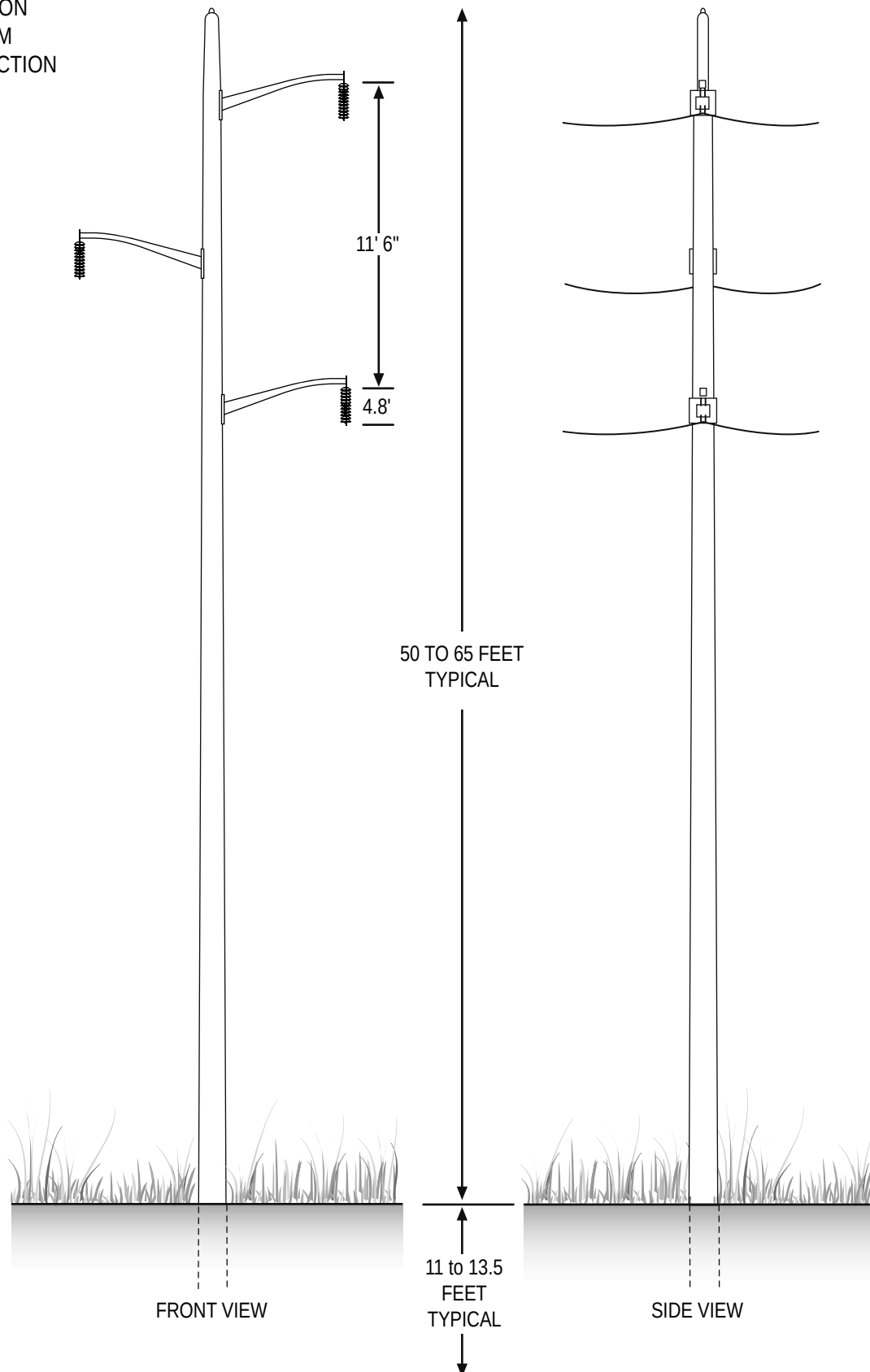


Not to Scale

FIGURE DR#4-PD-4.1
Typical Dead End Structure
Cabrillo-Santa Ynez 115kv Reconducting



SUSPENSION
CROSSARM
CONSTRUCTION

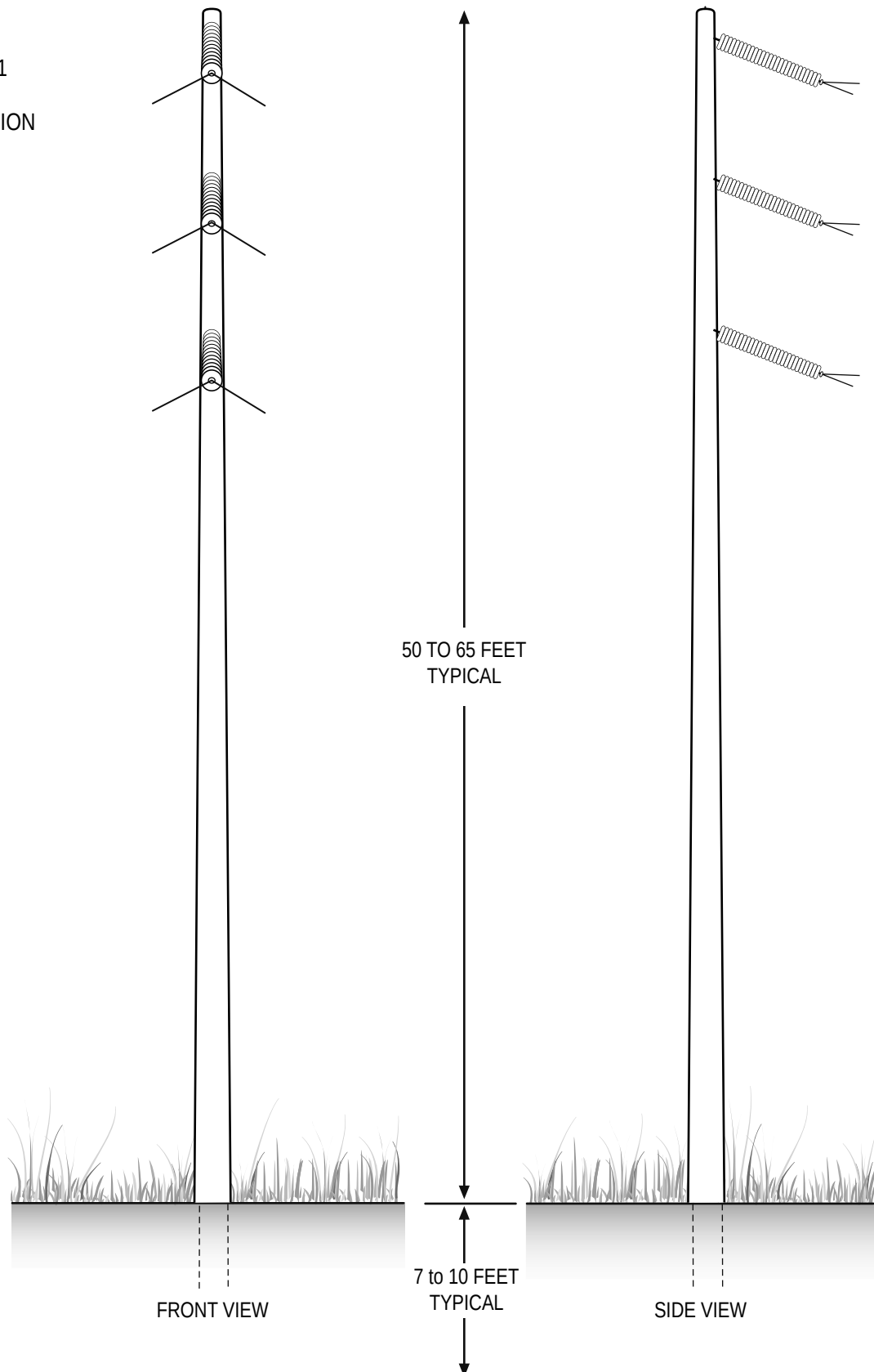


Not to Scale

FIGURE 2.7-2
Typical Light-duty Steel Pole
Cabrillo-Santa Ynez 115kv Reconducting



TYPICAL SV-1
CROSSARM
CONSTRUCTION

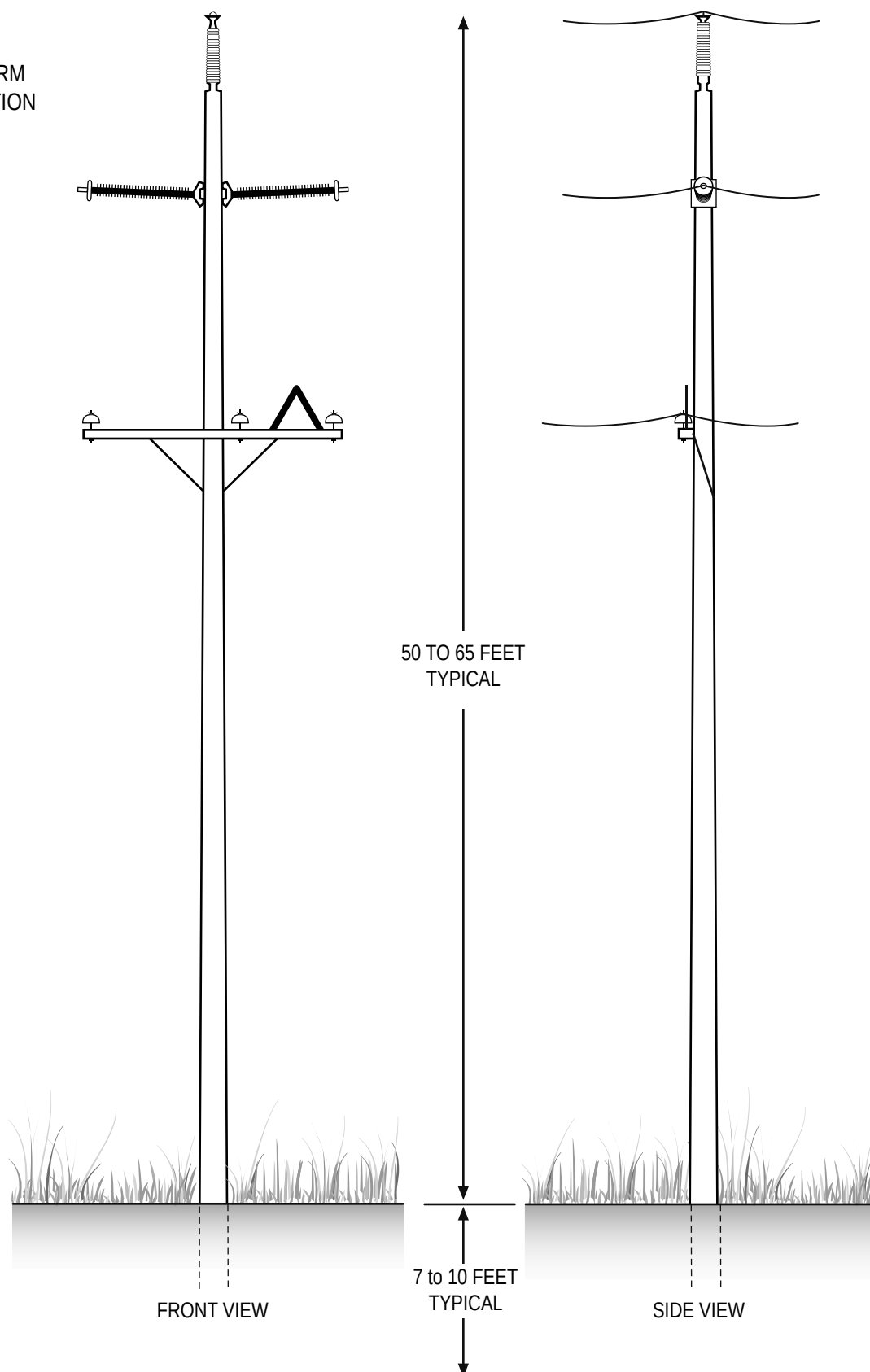


Not to Scale

FIGURE DR#4-PD-4.3
Type SV-1
Cabrillo-Santa Ynez 115kv Reconducting



T-1 CROSSARM CONSTRUCTION



Not to Scale

FIGURE DR#4-PD-4.2
T-1 CROSSARM CONSTRUCTION
Cabrillo-Santa Ynez 115kv Reconducting



APPENDIX B:

AIR QUALITY CALCULATIONS

Cabrillo-Santa Ynez 115 kV Reconductoring Project

Construction Emissions Summary

	Emissions (tons/project)							Emissions (metric tons/project)	Emissions with Implementation of APM GHG-1 (metric tons/project)
	ROG	NOx	CO	SO ₂	Exhaust PM ₁₀	Fugitive PM ₁₀	Exhaust PM _{2.5}	CO ₂	CO ₂
TOTAL	0.4	2.7	2.1	0.030	0.1	7	0.13	427	379
SBCAPCD Threshold	25	25	NA	NA	NA		NA	NA	NA
Threshold Exceeded?	No	No	NA	NA	NA		NA	NA	NA

SBCAPCD, *Scope and Content of Air Quality Sections in Environmental Documents*, June 2008

Implementation of APM GHG-1 was assumed to reduce construction equipment, construction vehicles, and worker commute emissions by approximately 15 percent.

Cabrillo-Santa Ynez 115 kV Reconductoring Project

Construction Equipment Emissions

Table 1. Construction Equipment Emission Summary (tons/activity)

Construction Activity	Activity Duration (months)	Emissions (tons/activity)						Emissions (metric tons/activity)
		ROG	NOx	Exhaust PM ₁₀	Exhaust PM _{2.5}	CO	SO ₂	CO ₂
Re-establishment of Access Roads	2	0.05	0.37	0.02	0.02	0.18	0.0004	32
Auger Holes	6	0.09	0.93	0.04	0.03	0.28	0.0034	129
Pole Erection	6	0.02	0.10	0.01	0.01	0.05	0.0001	8
Conductor Installation	6	0.10	0.60	0.05	0.05	0.34	0.0005	44
TOTAL		0.25	1.99	0.12	0.11	0.85	0.0044	212

The URBEMIS2007 default of 17 days per month was used to calculate emissions in units of tons per activity (4 workdays per week).

-The PM emission factor was assumed to represent PM₁₀ emissions.

- PM_{2.5} emissions were calculated following the SCAQMD Particulate Matter (PM) 2.5 Significance Thresholds and Calculation Methodology, October 2006. For offroad combustion sources, 89% of the PM₁₀ would be PM_{2.5}.

Table 2. Construction Equipment Summary

Construction Activity: Re-establishment of Access Roads (Assumed duration = 2 months)

Year of Activity: 2010						Emission Factors (g/bhp hr)					
Equipment	Fuel Type	Number of Equipment	Horsepower	Load	Operation (hours per day)	ROG	NOx	PM	CO	SO ₂	CO ₂
Motor Grader	Diesel	1	174	0.61	10	0.488	3.789	0.219	2.074	0.004	346.974
Brush hog (ASV Mower) ^a	Diesel	1	91	0.68	10	0.762	4.434	0.431	2.742	0.005	386.971
Water Truck	Diesel	1	189	0.50	10	0.319	3.144	0.112	0.837	0.004	324.222

Construction Activity: Auger Holes (Assumed duration = 6 months)

Year of Activity: 2010						Emission Factors (g/bhp hr)					
Equipment	Fuel Type	Number of Equipment	Horsepower	Load	Operation (hours per day)	ROG	NOx	PM	CO	SO ₂	CO ₂
Auger ^b	Diesel	1	291	0.75	10	0.204	2.337	0.084	0.763	0.004	426.608
Chainsaw ^c	Gasoline	1	15	1	10	0.011	0.0002	0.00003	0.020	0.000002	0.054
Water Truck	Diesel	1	189	0.50	10	0.319	3.144	0.112	0.837	0.004	324.222

Construction Activity: Pole Erection (Assumed duration = 6 months)

Year of Activity: 2010						Emission Factors (g/bhp hr)					
Equipment	Fuel Type	Number of Equipment	Horsepower	Load	Operation (hours per day)	ROG	NOx	PM	CO	SO ₂	CO ₂
Aerial Lift ^d	Diesel	1	60	0.46	10	0.477	3.074	0.246	1.715	0.003	261.653

Construction Activity: Conductor Installation

Year of Activity: 2010 (Assumed duration = 6 months)						Emission Factors (g/bhp hr)					
Equipment	Fuel Type	Number of Equipment	Horsepower	Load	Operation (hours per day)	ROG	NOx	PM	CO	SO ₂	CO ₂
Aerial Lift ^d	Diesel	2	60	0.46	10	0.477	3.074	0.246	1.715	0.003	261.653
Pulvers and Tensioners ^e	Diesel	2	106	0.48	10	0.583	3.451	0.314	1.943	0.003	273.029

^a It was assumed the emission factors for sweepers/scrubbers in URBEMIS2007 would represent emissions from engines used to operate the brush hog.

^b It was assumed the emission factors for bore/drill rigs in URBEMIS2007 would represent emissions from engines used to operate the auger.

^c The OFFROAD2007 model was used for the chainsaw emission factors.

^d It was assumed the emission factors for aerial lifts in URBEMIS2007 would represent emissions from engines used to operate the line truck with worker lift.

^e It was assumed the emission factors for air compressors in URBEMIS2007 would represent emissions from engines used to operate the pullers and tensioners.

Source: Emission factors, horsepower, and load factors from URBEMIS2007, version 9.2.4.

Cabrillo-Santa Ynez 115 kV Reconductoring Project

Truck Emissions

Table 3. On-Site Truck Miles Traveled

Construction Activity	Activity Duration (months)	Truck Type	Number of Trucks	Average Roundtrip Distance Traveled (Miles per Day)	Total Vehicle Miles Traveled (VMT/day)	Emissions (tons/activity)							Emissions (metric tons/activity)
						ROG	NOx	Exhaust PM ₁₀	Fugitive PM ₁₀	Exhaust PM _{2.5}	CO	SO ₂	CO ₂
Survey	2	Pick-up truck (gasoline)	1	20	20	0.001	0.001	0.000	0.19	0.000	0.011	0.00002	1.0
Re-establishment of Access Roads	2	Pick-up truck (gasoline)	1	20	20	0.001	0.001	0.000	0.19	0.000	0.011	0.00002	1.0
Auger Holes	6	Pick-up truck (gasoline)	1	20	20	0.001	0.001	0.000	0.58	0.000	0.011	0.00002	1.0
Material Haul	1	Line Truck with Trailer	1	100	100	0.014	0.064	0.004	0.48	0.004	0.030	0.00007	7.0
Pole Delivery	2	Pick-up truck (gasoline)	1	20	20	0.001	0.001	0.000	0.19	0.000	0.011	0.00002	1.0
		Line Truck with Trailer	1	100	100	0.028	0.128	0.008	0.97	0.007	0.060	0.00015	13.9
Pole Erection - Aerial Access	6	Crew-cab Truck	1	20	20	0.002	0.003	0.000	0.58	0.000	0.033	0.00006	3.1
Pole Erection - Ground Access	6	Crew-cab Truck	1	20	20	0.002	0.003	0.000	0.58	0.000	0.033	0.00006	3.1
		Line Truck with Trailer	1	20	20	0.017	0.077	0.005	0.58	0.004	0.036	0.00009	8.4
Conductor Installation	6	Pick-up truck (gasoline)	3	20	60	0.007	0.010	0.001	1.74	0.001	0.099	0.00018	9.4
		Line Truck with Trailer	1	20	20	0.017	0.077	0.005	0.58	0.004	0.036	0.00009	8.4
Construction Workers	12	Passenger car (gasoline)	10	60	600	0.011	0.049	0.005	0.05	0.002	0.405	0.00052	50.2
TOTAL						0.102	0.415	0.027	6.729	0.023	0.774	0.001	107.6

The URBEMIS2007 default of 22 days per month was used to calculate emissions in units of tons per activity. Fugitive emissions from roads assumes 60% of the miles travel would occur on paved roads and 40% of the miles traveled would occur on unpaved roads.

Table 4. Emission Factors (EF)

	ROG	NOx	PM ₁₀	PM _{2.5}	CO	SO ₂	CO ₂
Heavy-duty diesel Emission Factor (g/mile)	5.806	26.30	1.575	1.449	12.292	0.03	3165.446
Heavy-duty diesel Emission Factor (lb/mile)	0.0128	0.0580	0.0035	0.0032	0.0271	0.0001	6.9785
Gasoline pick-up Emission Factor (g/mile)	0.846	1.152	0.069	0.064	11.321	0.021	1182.821
Gasoline pick-up Emission Factor (lb/mile)	0.0019	0.0025	0.0002	0.0001	0.0250	0.00005	2.60763
Gasoline passenger car Emission Factor (g/mile)	0.061	0.281	0.029	0.014	2.317	0.003	287.698
Gasoline passenger car Emission Factor (lb/mile)	0.0001	0.0006	0.0001	0.0000	0.0051	0.0000	0.6343

Emission factors from EMFAC2007 v 2.3 for SBCAPCD for a heavy duty diesel truck traveling 10 miles per hour, gasoline pickup traveling 5 mph, and gasoline passenger car traveling 45 mph.

Cabrillo-Santa Ynez 115 kV Reconductoring Project

Truck Emissions

Table 5. Fugitive Emissions from Roads

Travel on Unpaved Surfaces

Emission Factor (EPA AP-42 13.2.2):

Travel on Paved Surfaces

Emission Factor (EPA AP-42 13.2.1):

$EF^{(1)} = k [(s/12)^a] [(W/3)^b]$ lb/vehicle mile traveled (vm) $E = [k(sL/2)^{0.65}(W/3)^{1.5}] - C$

Variables	PM ₁₀	Variables	PM ₁₀
k	1.5	k	0.016
a	0.9	sL (g/m2)	0.03
b	0.45	W (tons)	3
s (%)	8.5	C	0.0005
W (tons)	3	EF(lb/VMT) =	0.001
EF(lb/VMT) =	1.10		

1. Emission factors were calculated using EPA AP-42 13.2.2, equation 1b.
2. Silt content were obtained from EPA AP42 Table 13.2.2-1. The value of scraper routes of construction sites was used.

Cabrillo-Santa Ynez 115 kV Reconductoring Project

Table 6. Fugitive Dust Calculations

Grading

Acres Graded	Emission Factor (lb PM₁₀/acre)	PM₁₀ Emissions (tons/project)
12	20	0.12

A 40 ft by 100ft work area around each pole results in approximately 12 acres disturbed for the Project
The emission factor for disturbed area emissions is from URBEMIS2007, version 9.2.4.

Cabrillo-Santa Ynez 115 kV Reconductoring Project

Helicopter Emission Calculations

Table 7. Helicopter Criteria Pollutant Emissions Summary

Daily Emissions (lb/day)				
CO	HC	NOx	SOx	PM
20.48	1.20	12.09	1.11	0
Annual Emissions (ton/yr)				
CO	HC	NOx	SOx	PM
0.451	0.026	0.266	0.024	0

Daily emissions calculated assuming 2 LTO per day and 8 hours per work day.

Annual emissions calculated assuming 22 workdays per month for 2 months.

Table 8. Helicopter Criteria Pollutant Emission Factors

Helicopter External Exhaust Emission Factors									
Helicopter	Engine Type	Mode		Emission Factors (lbs/min)					Minutes/LTO
				CO	HC	NOx	SOx	PM	
BELL 206	250B17B	1	Approach	0.0686777	0.007566187	0.0032011	0.0007857	0	6.50
	250B17B	2	Climb	0.0368677	0.001634931	0.0243605	0.0022072	0	4.33
	250B17B	3	Take-off	0.0345047	0.001325406	0.0291589	0.0023857	0	2.17
	250B17B	4	Idle	0.1013631	0.020899608	0.001045	0.0005643	0	7.00

It was assumed that the Bell 206 engine represents the emissions profile of the helicopter that would be used.

Emission factors for the Bell 206 engine are from the Federal Aviation Administration, Emissions and Dispersion Modeling System (EDMS).

Time per mode based on default times in EDMS.

Cabrillo-Santa Ynez 115 kV Reconductoring Project

Helicopter Emission Calculations

Table 9. Landing/Take-Off Criteria Pollutant Emissions

Engine Mode	Emissions (lbs/LTO)				
	CO	HC	NOx	SOx	PM
Approach	0.446	0.049	0.021	0.005	0
Climb	0.160	0.007	0.105	0.010	0
Take-off	0.075	0.003	0.063	0.005	0
Idle	0.710	0.146	0.007	0.004	0
	TOTAL:				
	1.390	0.205	0.197	0.024	0

2 LTO per day

Table 10. Helicopter Operation Criteria Pollutant Emissions during Tower Work

Minutes operation per day 480

Engine Mode	Emissions (lbs/LTO)				
	CO	HC	NOx	SOx	PM
Climb	17.70	0.78	11.69	1.06	0

Assume helicopter operates for 8 hours per day.

Table 11. Helicopter CO₂ Emissions

Fuel Use:	32	gallons per hour
Emission Factor:	9.56	kg CO ₂ /gallon Jet A fuel
Emissions (metric tons/project):	108	metric tons CO ₂

Emissions calculated assuming 22 workdays per month for 2 months.

CO₂ emission factor from the ARB Mandatory Reporting Regulation, Appendix A, Table 4.

APPENDIX C-1:

BIOLOGICAL RESOURCES

TECHNICAL REPORT

Biological Resources Technical Report

**Cabrillo-Santa Ynez 115 kV Reconductoring Project,
Santa Barbara County, California**

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June 30, 2009



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1. Introduction

This report is preliminary documentation of existing biological resources on Pacific Gas & Electric Company's (PG&E's) Cabrillo-Santa Ynez Reconductoring Project in Santa Barbara County, California. The project includes approximately 14.6 miles (mi) of single circuit 115-kilovolt (kV) line. The study area, including power line corridor and a 200-foot buffer, covers approximately 345 acres (Figure 1, maps 1-17; all figures located at the end of this report). This report has been prepared at the request of CH2M HILL to document the reconnaissance field investigation conducted for the California Environmental Quality Act (CEQA) review of the proposed development project.

PG&E proposes to reductor the existing Cabrillo-Santa Ynez 115kV power line to improve line reliability for the area. The project is located in Santa Barbara County between the cities of Lompoc and Buellton, California. The alignment is oriented east-west roughly paralleling State Route 246 between State Route 1 in Lompoc and U.S. Highway 101, north of Buellton. This line connects Cabrillo Substation in Lompoc to Santa Ynez Switching Station, just west of U.S. Highway 101. This project is proposed because the existing conductor has corroded and deteriorated, leaving the line brittle and subject to failure. Overall, the project includes three components: installation of 128 new light-duty steel poles with a surface treatment designed to render the appearance of natural weathering; reductoring of the single circuit 115kV power line; and the removal of 128 wood poles. Additionally, insulators on all 134 existing poles will be replaced.

The following sections describe existing biotic communities and discuss sensitive habitats and potential special-status wildlife species occurring in the study area.

2. Methods

Prior to conducting reconnaissance-level field surveys in the project area, Garcia and Associates (GANDA) reviewed existing information on biotic resources in the study area and surrounding areas. The following sources were reviewed:

- California Department of Fish and Game (CDFG) RareFind 3.1.0 Natural Diversity Database (CNDDDB) (CDFG 2008b);
- U.S. Fish and Wildlife Service (USFWS) species list website (USFWS 2008);
- California Wildlife Habitat Relationships System (CWHR) (CDFG 2008c).
- California Native Plant Society online version of the *Inventory of Rare and Endangered Plants of California* (CNPS 2009).

A list of special-status wildlife species with potential to occur in the project area was compiled by performing a CNDDDB search and reviewing the USFWS species list for the study area. The CNDDDB search included the following U.S. Geological Survey (USGS) quadrangles: Casmalia, Foxen Canyon, Lompoc, Lompoc Hills, Los Alamos, Los Olivos, Orcutt, Santa Rosa Hills, Santa

Ynez, Sisquoc, Solvang, Surf, Tranquillon Mountain, Zaca Creek and Zaca Lake. Other literature reviewed on wildlife distribution in the project region included the Lompoc Wind Energy Project (Aspen Environmental Group 2008), a bat survey report prepared for Vandenberg Air Force Base (Pierson et al. 2002), and the Ecosystem Characterization of La Purisima State Historic Park (Gevirtz et al. 2005).

Reconnaissance-level surveys were conducted along the alignment by GANDA wildlife biologist Loni Cooper and botanist Onkar Singh on January 20-23, 2009. The purpose of these surveys was to identify and map potential habitat for special-status wildlife species and to field-verify the mapped vegetation typing that was based on remote GIS sensing techniques. The study area included a 200-foot wide buffer centered on the 14.6 mi power line.

3. Plant Communities

Nine plant community types were identified within the study area. These include six natural vegetation types (California annual grassland, coast live oak woodland, central (Lucian) coastal scrub, riparian scrub, freshwater ponds/seeps and mule fat scrub); the other three are associated with human activities (agriculture, developed/landscaped, and ruderal). Type classifications of natural plant communities are based primarily on Holland (1986), with additional reference to the series-based vegetation classification system of Sawyer and Keeler-Wolf (1995). Human-influenced vegetation types are not included in the Holland (1986) system; some of these are included in the series described by Sawyer and Keeler-Wolf (1995). The acreage of each type found in the study area is shown in Figure 1 and summarized in Table 1. Descriptions of all identified vegetation types are provided below.

Table 1. Extent of vegetation types within the study area.

Vegetation Type	Area (acres)
<i>Natural Vegetation</i>	
California Annual Grassland	95.24
Coast Live Oak Woodland	72.33
Central (Lucian) Coastal Scrub	107.71
Riparian Scrub	3.87
Freshwater Pond and Seeps	1.19
Mule Fat Scrub	0.86
<i>Other Vegetation</i>	
Agriculture	47.58
Developed/Landscaped	10.32
Ruderal	5.41
Total	344.51

California Annual Grassland (Non-native)

California annual grassland is the current name for Holland's non-native grassland (Holland 1986), an upland community type composed of dense to sparse cover of mainly introduced annual grasses, usually less than 3 feet in height. California annual grassland includes remnant native perennial grasses, and native annual forbs (broad-leaved plants). The equivalent vegetation type in Sawyer and Keeler-Wolf (1995) is the California annual grassland series. California annual grassland is common along the entire length of the power line. Many of the grassland areas within the study area are used as pastureland for cattle grazing.

Although floristic composition is variable within this vegetation type, typical dominants for this vegetation type in the project area include soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), and foxtail chess (*B. madritensis*), wild oats (*Avena* spp.), California croton (*Croton californicus*), and filarees (*Erodium botrys*, *E. cicutarium*). In years of favorable rainfall, this vegetation type may support numerous species of native annual spring wildflowers (Holland 1986). Native species observed during the January 2009 reconnaissance survey included Sandberg bluegrass (*Poa secunda*), red maids (*Calandrinia ciliata*), tarweed (*Hemizonia* sp.), sky lupine (*Lupinus* c.f. *nanus*), and common peppergrass (*Lepidium* c.f. *nitidum*).

Central (Lucian) Coastal Scrub

Central (Lucian) coastal scrub, as described by Holland (1986), is typically comprised of a dense shrub layer 3-6 feet tall with a sparse herbaceous layer below and often occurs on exposed south-facing slopes. The equivalent community in Sawyer and Keeler-Wolf (1995) is California sagebrush series. Within the study area, this community typically integrates with surrounding habitat types including California annual grassland and coast live oak woodland. Central (Lucian) coastal scrub is common throughout the study area.

Species composition is highly variable and is dependent upon topography, soils, and slope aspect. Along the alignment this community is typically dominated by California sagebrush (*Artemisia californica*) with black sage (*Salvia mellifera*) and coyote brush (*Baccharis pilularis*) often occurring as associated species. Other shrubs commonly occurring within this vegetation type include sticky monkeyflower (*Mimulus aurantiacus*), Menzies' goldenbush (*Isocoma menziesii*), goldenbush (*Ericameria ericoides*), deerweed (*Lotus scoparius*), and California encelia (*Encelia californica*). The understory is generally sparse and includes native forbs and grasses such as yarrow (*Achillea* sp.) and needlegrass (*Nassella* spp.), as well as various non-native annual grass species.

Coast Live Oak Woodland

In this vegetation type, coast live oak (*Quercus agrifolia*) is the sole dominant tree in the canopy. It typically occurs on north-facing slopes and in shaded ravines, and can occur with a more open canopy in more exposed areas (Holland 1986). Coast live oak woodland is common throughout the study area where it typically intergrades with the California annual grassland and central (Lucian) coastal scrub communities.

The understory vegetation within the oak woodlands is relatively dense and diverse. The composition of the understory varies depending on canopy density and adjacent habitats. Where

there is a relatively dense canopy, an herbaceous understory dominates. Typical species include hedge nettle (*Stachys bullata*), pitcher sage (*Salvia spathacea*), miners lettuce (*Claytonia perfoliata*), fiesta flower (*Pholistoma auritum*), bedstraw (*Gallium sp.*), and a variety of other native annual herbs and non-native grasses. At the ecotone between coast live oak woodland and central (Lucian) coastal scrub the oak canopy was found to be less dense and typical understory woodland species include California sagebrush, sticky monkeyflower and toyon (*Heteromeles arbutifolia*).

Freshwater Ponds and Seeps

Freshwater ponds are not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Holland (1986), however, describes freshwater seeps as areas of permanently wet or moist soils consisting of low growing perennial herbs and grasses. A single seep with active groundwater discharge was identified near pole 112 during the January 2009 reconnaissance survey. Several freshwater ponds occur scattered throughout the study area in low-lying areas in which the soil is inundated or saturated for part of the growing season. These are typically man-made stock ponds or detention basins. The wetlands northeast of SR 246 and Campbell Road (Figure 1, Map 9: Ponds 10A, 10B) located near pole 70 are known to support special-status wildlife species. According to Tom Olson (pers. comm. T. Olson 2009a) these ponds are natural sag ponds (e.g., depressions created by an active fault line) that have been surveyed by local biologists since the early 1970s.

Plant species composition within the freshwater pond habitat varies depending on the amount of inundation. In the larger, deeper ponds, vegetation was generally restricted to the shallow margins and includes species such as tules (*Scirpus* spp.), broad-leaved cattail (*Typha latifolia*), rushes (*Juncus* spp.) and scattered arroyo willows (*Salix lasiolepis*). Shallower ponds that were dry at the time of the reconnaissance survey were primarily dominated by spiny cocklebur (*Xanthium spinosum*). Dominant species associated with the freshwater seep include curly dock (*Rumex crispus*) and water cress (*Rorippa nasturtium-aquaticum*).

Mule Fat Scrub

Mule fat scrub, as described by Holland (1986) and Sawyer and Keeler-Wolf (1995), is a tall, herbaceous, riparian shrub community dominated by mule fat (*Baccharis salicifolia*). This early seral vegetation type is maintained by frequent flooding and scouring that prevents the succession of this community to cottonwood- or sycamore-dominated riparian forests or woodlands. Commonly observed associates in the shrub layer include sandbar willow (*Salix* c.f. *exigua*). The herbaceous layer is sparsely vegetated and includes white sweetclover (*Melilotus albus*) and rabbits-foot grass (*Polypogon monspeliensis*). Within the study area, mule fat scrub was observed in the active channel of the Santa Ynez River.

Riparian Scrub

Riparian scrub is described by Holland (1986) as a scrubby streamside thicket occurring on fine-grained sand and gravel bars along active river channels. The equivalent series in Sawyer and Keeler-Wolf (1995) is the Arroyo Willow series. It is an early seral community that in the absence of flood disturbance would succeed into a riparian forest community. Patches of this

vegetation type occur along the major waterways within the study area such as the Santa Ynez River and Santa Rosa Creek.

The riparian scrub community in the study area is generally dominated by an overstory of arroyo willow with some occurrences of coast live oak, sandbar willow, coyote brush, and blue elderberry (*Sambucus mexicana*). Understory species include rush (*Juncus* sp.), mugwort (*Artemisia douglasiana*), poison hemlock (*Conium maculatum*), California blackberry (*Rubus californica*), gooseberry (*Ribes* sp.), poison oak (*Toxicodendron diversilobum*), and stinging nettle (*Urtica dioica*).

Agriculture

Cultivated agricultural lands do not support natural vegetation, therefore they are not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Disked fields, irrigated crops and vineyards were mapped as agriculture. Grape (*Vitis* spp.) vineyards associated with wine production are the most abundant type of agriculture within the study area. The understories of vineyards typically consist of low-growing non-native grasses or are sprayed with herbicides to prevent herbaceous vegetation growth. Areas mapped as agriculture are common throughout the study area.

Developed/Landscaped

This habitat type is not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Developed areas include residential, commercial and industrial infrastructure as well as hardscaped (concrete, asphalt, or gravel) areas. Vegetation, where present, typically consists of weedy species such as telegraph weed (*Heterotheca grandiflora*) or ornamental plantings such as oleander (*Nerium oleander*).

Ruderal Vegetation

Ruderal vegetation typically occurs in areas that have been subject to ground disturbance, often resulting in a predominance of non-native species. Ruderal vegetation is not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Within the study area, the ruderal vegetation type is restricted to the western portion of the power line from poles 2 to 19. Included within the habitat type is a portion of the floodplain of the Santa Ynez River where soil disturbance related to past human activities has created a highly disturbed landscape characterized by both native and non-native weedy species such as Menzies' goldenbush, field mustard (*Brassica rapa*), black mustard (*B. nigra*), wild radish (*Raphanus sativus*), anise (*Foeniculum vulgare*), and horseweed (*Conyza canadensis*).

Rare Plants

The natural plant communities present throughout the project area provide suitable habitat for special-status plant species. GANDA botanists are currently conducting protocol-level special-status plant surveys for the Project. These surveys started in March 2009 and will be completed during the summer of 2009. During the first survey event in March, Lompoc ceanothus (*Ceanothus cuneatus* var. *fascicularis*), a CNPS watch list species (Table 2), was observed in the

study area. No other special-status plant species have been observed thus far. Following the survey a rare plant survey report will be prepared to document the methods and findings.

In preparation for the surveys, a list of potentially occurring special-status plant species was compiled. The list was assembled using community and habitat information from the reconnaissance surveys and information from the *Inventory of Rare and Endangered Plants of California* (CNPS 2009), the CNDDDB (CDFG 2008b), and other sources listed below. A plant was considered to be of special status if it met one or more of the following criteria:

- Federally or State-listed, or proposed for listing, as rare, threatened or endangered (CDFG 2009);
- Special Plant as defined by the CNDDDB (CNDDDB 2009); or
- Listed by the California Native Plant Society in the online version of its *Inventory of Rare and Endangered Plants of California* (CNPS 2009). Species designated as List 4 by the CNPS were considered only if the species was rare or restricted to Santa Barbara County.

The list was compiled by conducting a 15-quadrangle search of the CNDDDB RareFind3 database (CDFG 2009). The CNDDDB search included the following USGS quadrangles: Casmalia, Foxen Canyon, Lompoc, Lompoc Hills, Los Alamos, Los Olivos, Orcutt, Santa Rosa Hills, Santa Ynez, Sisquoc, Solvang, Surf, Tranquillon Mountain, Zaca Creek and Zaca Lake. The CNPS (2009) Inventory was then queried to produce a similar list for Santa Barbara County. The specific habitats included in the query were chaparral, cismontane woodland, coastal scrub, meadows and seeps, valley and foothill grassland, riparian scrub and riparian woodland at elevations between 0 and 2297 feet. These habitats were selected based on the similarity of their constituent species to those occurring on the project site. A total of 107 special-status plant species was identified in these queries. This list was revised and shortened to 40 taxa after considering the distributional analysis and habitat requirements of all taxa on the preliminary list. Dune buckwheat (*Eriogonum parvifolium*) was added to the target plant species list, because it is the host plant for the federally listed endangered El Segundo blue butterfly (*Euphilotes battoides allyni*). Table 2 provides a summary of information on the 40 special-status plants with potential to occur within the project area.

Table 2. Special-status plant species with potential to occur within the Cabrillo-Santa Ynez Reconductoring Project Area.

Common name <i>Scientific name</i>	FED	STATE	CNPS	Flowering Period	Habitat Preferences	Potential to Occur at the Project Site
La Graciosa thistle <i>Cirsium loncholepis</i>	FE	ST	1B.1	May-Aug	Cismontane woodland, Coastal dunes, Coastal scrub, Marshes and swamps(brackish), Valley and foothill grassland/mesic, sandy; 13-722 ft.	Moderate: There is a recorded occurrence of this species in the Surf quadrangle which is located adjacent to the project site. Suitable habitat is present.
Lompoc yerba santa <i>Eriodictyon capitatum</i>	FE	SR	1B.2	May-Aug	Closed-cone coniferous forest, Chaparral(maritime)/sandy;131-2952 ft.	Low: Known records of this species are restricted to the Santa Ynez Mountains and Burton Mesa. Suitable chaparral habitat may not be present within the project site.
seaside bird's-beak <i>Cordylanthus rigidus ssp. littoralis</i>	-	SE	1B.1	Apr-Oct	Closed-cone coniferous forest, Chaparral(maritime), Cismontane woodland, Coastal dunes, Coastal scrub/sandy, often disturbed sites; 0-1394 ft.	Moderate: There are several recorded occurrences of this subspecies within 5 miles of the project site. Suitable habitat is present.
Santa Ynez false lupine <i>Thermopsis macrophylla</i>	-	SR	1B.3	Apr-Jun	Chaparral(sandy, granitic, disturbed areas) ; 1394-4593 ft.	Low: Suitable chaparral habitat may not be present within the project site
Hoover's bent grass <i>Agrostis hooveri</i>	-	-	1B.2	Apr-Jul	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Valley and foothill grassland/usually sandy; 20-2000 ft.	Moderate: There are 2 recorded occurrences of this species within 5 miles of the project site. Suitable habitat is present.
Santa Ynez groundstar <i>Ancistrocarphus keilii</i>	-	-	1B.1	Mar-Apr	Chaparral, Cismontane woodland/sandy; 130-427 ft.	Moderate: A recorded occurrence of this species occurs within 5 miles of the project site. This species is known only from the Santa Ynez Valley. Suitable habitat is present.
La Purisima manzanita <i>Arctostaphylos purissima</i>	-	-	1B.1	Nov-May	Chaparral(sandy), Coastal scrub; 197-1280 ft.	High: A recorded occurrence of this species occurs in the immediate vicinity of the project site in the near Campbell Road and Hwy 246. Suitable habitat is present.
Refugio manzanita <i>Arctostaphylos refugioensis</i>	-	-	1B.2	Dec-Mar(May)	Chaparral(sandstone); 899-2690 ft.	Low: Suitable chaparral habitat and sandstone substrates may not be present within the project site.
sand mesa manzanita <i>Arctostaphylos rudis</i>	-	-	1B.2	Nov-Feb	Chaparral(maritime), Coastal scrub/sandy; 82-1056 ft.	Moderate: There are several recorded occurrences of this species within 5 miles of the project site. Suitable

Common name Scientific name	FED	STATE	CNPS	Flowering Period	Habitat Preferences	Potential to Occur at the Project Site
						habitat is present.
Eastwood's brittle-leaf manzanita <i>Arctostaphylos tomentosa</i> ssp. <i>eastwoodiana</i>	-	-	1B.1	Mar	Chaparral(maritime, sandy) ; 295- 1197 ft.	Low: Suitable chaparral habitat may not be present within the project site.
Miles' milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	-	-	1B.2	Mar-Jun	Coastal scrub(clay) ; 66-295 ft.	High: A recorded occurrence of this variety occurs in the immediate vicinity of the project site between Drum Canyon and Hwy 101. Suitable habitat is present.
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	-	-	1B.2	Apr-Oct	Coastal bluff scrub, Coastal scrub/alkaline; 32-656 ft.	Moderate: There is a recorded occurrence of this variety in the Zaca Lake quadrangle, which is located adjacent to the project site. Suitable habitat may be present.
round-leaved filaree <i>California macrophylla</i>	-	-	1B.1	Mar-May	Cismontane woodland, Valley and foothill grassland/clay; 50-3937 ft.	Moderate: There is a recorded occurrence of this species in the Los Olivos quadrangle which is located adjacent to the project site. Suitable habitat is present.
late-flowered mariposa lily <i>Calochortus weedii</i> var. <i>vestus</i>	-	-	1B.2	Jun-Aug	Chaparral, Cismontane woodland, Riparian woodland/often serpentinite; 902-6250 ft.	Moderate: There are recorded occurrences of this variety in the Santa Rosa Hills and Santa Ynez quadrangles which are located adjacent to the project site. Suitable habitat is present.
dwarf calycadenia <i>Calycadenia villosa</i>	-	-	1B.1	May-Oct	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland/rocky, fine soils; 787-4429 ft.	Moderate: There is a recorded occurrence of this species in the Los Alamos quadrangle which contains the project site. Suitable habitat is present.
Santa Barbara jewel-flower <i>Caulanthus amplexicaulis</i> var. <i>barbarae</i>	-	-	1B.1	May-Jul	Closed-cone coniferous forest, Chaparral, Cismontane woodland/serpentinite; 1542-4000 ft.	Low: Known only from serpentine soils in the San Rafael Mountains.
Lompoc ceanothus <i>Ceanothus cuneatus</i> var. <i>fascicularis</i>	-	-	4.2	Feb-April	Chaparral/sandy; 16 – 1312 ft.	Moderate: Known from sandy mesas and hills about Lompoc, and northeast of Buellton (Smith 1998).
Blakley's spineflower <i>Chorizanthe blakleyi</i>	-	-	1B.3	Apr-Jun	Chaparral, Pinyon and juniper woodland; 1969-5250 ft.	Low: Known records of this species are restricted to the San Rafael, Sierra Madre, and Santa Ynez Mountains.

Common name Scientific name	FED	STATE	CNPS	Flowering Period	Habitat Preferences	Potential to Occur at the Project Site
						Suitable chaparral habitat may not be present within the project site.
straight-awned spineflower <i>Chorizanthe rectispina</i>	-	-	1B.3	Apr-Jul	Chaparral, Cismontane woodland, Coastal scrub; 279-3396 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the project site just west of Vandenberg Village. Suitable habitat is present.
California sawgrass <i>Cladium californicum</i>	-	-	2.2	Jun-Sep	Meadows and seeps, Marshes and swamps/alkaline or freshwater; 197-1969 ft.	Moderate: There is a recorded occurrence of this species in the Orcutt quadrangle which is located adjacent to the project site. Suitable habitat is present.
leafy tarplant <i>Deinandra increscens</i> ssp. <i>foliosa</i>	-	-	1B.2	Jun-Sep	Valley and foothill grassland/sandy; 984-1640 ft.	Low: There are no recorded occurrences of this subspecies within the project site or surrounding quadrangles. The plant is not known to occur south of the Guadalupe quadrangle.
dune larkspur <i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	-	-	1B.2	Apr-May	Chaparral, Coastal dunes; 0-656 ft.	High: There is a recorded occurrence of this subspecies in the immediate vicinity of the project site near Campbell Road and Hwy 246. Suitable habitat is present.
umbrella larkspur <i>Delphinium umbraculorum</i>	-	-	1B.3	Apr-Jun	Cismontane woodland; 1312-5249 ft.	Moderate: There is a recorded occurrence of this species in the Los Olivos quadrangle which is located adjacent to the project site. Suitable habitat is present.
Dune eriogonum <i>Eriogonum parvifolium</i>	-	-	-	May-Nov	Coastal Strand, Coastal Sage Scrub; 0 and 2297 ft.	Moderate: Known from sandy coastal areas in Santa Barbara County
Ojai fritillary <i>Fritillaria ojaiensis</i>	-	-	1B.2	Feb-May	Broadleafed upland forest(mesic), Chaparral, Lower montane coniferous forest/rocky; 984-3274 ft.	Low: Known records of this species are restricted to the San Rafael, Sierra Madre, and Santa Ynez Mountains. Suitable chaparral habitat may not be present within the project site.
vernal barley <i>Hordeum intercedens</i>	-	-	3.2	Mar-Jun	Coastal dunes, Coastal scrub, Valley and foothill grassland(saline flats and depressions), Vernal pools; 16-3281 ft.	Low: There are no recorded occurrences of this species within the project site or surrounding quadrangles. Habitat conditions are

Common name Scientific name	FED	STATE	CNPS	Flowering Period	Habitat Preferences	Potential to Occur at the Project Site
						marginal.
mesa horkelia <i>Horkelia cuneata ssp. puberula</i>	-	-	1B.1	Feb- Jul(Sep)	Chaparral(maritime), Cismontane woodland, Coastal scrub/sandy or gravelly; 230-2657 ft.	Moderate: There are several recorded occurrences of this subspecies within 5 miles of the project site. Suitable habitat is present.
Kellogg's horkelia <i>Horkelia cuneata ssp. sericea</i>	-	-	1B.1	Apr-Sep	Closed-cone coniferous forest, Chaparral(maritime), Coastal dunes, Coastal scrub/sandy or gravelly, openings; 33-656 ft.	Moderate: There is an extirpated occurrence of this subspecies in the Lompoc quadrangle which contains the project site. Suitable habitat is present.
pale-yellow layia <i>Layia heterotricha</i>	-	-	1B.1	Mar-Jun	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland/alkaline or clay; 984-5594 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the project site near Mission Village. Suitable habitat is present.
large-flowered leptosiphon <i>Leptosiphon grandiflorus</i>	-	-	4.2	Apr-Aug	Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland/usually sandy; 16-4003 ft.	Moderate: The Consortium of California Herbaria lists a single voucher collection from Santa Barbara County and the CNPS states extirpation of this species from the county. Suitable habitat is present.
Santa Barbara honeysuckle <i>Lonicera subspicata var. subspicata</i>	-	-	1B.2	May- Aug(Dec- Feb)	Chaparral, Cismontane woodland, Coastal scrub; 115-3281 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the project site near La Purisima State Park. Suitable habitat is present.
Carmel Valley malacothrix <i>Malacothrix saxatilis var. arachnoidea</i>	-	-	1B.2	(Mar)Jun- Dec	Chaparral(rocky), Coastal scrub; 82-3399 ft.	Low: Only known records in Santa Barbara County are from Little Pine Mountain in the San Rafael Mountains.
Mt. Diablo cottonweed <i>Micropus amphibolus</i>	-	-	3.2	Mar-May	Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland/rocky; 148-2707 ft.	Moderate: There is a recorded occurrence of this species in the Zaca Creek quadrangle which contains the project site. Suitable habitat is present.
Vandenberg monkeyflower <i>Mimulus fremontii var. vandenbergensis</i>	-	-	1B.1	Apr-Jun	Chaparral, Cismontane woodland, Coastal dunescentral dune scrub/sandy; often disturbed areas; 246-394 ft.	Moderate: There are several recorded occurrences of this variety within 5 miles of the project site. All known occurrences are on or within close proximity to the Vandenberg Air Force Base. Suitable habitat is present.
white rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	-	-	2.2	(Jul)Aug- Nov(Dec)	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/sandy, gravelly; 0-6890 ft.	Moderate: There is a recorded occurrence of this species in the Surf quadrangle which is located adjacent

Common name Scientific name	FED	STATE	CNPS	Flowering Period	Habitat Preferences	Potential to Occur at the Project Site
						to the project site. Suitable habitat is present.
Nuttall's scrub oak <i>Quercus dumosa</i>	-	-	1B.1	Feb-Apr	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy, clay loam; 49-1312 ft.	Low: This species is not known to occur north of southern Santa Barbara County.
Santa Cruz Island oak <i>Quercus parvula</i> var. <i>parvula</i>	-	-	4.2	(Mar)Apr-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland; 98-3000 ft.	Moderate: This species is endemic to Santa Barbara County. Suitable habitat is present.
Hoffmann's bitter gooseberry <i>Ribes amarum</i> var. <i>hoffmannii</i>	-	-	3	Mar-Apr	Chaparral, Riparian woodland; 492-3904 ft.	Moderate: There is a recorded occurrence of this species in the Santa Ynez quadrangle which is located adjacent to the project site. Suitable habitat is present.
black-flowered figwort <i>Scrophularia atrata</i>	-	-	1B.2	Mar-Jul	Closed-cone coniferous forest, Chaparral, Coastal dunes, Coastal scrub, Riparian scrub; 33-1640 ft.	Moderate: There are several recorded occurrences of this species within 5 miles of the project site. Suitable habitat is present.
chaparral ragwort <i>Senecio aphanactis</i>	-	-	2.2	Jan-Apr	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline; 49-2625 ft.	Moderate: There are recorded occurrences of this species in the Lompoc Hills and Santa Ynez quadrangles which are located adjacent to the project site. Suitable habitat is present.
Sonoran maiden fern <i>Thelypteris puberula</i> var. <i>sonorensis</i>	-	-	2.2	Jan-Sep	Meadows and seeps(seeps and streams) ; 164-2000 ft.	Low: There are no recorded occurrences of this species within the project site or surrounding quadrangles. Habitat conditions are marginal.

1. Scientific nomenclature based on Hickman (1993) and Jepson Online Interchange (2009); common names from Hickman (1993), CalFlora (2009).

2. Conservation status definitions are as follows:

U.S. Fish and Wildlife Service designations:

FE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.

California Department of Fish and Game designations:

SE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.

SR Rare: Any species not currently threatened with extinction, but in such small numbers throughout its range that it may become endangered if its present environment worsens.

ST Threatened: Any species likely to become endangered within the foreseeable future.

California Native Plant Society designations:

- 1A Species presumed extinct in California
- 1B Plants rare, threatened or endangered in California and elsewhere.
- 2 Plants rare, threatened or endangered in California, but more common elsewhere.
- 3 Plants About Which We Need More Information - A Review List
- 4 Plants of Limited Distribution - A Watch List

California Native Plant Society threat categories:

- .1 Seriously endangered in California.
- .2 Fairly endangered in California.

3. Habitat information from the California Native Plant Society's on-line Inventory of Rare and Endangered Plants of California (2009), and A Flora of the Santa Barbara Region (Smith 1998).

4. A plant species was determined to have potential to occur in the project area if its known or expected geographic range includes the vicinity of the project area, and if its known or expected habitat is represented within or near the project area. Distance to nearest known location is the shortest distance to the power line corridor within the project area. Sources: CNPS 2008, CDFG 2008a, Jepson Online Interchange 2008.

Wildlife Habitats

The study area crosses a variety of wildlife habitat types that correspond with the diversity of vegetation types, topography and hydrologic features found in the area. The classification of wildlife habitats generally follows that used for vegetation types described above. While vegetation types are defined by plant species composition, wildlife habitats can include other important features such as rock outcrops, underground refugia, and open water. In some cases, a wildlife habitat type includes more than one plant community where those communities provide similar habitat characteristics and support a similar assemblage of wildlife species. A description of wildlife habitats in the study area follows; these are based on the California Wildlife Habitat Relationships System (CDFG 2008c).

California Annual Grassland

California annual grassland can support a variety of small mammals and provide foraging or nesting habitat for raptors and other birds. Birds commonly found foraging in annual grasslands include red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and turkey vulture (*Cathartes aura*). Common seed eaters, including California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), and western meadowlark (*Sturnella neglecta*) will nest on the ground in grasslands. Other common species, such as western scrub-jay (*Aphelocoma californica*), barn swallow (*Hirundo rustica*), and northern mockingbird (*Mimus polyglottos*) will disperse through, and forage within, grassland habitats.

Common mammals of annual grasslands include California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), broad-footed mole (*Scapanus latimanus*), western harvest mouse (*Reithrodontomys megalotis*), and black-tailed jackrabbit (*Lepus californicus*). These small mammals utilize open grassland for both foraging and breeding. Larger mammals such as California mule deer (*Odocoileus hemionus*) will browse on grassland plants and rest here at night. Burrows of California ground squirrels can also provide important refuge sites for other species. Grassland wildflowers provide important nectar sources for butterflies, bees and other insects.

Central Coast Scrub

This wildlife habitat type is dominated by scattered to dense stands of low to medium-sized shrubs. Common species associated with this habitat include western fence lizard (*Sceloporus occidentalis*), California quail, western scrub-jay, California towhee (*Pipilo crissalis*), California ground squirrel, and brush rabbit (*Sylvilagus bachmani*). Agile kangaroo rat (*Dipodomys agilis*), pinyon mouse (*Peromyscus truei*) and gray fox (*Urocyon cinereoargenteus*) are also common species expected to occur in coastal scrub habitat in this region.

Coast Live Oak Woodland

Coast live oak woodlands provide important nesting and perching habitat for raptors and other birds, an abundant food source in acorns, and cover for larger mammals. Common birds and mammals that utilize this habitat type include red-shouldered hawk (*Buteo lineatus*), California quail, oak titmouse (*Baeolophus inornatus*), bushtit (*Psaltiriparus minimus*), spotted towhee (*Pipilo maculatus*), western scrub-jay, gray fox and mule deer. Leaf litter deposited below the

trees create microhabitats for a number of small vertebrates including arboreal salamander (*Aneides lugubris*), black-bellied slender salamander (*Batrachoseps nigriventris*), western skink (*Eumeces skiltonianus*), and rodents such as deer mouse (*Peromyscus maniculatus*) and California pocket mouse (*Chaetodipus californicus*).

Freshwater Ponds and Seeps

Seasonal freshwater ponds, wetlands and seeps often support a unique assemblage of species that are adapted to an annual regime of inundation and desiccation. These habitats provide valuable resources for a variety of wildlife species. Species composition depends in part on the period of inundation (or hydroperiod) during the wet season. When water is present, these habitats can support many aquatic invertebrates and provide breeding sites for amphibians such as Pacific treefrog (*Pseudacris regilla*), western toad (*Bufo boreas*), western spadefoot (*Spea* [= *Scaphiopus*] *hammondi*), California tiger salamander (CTS; *Ambystoma californiense*), and California red-legged frog (CRLF; *Rana draytonii*) and for reptiles such as southwestern pond turtle (*Actinemys marmorata pallida*). In winter and spring, seasonal wetlands also provide foraging habitat for resident and migratory birds such as yellow warbler (*Dendroica petechia brewsteri*), song sparrow (*Melospiza melodia*), snowy egret (*Egretta thula*), and green heron (*Butorides virescens*). Because they are often hydrologically isolated from rivers and streams and subject to seasonal drying, fish are absent from these seasonal wetlands. Such areas provide unique habitat conditions that can be essential for locally endemic and rare species.

Riparian and Mule Fat Scrub

Riparian communities provide important habitat for many wildlife species. These communities offer diverse microhabitats created by the layering of trees, shrubs, herbs, and aquatic vegetation, as well as access to streams for drinking and foraging. Riparian zones provide valuable nesting habitat for birds; offer cover and refuge sites for amphibians, reptiles and small mammals; and serve as important movement corridors for wildlife. They also enhance the value of adjacent upland habitats by providing water, foraging resources, and thermal refuges. Bird species found in riparian scrub and woodland habitats include Cooper's hawk (*Accipiter cooperi*), oak titmouse, Hutton's vireo (*Vireo huttoni*), warbling vireo (*Vireo gilvus*), spotted towhee and many other songbirds. Common mammals found in these habitats include opossum (*Didelphis virginianus*), raccoon (*Procyon lotor*), mule deer, striped skunk (*Mephitis mephitis*), deer mouse, and big-eared woodrat (*Neotoma macrotis*). Riparian vegetation can also provide beneficial shading and instream cover for fishes and other aquatic species.

Agriculture

Cultivated agricultural lands include vineyards, irrigated crop fields and dry-farmed fields found within the study area. Water features including channelized streams and irrigation ditches are associated with some of the agricultural areas within the study area. Typical species found in agricultural land include red-tailed hawk, common crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), western meadowlark, house finch (*Carpodacus mexicanus*), red-winged blackbird (*Agelaius phoeniceus*), California ground squirrel and deer mouse. Water bodies serve as habitats for amphibians such as Pacific tree frog, western spadefoot, and bullfrog (*Rana catesbeiana*); reptiles such as southwestern pond turtle (*Clemmys*

marmorata pallida); and a variety of waterbirds. These aquatic features also provide an important source of water and refuge sites for many terrestrial wildlife species.

Developed/Landscaped

Developed areas, particularly areas with landscaping vegetation, can provide moderate habitat value for wildlife. The planting and maintenance of shrubs, trees, and other ornamental plants in developed and landscaped areas can enhance this habitat for opportunistic animal species that can coexist with humans. Examples of species found in this habitat type are the northern mockingbird, house finch, Brewer's blackbird, raccoon, and opossum. Also, buildings and structures such as bridges, overpasses and power structures can provide shelter, roosting, or nesting sites for species such as cliff swallow (*Petrochelidon pyrrhonota*), barn swallow, rock dove (*Columba livia*), and small mammals such as mice, rats, and a variety of bats.

Ruderal Vegetation

Ruderal areas generally provide relatively low habitat value for wildlife because they are degraded communities dominated by non-native, weedy plants. These areas typically provide low-quality foraging habitat for most birds and small mammals, but can provide marginal habitat for some species depending on the type and amount of vegetation present. Common birds found in ruderal habitat include Brewer's blackbird, house finch, and mourning dove. The western fence lizard, a common reptile, often utilizes ruderal areas such as roadsides and railroad berms for thermal basking.

4. Wetlands and Aquatic Resources

Seasonal wetlands and numerous other aquatic habitat features occur at various locations within the study area. In January and March 2009, CH2M HILL wetlands biologists conducted a jurisdictional delineation for a portion of this Project. A separate report with those findings is being finalized.

5. Special-Status Wildlife Species

Special-status species are defined in accordance with the CEQA Guidelines, Section 15380, and include species that:

- are listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act;
- are listed or candidates for listing as threatened or endangered under the California Endangered Species Act;
- are designated as Species of Special Concern by the CDFG;
- are listed on the CDFG "Special Animals" list (CDFG 2008a); or
- otherwise meet the definition of rare, threatened or endangered, as described in the CEQA Guidelines, Section 15380.

Special-status wildlife species with potential to occur in the study area or vicinity are summarized in Table 3. The project alignment also passes through designated Critical Habitat for southern steelhead (*Oncorhynchus mykiss irideus*) California tiger salamander (*Ambystoma californiense*), and southwestern willow flycatcher (*Empidonax traillii extimus*) (Figure 2).

Table 3. Special-status wildlife species with potential to occur within the study area.

Common Name Scientific Name	Status ¹ Federal/State	Habitat Requirements	Potential to Occur in the Study Area
Invertebrates			
Monarch butterfly (roosting) <i>Danaus plexippus</i>	– / –	Winter roosting sites extend along the coast from northern Mendocino County to Baja California, Mexico. Roosts are often located in wind-protected tree groves, commonly found in eucalyptus, Monterey pine and/or cypress groves, with nectar and water sources in the vicinity.	Low to moderate potential to occur. Limited suitable roosting habitat occurs in and adjacent to the study area. One monarch butterfly was observed in flight during the reconnaissance field survey north of pole sites 59 and 60.
Lompoc grasshopper <i>Trimerotropis occulens</i>	– / –	Known only from Santa Barbara and San Luis Obispo Counties, but very little is known about its habitat requirements (pers. comm. Arnold 2009). Typically, <i>Trimerotropis</i> occurs in open areas with scattered vegetation cover and in habitat with extensive areas of bare or sparsely vegetated ground.	Moderate potential to occur; a CNDDDB occurrence from 1938 records an observation of this species approximately 2.5 miles northwest of the study area. Recently observed in the Lompoc area (pers. comm. Arnold 2009).
Fish			
Southern steelhead – southern California environmentally significant unit (ESU) <i>Oncorhynchus mykiss irideus</i>	FE / CSC	Spawns in silt-free coastal rivers and streams with a moderate to steep gradient. Requires gravel riffle for spawning and may overwinter in deep, low-velocity pools or lakes. Southern steelhead populations likely have greater physiological tolerances to warmer water and more variable conditions than other steelhead species.	High potential to occur in the Santa Ynez River and its tributaries. Santa Ynez River and tributaries are designated Critical Habitat for this species. See text for discussion.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE / CSC	Found in brackish water habitats along the coast of California in shallow lagoons and lower stream reaches. Requires fairly still but not stagnant water and high oxygen levels.	Low potential to occur. No suitable aquatic habitat is present in the study area, which is too far inland. Known from the mouth of the Santa Ynez River, about 12 mi to the west.
Unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE / SE	Found in weedy pools, backwaters, and among emergent vegetation at the stream edge in small southern California streams. Requires cool (<75°F), clear water with abundant vegetation.	Low potential to occur. No suitable aquatic habitat is present in the study area. This species is only known to locally exist in the Santa Clara River (Los Angeles County) and San Antonio Creek drainages (Santa Barbara County).

Table 3. Special-status wildlife species with potential to occur within the study area.

Common Name Scientific Name	Status ¹ Federal/State	Habitat Requirements	Potential to Occur in the Study Area
Amphibians			
Arroyo toad <i>Bufo californicus</i>	FE / CSC	Occurs in semi-arid regions near washes or intermittent streams in a variety of habitats including valley-foothill, desert riparian, and desert wash. Found primarily in rivers with sandy banks, willows, cottonwoods, and sycamores. Requires loose, gravelly areas in streams, especially in drier parts of this species range.	Low to moderate potential to occur. Suitable habitat is present along the Santa Ynez River in the study area.
California red-legged frog <i>Rana draytonii</i>	FT / CSC	Breeds in ponds and pools in slow-moving streams with emergent vegetation; adjacent upland habitats are often used for temporary refuges or dispersal movements.	Present. Known to occur in ponds within the study area – see text discussion.
California tiger salamander <i>Ambystoma californiense</i>	FE / CCC	Vernal pools and/or seasonal water sources; requires underground refuges, especially ground squirrel burrows.	Present. Known to occur in ponds within study area as discussed in text and to use nearby upland habitat in the non-breeding season. There is also designated Critical Habitat for this species in the study area.
Western spadefoot <i>Spea hammondi</i>	– / CSC	Occurs primarily in open grassland habitats, but can be found in valley-foothill hardwood woodlands. Prefers open areas with sandy or gravel laden soils. Vernal pools or rain-pools and/or ponds that do not contain bullfrogs, fish or crayfish are essential for breeding and egg-laying.	Present. Suitable aquatic habitat present in the study area. Known to occur in ponds within the study area. CNDDB occurrences also recorded in the vicinity of the project alignment. See text discussion.
Reptiles			
Coast (California) horned lizard <i>Phrynosoma coronatum</i> (frontale population)	– / CSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Found in open areas for sunning, bushes for cover, patches of loose soil for burial and abundant supply of ants and other insects.	High potential to occur. Suitable habitat is present in the study area and ant colonies were observed during the reconnaissance-level field survey.
Coast patch-nosed snake <i>Salvadora hexalepis</i> <i>virgultea</i>	– / CSC	Associated with rocky or gravelly soil vegetated with low scrub growth and minimum vegetation density (i.e., coastal chaparral or coastal scrub). Require small mammal burrows for refuge and overwintering sites. Preys primarily on western whiptail lizards.	Moderate potential to occur. Suitable habitat is present in the study area.

Table 3. Special-status wildlife species with potential to occur within the study area.

Common Name Scientific Name	Status¹ Federal/State	Habitat Requirements	Potential to Occur in the Study Area
Silvery legless lizard <i>Anniella pulchra pulchra</i>	– / CSC	Found in moist, warm sandy or loose loamy soils with plant cover. Requires soil moisture and occurs often in areas with leaf litter under trees and bushes in sunny locations.	Moderate to high potential to occur. Suitable habitat is present in the study area. CNDDDB occurrences are recorded in the vicinity as discussed in text.
Southwestern pond turtle <i>Actinemys marmorata pallida</i>	– / CSC	Permanent and seasonal ponds, lakes, and slow-moving parts of streams.	Present. Known to occur at ponds in the study area (see text).
Two-striped garter snake <i>Thamnophis hammondi</i>	– / CSC	Occurs in California coastal habitats from sea level to about 7,000 feet (ft) elevation. Highly aquatic, found in or near permanent fresh water around pools, creeks, cattle tanks, and other water sources. Often found in rocky areas in oak woodland, chaparral, and coniferous forest.	Moderate potential to occur. Suitable habitat occurs in the Santa Ynez River.
Birds			
California least tern <i>Sternula antillarum browni</i>	FE / SE	Nests along the coast from San Francisco Bay south to northern Baja California. Known to be a colonial breeder, prefers bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas for nesting.	Low potential to occur. No suitable habitat was found in the study area.
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE / SE	Summer resident of southern California, found in low riparian habitats near water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis or mesquite. Requires dense shrub layer (2 -10 ft above ground) for nesting habitat.	High potential to occur. Suitable foraging and nesting habitat on and adjacent to the study area along the Santa Ynez River. Based on recent records, more likely to be present during migration than as a nesting species.
Southwestern willow flycatcher <i>Empidonax traillii eximius</i>	FE / SE	Occurs in riparian woodlands in southern California. Found in bushes, willow thickets, and brushy fields. Nests in thickets of deciduous trees and shrubs, or along woodland edges, especially willows, often near streams or marshes.	High potential to occur on the study area. Suitable nesting and foraging habitat found along the Santa Ynez River in the study area which has been designated as Critical Habitat for this species.

Table 3. Special-status wildlife species with potential to occur within the study area.

Common Name Scientific Name	Status¹ Federal/State	Habitat Requirements	Potential to Occur in the Study Area
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT / CSC	Found on sandy beaches, salt pond levees and shores of large alkali lakes. Requires sandy, gravelly or friable soils for nesting. Tends to be found in places where habitat matches the pale color of its back.	Low to none. No suitable habitat found in the study area.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FC / SE	Nests in riparian forests along broad, lower flood-bottoms of large river systems. Nests in riparian jungles of willow often mixed with cottonwoods, with an understory of blackberry and/or nettles.	Moderate potential to occur on the study area. Suitable nesting and foraging habitat found in the Santa Ynez River in the study area, and a pair was observed in the study area vicinity in 2000 near the Santa Ynez River (National Audubon Society 2009).
Golden eagle <i>Aquila chrysaetos</i>	BGEPA / –	Rolling foothills, mountain areas, sage-juniper flats, & desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas provide good nesting sites.	High potential to occur. Suitable foraging and nesting habitat on and adjacent to the study area. Unlikely to nest in study area.
Grasshopper sparrow <i>Ammodramus savannarum</i>	– / CSC	Found in dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Can be loosely colonial when nesting.	High potential to occur. Known to occur in the area at the Lompoc Wind Energy Project (approximately 9 mi southwest of the alignment). Known to nest at La Purisima Mission State Historic Park.
Loggerhead shrike <i>Lanius ludovicianus</i>	– / CSC	Found in a wide variety of habitats including woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oases, scrub and washes. Prefers open habitat for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Moderate to high potential to occur on study area. Suitable nesting and foraging habitat present in the study area. More likely to be found during non-breeding months.
Long-eared owl <i>Asio otus</i>	– / CSC	Found in riparian bottomlands with tall willows & cottonwoods; also, belts of live oak paralleling stream courses. Requires adjacent open land with abundant prey (mice) and the presence of old nests of crows, hawks, or magpies for breeding.	High potential to occur on the study area. Suitable nesting and foraging habitat found along the Santa Ynez River in the study area.
Mountain plover <i>Charadrius montanus</i>	– / CSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Prefers short vegetation, bare ground with flat topography and grazed areas with burrowing rodents.	Moderate to high potential to occur on study area. Suitable wintering habitat present in the study area. Known to winter at Vandenberg Air Force Base.

Table 3. Special-status wildlife species with potential to occur within the study area.

Common Name <i>Scientific Name</i>	Status ¹ Federal/State	Habitat Requirements	Potential to Occur in the Study Area
Tricolored blackbird <i>Agelaius tricolor</i>	– / CSC	Highly colonial species that requires open water protected nesting substrate, and foraging areas with insect prey near the colony. Nests in freshwater marshes containing emergent vegetation such as cattails and tules.	Low to moderate nesting potential due to limited suitable habitat, but moderate to high potential to foraging
Western burrowing owl <i>Athene cunicularia hypugaea</i>	– / CSC	Nests in burrows (often constructed by ground squirrels) and forages in low-growing grasslands and other open, semi-arid habitats	Moderate potential to occur in the study area. Suitable wintering and foraging habitat present. Unlikely to nest in the study area (pers. comm. Tom Olson, 2009b).
White-tailed kite <i>Elanus leucurus</i>	– / CFP	Nests in oak, willow or other trees and forages over open grasslands. A coast live oak tree is often chosen as a nest site.	High potential to occur in the study area. Suitable nesting and foraging habitat present on and adjacent to the study area.
Yellow warbler <i>Dendroica petechia brewsteri</i>	– / CSC	Found in riparian plant associations bushes, swamp edges, streams and gardens. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Nests in a variety of habitats including woodlands and thickets along stream edges, lakes, swamps and marshes.	High potential to occur on the study area. Suitable nesting and foraging habitat found on the study area, primarily along the Santa Ynez River.
Mammals			
American badger <i>Taxidea taxus</i>	– / CSC	Prefers dry open stages of most shrub, forest, and herbaceous habitats. Requires sufficient food, friable soils and open, uncultivated ground. Preys mostly on burrowing rodents.	High potential to occur. Suitable habitat found throughout the study area and CNDDB occurrences recorded in the vicinity of the project alignment.
Pallid bat <i>Antrozous pallidus</i>	– / CSC	Open, dry habitats such as grasslands, shrublands, and woodlands with rocky areas for roosting. Roosts in cliff crevices of rock faces, bridges, and occasionally hollow trees and buildings.	Moderate potential to occur. A CNDDB occurrence is in the vicinity of the alignment in northern section of Santa Ynez River. Also known to roost nearby at Vandenberg Air Force Base.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	– / CSC	Found throughout California in a wide variety of habitats; most commonly associated with mesic sites. Generally solitary or in small groups, but females form larger maternity colonies in the summer. Roosts in the open, hanging from walls and ceilings of caves, mines or abandoned structures in or near woodlands and forests. Extremely sensitive to human disturbance.	Moderate potential to occur. CNDDB occurrence recorded in the vicinity of the project alignment. Limited suitable roosting habitat available. Widely distributed on nearby Vandenberg Air Force Base.

Table 3. Special-status wildlife species with potential to occur within the study area.

Common Name Scientific Name	Status ¹ Federal/State	Habitat Requirements	Potential to Occur in the Study Area
Western red bat <i>Lasiurus blossevillii</i>	– / CSC	Widely distributed throughout California. Roosts primarily in trees, 2-40 ft high. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. Forages over a wide variety of habitats including grasslands, open woodlands and forests, and croplands. Generally prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Low to moderate potential to occur. Suitable foraging and roosting habitat present in the study area. Known to forage at Vandenberg Air Force Base.
Western mastiff bat <i>Eumops perotis californicus</i>	– / CSC	Found in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees and/or tunnels	Low potential to occur. No occurrences recorded within the vicinity of the study area and recorded as very rare on Vandenberg Air Force Base. Not considered to be a resident species, but rather an occasional visitor.
Yuma myotis <i>Myotis yumanensis</i>	– / CSC	Found in a variety of habitats, ranging from desert areas near open water to juniper and riparian woodlands. Optimal habitat is open forest and woodlands with water sources. Forages over open water. Roosts in large groups in caves, buildings, crevices, mines and under bridges.	Moderate potential to occur. CNDDB occurrence recorded in the vicinity of the alignment in northern section of Santa Ynez River. There is limited distribution at Vandenberg Air Force Base.

Notes:

¹ Status designations:

Federal

FE Listed as Endangered under the federal Endangered Species Act
 FT Listed as Threatened under the federal Endangered Species Act
 FC Listed as Candidate under the federal Endangered Species Act
 BGEPA Bald and Golden Eagle Protection Act
 – No Listed Status

State of California

SE California Fish and Game Code Endangered Species
 ST California Fish and Game Code Threatened Species
 CFP California Fish and Game Code Fully Protected Species
 CSC California Department of Fish and Game Species of Special Concern
 CCC California Candidate Species as Threatened or Endangered
 – No Listed Status

Wildlife

The literature and database review identified thirty-four special-status wildlife species with potential to occur in or near the study area (Table 3). Based on the initial assessment of wildlife habitats conducted during the reconnaissance field survey, twenty-nine of these species were determined to have moderate or high potential to occur on the site. Four of these species, the California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), southwestern pond turtle (*Actinemys marmorata pallida*), and western spadefoot (*Spea hammondi*) are known to occur in the study area at the wetlands northeast of SR 246 and Campbell Road (Figure 1, Map 9: Ponds 10A, 10B) (pers. comm. Tom Olson, 2009b). Details of these species that have been documented to occur on the study area or have moderate to high potential to occur are discussed further below.

The CNDDDB documents 22 special-status wildlife species in the vicinity of the study area. Three of these species, the tidewater goby (*Eucyclogobius newberryi*), California least tern (*Sternula antillarum browni*), and western snowy plover (*Charadrius alexandrinus nivosus*), occur exclusively along coastal habitat, which is not present in the study area. Two other species, including the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) and western mastiff bat (*Eumops perotis californicus*), have CNDDDB occurrences in the vicinity of the project; however, there is either no suitable habitat present along the project alignment for these species or these species are locally very rare and not expected to occur in the project alignment.

Federally Listed Species

Arroyo toad – Federally Endangered, State species of special concern

Arroyo toad (*Bufo californicus*) has very specific habitat requirements, which include low-gradient stream segments with shallow breeding pools free of predatory fish; sandy or fine gravel beds without silt for egg mass depositing and tadpole development; and exposed sandy terraces and sparsely vegetated sand and gravel bars that are sufficiently wet for burrowing (Jennings and Hayes 1994, Stebbins 2003, CDFG 2008b). This species is primarily nocturnal and remains mostly underground during the daytime. Generally, arroyo toad becomes active in January or February during the first substantial rain event of the year (Jennings and Hayes 1994). Breeding occurs typically from March to July with larvae reaching metamorphosis in 2 to 3 months. Unlike other California tadpoles, arroyo tadpoles sift the substrate while foraging for food (Jennings and Hayes 1994, Stebbins 2003).

There are no CNDDDB occurrences of arroyo toad within 5 mi of the study area. Arroyo toad is known to occur above the Gibraltar Reservoir on the Mono and Indian Creeks as well as the main stream of the Santa Ynez River, approximately 50 mi upstream from the project alignment (Sweet 1992). There are elements of potential habitat for arroyo toad along the Santa Ynez River in the study area, including a braided channel on a relatively low floodplain with mule fat dominant vegetation. The Santa Ynez River is the only potential habitat for this species in the study area (Figure 1, Map 1: 1).

Southern steelhead – Southern California ESU – Federally Endangered, State species of special concern

Southern steelhead (*Oncorhynchus mykiss irideus*) have variable life history. They are generally anadromous; however, juveniles spend a wide range of time rearing in freshwater and some individuals may remain in freshwater throughout their life cycle. Adults generally begin returning to streams with the first heavy rains of fall, with peak migration occurring in winter to early spring. Depending on the timing of upstream migration, most spawning takes place from January through April. Steelhead usually spawn in high-gradient, upper reaches of tributary streams. After hatching, fry usually stay in fresh water for one to two years. Juvenile steelhead can occupy a variety of in-stream habitats that provide adequate cover, food supply, and cold water temperatures. Out-migration generally occurs between February and June and requires sufficiently high flows and cool water temperatures.

The southern portion of the environmentally significant unit (ESU) where steelhead actively spawn and rear contains relatively few representative streams. Overall, southern steelhead usually spend less time in fresh water because of inhospitable conditions in the lower reaches of southern California streams. Therefore, steelhead in this region tend to migrate to the ocean or they tend to utilize coastal lagoons during their first year. The southern California ESU includes populations of steelhead in streams from Santa Maria to Malibu Creek. Santa Ynez River and tributaries are designated Critical Habitat for this species. Critical Habitat tributaries that are in the study area vicinity include Alisal and Salsipuedes Creeks, which are upstream from the alignment, and San Miguelito Creek, which is located downstream from the alignment. The Santa Ynez River and its tributaries may occasionally support steelhead (NOAA 2005). Several occurrences of steelhead are reported in the CNDDDB from the Santa Ynez River. This is the only potential habitat for this species in the study area (Figure 1, Map 1: 1).

California red-legged frog – Federally Threatened, State species of special concern

The CRLF occurs primarily in ponds or pools of intermittent stream courses that retain water long enough for breeding and development of young. The adults prefer dense, emergent or shoreline riparian vegetation closely associated with deep, still or slow-moving water and may disperse upstream, downstream or upslope from their breeding habitat (Jennings and Hayes 1994). Key habitat features for CRLF include good water quality and absence of introduced bullfrogs and predatory fish. Adults and sub-adults can estivate in small mammal burrows and moist leaf litter generally found within 300 ft of aquatic habitat. However, during wet periods CRLF can move long distances between aquatic features, traversing up to 1 mi from ponds and ephemeral drainages (Jennings and Hayes 1994).

There are five CNDDDB occurrences of CRLF within 5 mi of the study area, with the closest occurrence approximately 0.40 mi from the alignment (Figure 2) (CDFG 2008b). In addition, a telephone conversation with Tom Olson (2009b) indicated that two seasonal sag ponds along the alignment are known to contain populations of CRLF (Figure 1, Map 9: Ponds 10A, 10B). Several other ponds and seasonal drainages located in the vicinity of the project and within the alignment could potentially provide suitable breeding habitat for CRLF (Figure 1, Maps 4, 5, 9, 10, 15: Ponds 4, 7, 11, 14, 16; Drainages 11A, 15). During the reconnaissance-level field surveys, Ponds 7, 11 and 16 were found to provide a perennial water source and dense emergent vegetation, thus providing potential habitat for CRLF. A perennial pond located along a potential

project access route (4300 Buellton Road) to poles 40 to 47 also provides suitable breeding habitat for CRLF. Other seasonal drainages and ponds in the project vicinity (Figure 1) were found to either contain bullfrogs (Pond 2) or may lack a sufficient hydroperiod for CRLF breeding and larval development. During a particularly wet year, Ponds 3, 5, 6, 9, 12A, B, 13 and 18 could provide marginal habitat for this species.

California tiger salamander – Federally Endangered, State Candidate for Listing (Feb 2009)

CTS breeds in vernal pools and other seasonal or permanent ponds, and spends up to 90 percent of its life underground in upland habitats. These salamanders typically occur in grassland and oak savanna habitats where rodent burrows or deep soil crevices are used as long-term refuge sites. Individuals may move as far as 1.2 mi between breeding ponds and upland refuge sites (USFWS 2003; CDFG 2008b). Adults migrate from upland habitats to breeding ponds during late fall and early winter. The aquatic larvae hatch and develop in pools during winter and spring, and require about ten weeks of surface water to complete their aquatic development. The juvenile metamorphs leave the pools to disperse into upland habitats during mid- to late spring. Adults and juveniles may also undergo dispersal movements within and between upland habitats at any time during the wet season, typically on rainy nights.

The power line alignment passes through designated Critical Habitat for CTS and there are two CNDDDB occurrences documented within the vicinity at less than 1.2 mi from the alignment (Figure 2). The wetlands northeast of SR 246 and Campbell Road (Figure 1, Map 9: Ponds 10A, 10B) have been documented to contain known populations of CTS (pers. comm. Tom Olson, 2009b). During the reconnaissance-level field surveys Ponds 7 and 16 (Figure 1, Maps 5, 15) were found to provide suitable habitat for CTS. Other seasonal ponds in the vicinity (Figure 1) may lack a sufficient hydroperiod for CTS breeding and larval development. During a particularly wet year ponds 3, 4, 5, 6, 9, 12A, 12B, and 18 could provide breeding habitat for this species.

Golden eagle – Federal Bald and Golden Eagle Protection Act

Golden eagle (*Aquila chrysaetos*) occurs in open rolling foothills and mountain areas. Typically they nest on cliff ledges or in large trees but they can also utilize power structures as nest sites. Golden eagles require open areas such as grasslands for hunting (CDFG 2008b). There are no CNDDDB records of this species nesting in the vicinity. However, suitable foraging for this species is present in open grasslands throughout the alignment and several large eucalyptus and Monterey cypress stands adjacent to and within the study area could also provide suitable nesting habitat for golden eagles.

Least Bell's vireo – Federally Endangered, State Endangered

The least Bell's vireo (*Vireo bellii pusillus*) is an obligate riparian specialist that prefers early successional and structurally diverse riparian vegetation, but also occurs in dense, low, shrubby vegetation, second-growth forest, oak scrub, coastal chaparral, and mesquite shrub lands (USFWS 1998). The most critical component of their summer breeding habitat is dense vegetation from 1.96 – 9.8 ft in height in riparian areas (Kus 2002). Least Bell's vireos migrate to Baja California during the winter, and breed in southern California during the summer months.

They arrive on the breeding grounds in late March/early April and depart from late July to late September. Nesting takes place from early April through late July (Kus 2002).

There are no CNDDDB occurrences in the immediate project vicinity. The nearest reported CNDDDB occurrences are approximately 11.9 mi northeast and 14.3 mi north of the study area. However, this species is also known to breed along the entire length of the Santa Ynez River in Santa Barbara County (Abell 1989; National Audubon Society 2009). During the reconnaissance field surveys suitable nesting habitat for least Bell's vireo was found along the Santa Ynez River and in several creeks and drainages in the study area (Figure 1, Map 1: Santa Ynez River 1; Maps 5, 10, 11, 15, 17: Drainages/Creeks 9B, 11A, 12C, 12D, 15 and 17). In the study area, the Santa Ynez River provides high-quality habitat for this species; the other drainages and creeks traversed by the project provide low to moderate quality nesting habitat.

Southwestern willow flycatcher – Federally Endangered, State Endangered

Southwestern willow flycatcher (*Empidonax traillii extimus*) is a riparian obligate species that breeds in dense vegetation along rivers, streams, or other wetlands. Willow flycatchers will utilize dense stands of willows (*Salix* sp.), mule fat tamarisk (*Tamarix* sp.), and other low shrubs for breeding substrate. The most important quality of the vegetation is that it must be dense throughout all of the layers present; they do not necessarily need an overstory of cottonwood (*Populus* sp.) or other large trees. Also, the vegetation must be within 60 ft of water or very saturated soil (USGS 2009). Southwestern willow flycatchers usually arrive on the breeding ground between early May and early June with most breeding occurring from mid-June to the end of July. Several subspecies of willow flycatchers migrate through southern California in early spring, and willow flycatchers call and sing while migrating; therefore willow flycatcher detections prior to June 15th cannot be assumed to be *E. t. extimus* (USFWS 2002).

The lower Santa Ynez River supports a large population of southwestern willow flycatchers; the largest colony occurs approximately 5 mi west of Buellton and 7 mi east of Lompoc (National Audubon Society 2009). Two southwestern willow flycatcher CNDDDB occurrences are documented in the project vicinity: approximately 1.6 mi south and 2.1 mi southeast of the study area, respectively. The alignment also passes through designated Critical Habitat for southwestern willow flycatcher along the Santa Ynez River (Figure 2). During the reconnaissance field surveys suitable nesting habitat for southwestern willow flycatcher was observed along the Santa Ynez River and along several smaller creeks and drainages in the study area (Figure 1, Map 1: Santa Ynez River 1; Maps 5, 10, 11: Drainages/Creeks 9B, 11A, 12C and 12D). The Santa Ynez River provides high-quality habitat for this species, with the other smaller drainages and creeks traversed by the project providing lower-quality nesting habitat.

Western yellow-billed cuckoo – Federally Candidate, State Endangered

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is an obligate riparian specialist that prefers multi-seral stage riparian habitat comprised of early successional stages and overstory of cottonwoods and large willow trees. Typical habitats include from 3.5 to 85 percent shrub cover. Also, depositional point bars and low woody vegetation have been used as significant indicators of cuckoo occupancy and riparian habitat succession (Laymon 1998). In addition, yellow-billed cuckoos require dense populations of large-bodied insects in order to

breed. Yellow-billed cuckoos do not defend their territory using vocalizations, displays, or aggressive interactions (Laymon 1998). They disperse in search of appropriate breeding habitat and conditions, and synchronize nesting activity with the availability of appropriate prey species at high densities. Yellow-billed cuckoos arrive on the breeding grounds from late April through July, but most arrive during June. The peak of breeding occurs from mid-July to early August, but can occur anytime when conditions are ideal. They depart during their annual migration from early July through mid-September (Laymon 1998; Hughes 1999).

There are no CNDDDB records of western yellow-billed cuckoo nesting within the vicinity of the alignment. However, in July of 2000 a pair was recorded along the Santa Ynez River near Sweeny Road east of Lompoc (National Audubon Society 2009). Since the sighting in 2000 was of a pair there is a chance that they were nesting in the area. This species is known to be very evasive and shy and therefore detecting a nest is very difficult and rare. During the reconnaissance field surveys suitable nesting habitat for yellow-billed cuckoo was observed along the Santa Ynez River and in several smaller creeks and drainages in the project area (Figure 1, Map 1: Santa Ynez River 1; Maps 5, 10, 11: Drainages/Creeks 9B, 11A, 12C and 12D). The Santa Ynez River provides high-quality habitat for this species, with the other drainages and creeks traversed by the project providing low-quality nesting habitat for this species.

State Special-Status Species

Monarch butterfly (roosting) – State special animals list

The monarch butterfly (*Danaus plexippus*) migrates long distances from summer to winter roosting grounds covering four generations of butterflies along their route. During the spring and summer, this species can be found in open fields and meadows with milkweed (*Asclepias syriaca*), the larval host plant. During winter monarchs can be found on the coast of southern California and at high altitudes in central Mexico. Monarchs gather at their winter locations generally starting in November and roost in clusters in the trees. In spring monarchs will reproduce and their offspring will make the return trip to the north. This species prefers dense, wind-protected tree groves, such as eucalyptus, Monterey pine and/or Monterey cypress found near the coast from northern Mendocino, California to Baja California, Mexico (CDFG 2008b).

The nearest CNDDDB occurrence to the study area is approximately 3.8 mi northwest of the alignment (Figure 2). There is limited suitable roosting habitat on or adjacent to the study area. Patches of eucalyptus and Monterey pine are present adjacent to the alignment, especially in the western section of the project; however, none of these stands provides sufficiently dense cover for this species. One monarch butterfly was, however, observed in flight during the reconnaissance field survey north of poles 59 and 60.

Lompoc grasshopper – State special animals list

Little is known about the habitat requirements of the Lompoc grasshopper (*Trimerotropis occulens*) (CDFG 2008b; pers. comm. Arnold 2009). This species is only known from Santa Barbara and San Luis Obispo Counties. Typically, this genus (band-winged) of grasshopper is expected to occur in open areas with widely scattered tree and/or shrub cover and in habitat with

extensive areas of bare or sparsely vegetated ground, loose sand, and relatively flat relief. There is one CNDDDB occurrence of this species approximately 2.5 mi northwest of the study area from 1938. Recently this species was found and collected in the Lompoc area by entomologist Richard Arnold (pers. comm. R. Arnold 2009). Arnold collected specimens of this species along Lompoc roadsides where shale or rock formations were prevalent.

Suitable habitat for this species, including open areas with loose soils, was observed in the study area during the reconnaissance-level survey. In particular, potential habitat for the Lompoc grasshopper could occur in the coastal scrub and annual grassland habitats along the alignment.

Western spadefoot – State species of special concern

Western spadefoot toad (*Spea hammondi*) occurs primarily in lowlands and is found frequently in washes, floodplains of rivers, and alluvial fans and flats; however, this species range also covers into foothills and mountain habitats. Western spadefoots prefer open vegetation with short grasses and sandy or gravelly soil (Stebbins 2003). This species typically aestivates during the summer in burrows (generally of their own construction) and emerges after warm fall to late winter/early spring rains to breed in ponds and ephemeral wetlands (Gevirtz 2005).

Western spadefoots are widespread in Santa Barbara County, and co-occur in several freshwater sites with the California tiger salamander (Gevirtz 2005). Typical breeding habitat for the western spadefoot in Santa Barbara County includes agricultural ponds, seasonal pools and ephemeral wetlands that hold water for at least 22 days and are free of introduced fish and bullfrogs. One western spadefoot CNDDDB occurrence was documented in the alignment in the vicinity of the wetlands northeast of SR 246 and Campbell Road (Figure 2); this species is also known to occur in these two ponds (Figure 1, Map 9: Ponds 10A, 10B) (pers. comm. Tom Olson, 2009b). Reconnaissance-level field surveys identified several other ponds (permanent and seasonal) located in the vicinity of the study area and within the alignment that provide suitable breeding habitat (Figure 1, Maps 3, 4, 5, 9, and 15: Ponds 3, 4, 7, 11, 14, and 16). Other ponds in the vicinity of the project (Figure 1) were found to either contain bullfrogs (Pond 2) or appeared to lack sufficient inundation for spadefoot breeding and larval development. During a particularly wet year Ponds 5, 6, 9, 12A, 12B, 13 and 18 could provide suitable breeding habitat for this species.

Coast horned lizard – State species of special concern

The coast horned lizard (*Phrynosoma coronatum*) is associated with a wide variety of habitats including scrubland, grassland, coniferous forest and woodlands. Commonly this species is found in lowlands along sandy washes and in habitats with loose, sandy loams and/or sandy-gravelly soils (Jennings and Hayes 1994; Stebbins 2003). This species requires open bare soil for basking and presence of native harvester ants for foraging.

In Santa Barbara County, coast horned lizards have been found in riparian scrub, dune scrub, coastal scrub and open chaparral. Widespread urban development in the Lompoc Valley has reduced much of the habitat for this species; consequently this species is uncommon in the region (Gevirtz 2005). The nearest CNDDDB record for this species is approximately 4.5 mi from the alignment. Suitable habitat including loose soils and colonies of harvester ants was observed

in the study during the reconnaissance-level survey, suggesting that this species may occur along the alignment. In particular suitable habitat was found in the coastal scrub and oak woodland habitats near pole locations 13 - 21, 25 - 28, 30 - 33, 37 - 39 and 118 - 121.

Coast patch-nosed snake – State species of special concern

The known range of the coast patch-nosed snake (*Salvadora hexalepis virgulata*) extends from central San Luis Obispo County, California to Baja California, Mexico. Little is known about the species life history and even less is known regarding this particular subspecies. In general patch-nosed snakes are associated with rocky or gravelly soils and shrub-scrub vegetation types (Jennings and Hayes 1994; Stebbins 2003). This snake is believed to overwinter in small mammal burrows (possibly in woodrat nests) from October to March (Jennings and Hayes 1994). There are no CNDDDB records of this species in the vicinity of the study area. However, this species is known to occur at the La Purisima Mission State Historic Park, less than 2 mi north of the alignment (Figure 2) (Gevirtz 2005). This species has moderate potential to occur in coastal scrub habitat in the study area.

Silvery legless lizard – State species of special concern

The silvery legless lizard (*Anniella pulchra pulchra*) requires loose, moist soils to facilitate burrowing, and is found typically in areas with sparse vegetation within chaparral, pine-oak woodlands and along stream sides (Stebbins 2003). Loss of habitat due to urbanization and agriculture, along with the introduction of non-native plants (e.g., veldt grass [*Ehrharta calycina*] and ice plant [*Carpobrotus edulis*]) has contributed to the decline in this species (Jennings and Hayes 1994). In Santa Barbara County, this species is found in sandy soils within chaparral, coastal scrub, oak woodland and open riparian habitats where leaf litter under shrubs provides foraging and cover habitat (Gevirtz 2005).

There are three CNDDDB occurrences in the project vicinity, with the closest approximately 4.3 mi northwest of the alignment. This species has potential to occur in the central coast scrub and coast live oak woodland found in the study area. During the reconnaissance field surveys good quality habitat (i.e. moist loose soils with abundant leaf litter) for this lizard was noted to occur in the woodland habitat near poles 100 to 113 (Figure 1, Maps 13, 14 and 15).

Southwestern pond turtle – State species of special concern

The southwestern pond turtle (*Actinemys marmorata pallida*) requires still or slow-moving temporary and permanent waters such as ponds, freshwater marshes and pools in perennial streams. They may remain active all year and sometimes move overland for distances of more than 300 ft to find a suitable nesting site (Jennings and Hayes 1994). Pond turtles generally lay their eggs in open areas that are on dry slopes with soils rich in silt and clay.

There are no CNDDDB records of this species within 5 mi of the study area. However, this species is known to occur along the Santa Ynez River and are reportedly common in the seasonal drainages and ponds found throughout the project vicinity (Gevirtz 2005). The wetlands northeast of SR 246 and Campbell Road, located within the alignment, are known to support this species (Figure 1, Map 6: Ponds 10A, 10B) (pers. comm. Tom Olson 2009b). During the reconnaissance-level field surveys several ponds and seasonal drainages located in the vicinity of

the project and within the alignment were found to provide suitable habitat for pond turtle (Figure 1, Maps 4, 5, 9, 10, 15: Ponds 4, 7, 11, 14, 16; Drainages 11A, 15; Santa Ynez River 1). Ponds 7, 11 and 16 were found to provide especially good habitat for pond turtle; all of these three ponds are permanent and support dense emergent vegetation and abundant basking locations. There is also a permanent pond located along the potential access route (4300 Buellton Road) to poles 40 to 47 that provides suitable habitat for pond turtle. Other seasonal drainages and ponds in the vicinity (Figure 1) appeared to lack a sufficient hydroperiod for this species. However, during a particularly wet year several of these ponds and drainages (i.e., Ponds 3, 5, 6, 9, 12A, 12B, 13 and 18; Drainages 12C) could also potentially provide suitable habitat for this species.

Two-striped garter snake – State species of special concern

This highly aquatic garter snake can be found in or near permanent or intermittent freshwater systems, often along streams with rocky beds and bordered with willows or other riparian vegetation. Two-striped garter snake (*Thamnophis hammondi*) is generally active at dusk or at night. This species' range is generally confined to coastal slope drainages in the Coast Peninsular and Transverse Ranges from Monterey Bay south through Baja California, Mexico (Jennings and Hayes 1994; Stebbins 2003).

This species is known to occur throughout Santa Barbara County where suitable perennial and intermittent drainages are available. Local populations have been reported along San Antonio Creek, upper Santa Ynez River, Honda Creek and Jalama Creek (Gevirtz 2005). This snake is also expected to occur in several tributary streams along the lower Santa Ynez River (i.e., Salsipuedes/El Jaro, Nojoqui and Zaca Creeks) (Gevirtz 2005). There are no CNDDDB records of two-striped garter snake within the 5 mi of the study area and the nearest CNDDDB occurrence is approximately 9 mi northeast of the Santa Ynez Switching Station. However, there is potential habitat for this snake in the Santa Ynez River within the alignment (Figure 1, Map 1).

Grasshopper sparrow – State species of special concern

The grasshopper sparrow (*Ammodramus savannarum*) occurs in extensive grassland areas with flat or sloped topography where there are scattered bushes or tall plants that may be utilized as perches. This species was once more widespread across Santa Barbara County, particularly along the southern coast (Lehmann 1994). This species has been consistently observed in the La Purisima Mission State Historic Park, less than 2 mi north of the alignment (Figure 2) (Gevirtz 2005). There are no CNDDDB records of this species nesting in the project vicinity; however, suitable foraging and nesting habitat is present in the open grasslands throughout the study area. This species has been observed nesting in the nearby La Purisima Mission State Historic Park (per comm. Tom Olson 2009b).

Loggerhead shrike – State species of special concern

The loggerhead shrike (*Lanius ludovicianus*) frequents open habitats with sparse trees and shrubs. They are known to utilize fences, trees, power lines and utility poles as lookout posts for scanning broad open areas where suitable prey abounds. This species generally nests in open fields with few trees or in open woodlands or scrub. There are no CNDDDB records of this species

nesting in the project vicinity; however, suitable foraging and nesting habitat is present in open California annual grasslands found throughout the alignment.

Long-eared owl – State species of special concern

Long-eared owls (*Asio otus*) nest in mature riparian or oak woodlands adjacent to riparian zones near open foraging areas. Wintering birds may roost communally in dense riparian thickets. There are no CNDDDB records of this species nesting in the project area; however, it may still breed in the canyons along the Cuyama River and on Vandenberg Air Force Base along the eastern portions of San Antonio Creek (Gevirtz 2005). The Cuyama River and the San Antonio Creek are approximately 17 mi north and 11 mi northeast of the study area, respectively. Suitable foraging and nesting habitat for this species is present in open California annual grasslands and oak woodlands found in the study area (Figure 1, Maps, 1, 15, 17: Santa Ynez River 1, Creeks and Drainages 15, 17).

Mountain plover – State species of special concern

Mountain plovers (*Charadrius montanus*) are winter migrants generally found on plowed agricultural fields. During the summer they relocate to nest in the dry prairies and short grass plains of northern Montana, southeastern Colorado and Wyoming. Typically this species nests in a scraped depression on bare ground lined with grasses, roots and cow manure (Kaufman 1996). There are no CNDDDB records of this species in the vicinity; however, suitable foraging habitat for this species is present in open grasslands found throughout the alignment.

Tricolored blackbird – State species of special concern

Tricolored blackbirds (*Agelaius tricolor*) are largely restricted to California, where they occur throughout the Central Valley and along the coast in Southern California from Santa Barbara County to the Mexican Border (Beedy and Hamilton 1999). They are colonial nesters, breeding in dense colonies from which they may travel several miles to forage in grasslands and agricultural fields. Males arrive at breeding sites before females and initiate singing from late February through March. Nesting occurs from late March to early August. Individuals within breeding colonies may nest synchronously and lay eggs within one week of each other (Beedy and Hamilton 1999). They breed within wetland habitats but prefer freshwater marshes dominated by cattails (*Typha* spp.) or bulrushes (*Schoenoplectus* spp.). Nesting has also been documented in willows (*Salix* spp.), blackberries (*Rubus* spp.), thistles (*Cirsium* and *Centaurea* spp.), and nettles (*Urtica* sp) (Beedy and Hamilton 1999). They will also breed in diverse upland habitats, and agricultural areas. They prefer larger marshes and denser vegetation than red-winged blackbirds. There are no CNDDDB records of tricolor blackbird within 5 mi of the study area, but they have been reported in the Santa Ynez watershed, nesting in farm ponds (National Audubon Society 2009). Suitable nesting habitat was observed in the study area during the reconnaissance surveys along the Santa Ynez River (Figure 1, Map 1) and suitable foraging habitat for this species is present in open grasslands found throughout the alignment.

Western burrowing owl – State species of special concern

Western burrowing owls (*Athene cunicularia hypugea*) prefer open, flat or gently sloped grasslands and require burrows for nesting. This species was almost extirpated from Santa

Barbara County due primarily to the conversion of grasslands and pastures to cultivation and the extermination of ground squirrel populations. Breeding still occurs in the Carrizo Plain in San Luis Obispo and pairs have been known to breed in the western Santa Maria and Cuyama Valleys (Lehman 1994). Although suitable habitat exists on the La Purisima Mission State Historic Park (Figure 2), this species has not been detected during recent surveys of the park (Gevirtz 2005). Currently this species is not known to nest in Santa Barbara County (pers. comm. Tom Olson 2009b). There are no CNDDDB records in the vicinity of the study area; however, suitable foraging and nesting habitat for this species is present in the annual grasslands and pastures found along the alignment; overwintering owls could occur the study area. During the reconnaissance field surveys suitable habitat (i.e., open grassland land with abundant California ground squirrels colonies present) were noted in abundance throughout the eastern section of the alignment (Figure 1, Maps 13 -17).

White-tailed kite – State fully protected species

The white-tailed kite (*Elanus leucurus*) inhabits open lowland valleys and low, rolling foothills. They forage in grasslands, marshes, riparian edges, and cultivated fields where prey species (mainly ground squirrels and jackrabbits) are relatively abundant (Kaufman 1996). Kites typically nest on the tops of trees in close proximity to good foraging locations. There are no CNDDDB records of this species nesting in the vicinity of the study area; however, suitable foraging and nesting habitat is present in woodland and open annual grasslands throughout the study area.

Yellow warbler – State species of special concern

Yellow warblers breed in riparian woodlands that typically contain tall willows, cottonwoods and sycamore. This species is a long-distance migrant, and population decline in southern California has been linked to cowbird parasitism and breeding habitat loss and/or degradation (Lehman 1994). This species is widely distributed in the vicinity of the project, including the upper Santa Ynez River and nearby tributaries (Gevirtz 2005).

There is one CNDDDB occurrence approximately 15 mi north of the study area. During the reconnaissance field surveys potential nesting habitat for yellow warbler was found along the Santa Ynez River and in several smaller creeks and drainages found along the alignment (Figure 1, Map 1: Santa Ynez River 1; Maps 5, 10, 11, 15, 17: Drainages/Creeks 9B, 11A, 12C, 12D, 15 and 17). The Santa Ynez River provides the best habitat for this species while the other drainages and creeks provide only low to moderate nesting habitat.

American badger – State species of special concern

The American badger (*Taxidea taxus*) is widely distributed throughout California, occurring in grassland and open scrub/shrub habitats. Decline of this species is often attributed to urban growth, conversion of grasslands to agriculture and the use of rodenticides (Reid 2006). This species is primarily solitary, nocturnal, and a proficient digger that constructs burrows for resting and rearing young. The badger's main food source is small mammals.

Badgers are known to occur in undeveloped habitats throughout Santa Barbara County but have declined in agriculturally developed areas including Santa Maria, Lompoc and Santa Ynez

Valleys (Gevirtz 2005). There are several CNDDDB records of American badger in the vicinity on roads, including one within the alignment along Campbell Road (Figure 2). Suitable habitat for badger is present in the open grasslands and coastal scrub found throughout the alignment.

Pallid bat – State species of special concern

Pallid bat (*Antrozus pallidus*) occurs in a wide variety of habitats throughout the state of California, ranging from deserts to moist oak woodlands and redwood forests along the coast (Pierson et al. 2002). Commonly this species is found in open, dry grasslands, oak savannah and open scrublands (Williams 1986). This bat is highly social and roosts in rock crevices, caves, mines, tunnels, tree hollows, bridges and buildings; foraging for large arthropods is generally done on the ground or gleaned from vegetation (Pierson et al. 2002).

Pallid bats were found to be widely distributed on Vandenberg Air Force Base, foraging along creeks and tanbark oak habitat (Pierson et al. 2002). Although caves and rock crevice roosting habitat is lacking along the alignment, there are sufficient tree hollows (i.e., coast live oaks) in the study area for this species to occur.

Townsend's big-eared bat – State species of special concern

Townsend's big-eared bat (*Corynorhinus townsendii*) is widely distributed throughout California with most populations concentrated in habitats with caves or mines for roosting (Pierson et al. 2002). This species is locally common in coastal and lower montane habitats. It forages primarily on moths and other soft-bodied insects which are captured in flight (Zeiner et al. 1990; Pierson et al. 2002). This bat is extremely sensitive to disturbance since their preferred roosting habitat is on cave walls and other exposed surfaces rather than protected crevices (Williams 1986).

This species is known to occur in Santa Barbara County with a known maternity roost along the Santa Ynez River east of the town of Santa Ynez (Gevirtz 2005). There are several CNDDDB records in the project vicinity, including one less than 0.5 mile from the alignment (Figure 2). There is limited suitable roosting habitat for this species in the study area consisting of vacant outbuildings, abandoned structures and small bridges along the eastern section of the alignment (Figure 1, Maps 13-17).

Western red bat – State species of special concern

The western red bat (*Lasiurus blossevillii*) is widely distributed throughout California and known to occur in a variety of habitats including forested canyons, riparian zones and arid areas where they primarily roost in trees (Reid 2006). Pierson et al. (2006) suggest that Central Valley habitats are most important for breeding populations. Western red bats are known to forage along creek drainages on Vandenberg Air Force Base, primarily as individuals, but no roosts have been found on the Base (Pierson 2002). There are no CNDDDB occurrences within 5 mi of the study area. Limited suitable foraging and roosting habitat for this species is present within the study area along the Santa Ynez River and other smaller drainages.

Yuma myotis – State species of special concern

The Yuma myotis (*Myotis yumanensis*) is known to occur in a variety of habitats throughout California. Optimal habitat for this species includes open forest and woodlands with available water sources nearby (Reid 2006; CDFG 2008). This species is known to have limited distribution in Santa Barbara County, including one maternity roost at Vandenberg Air Force Base (Pierson 2002). There is one CNDDB occurrence approximately 2 mi from the study area in the northern section of the Santa Ynez River (Figure 2). The Santa Ynez River likely provides the best suitable habitat for this species along the alignment; however, large ponds (Figure 1, Maps 9, 15: Ponds 11, 16) and outbuildings along the eastern section of the alignment also provide foraging and roosting habitat for this species.

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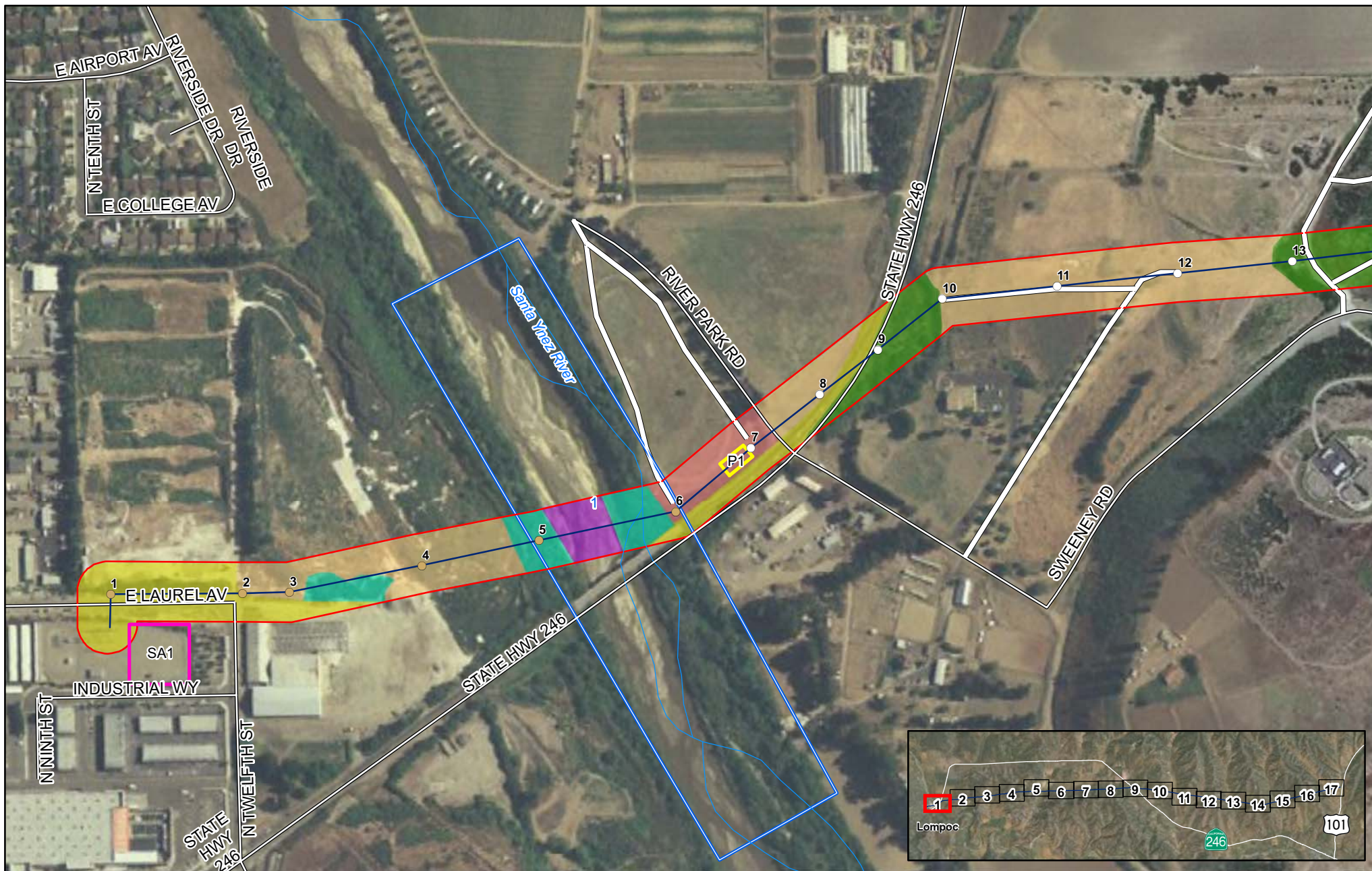
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FIGURES



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 1

0 300 600 Feet



Scale: 1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

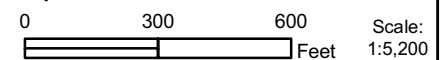
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 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
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 - Mule Fat Scrub
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- Other Vegetation**
- Agriculture
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- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 2





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

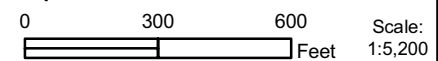
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 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

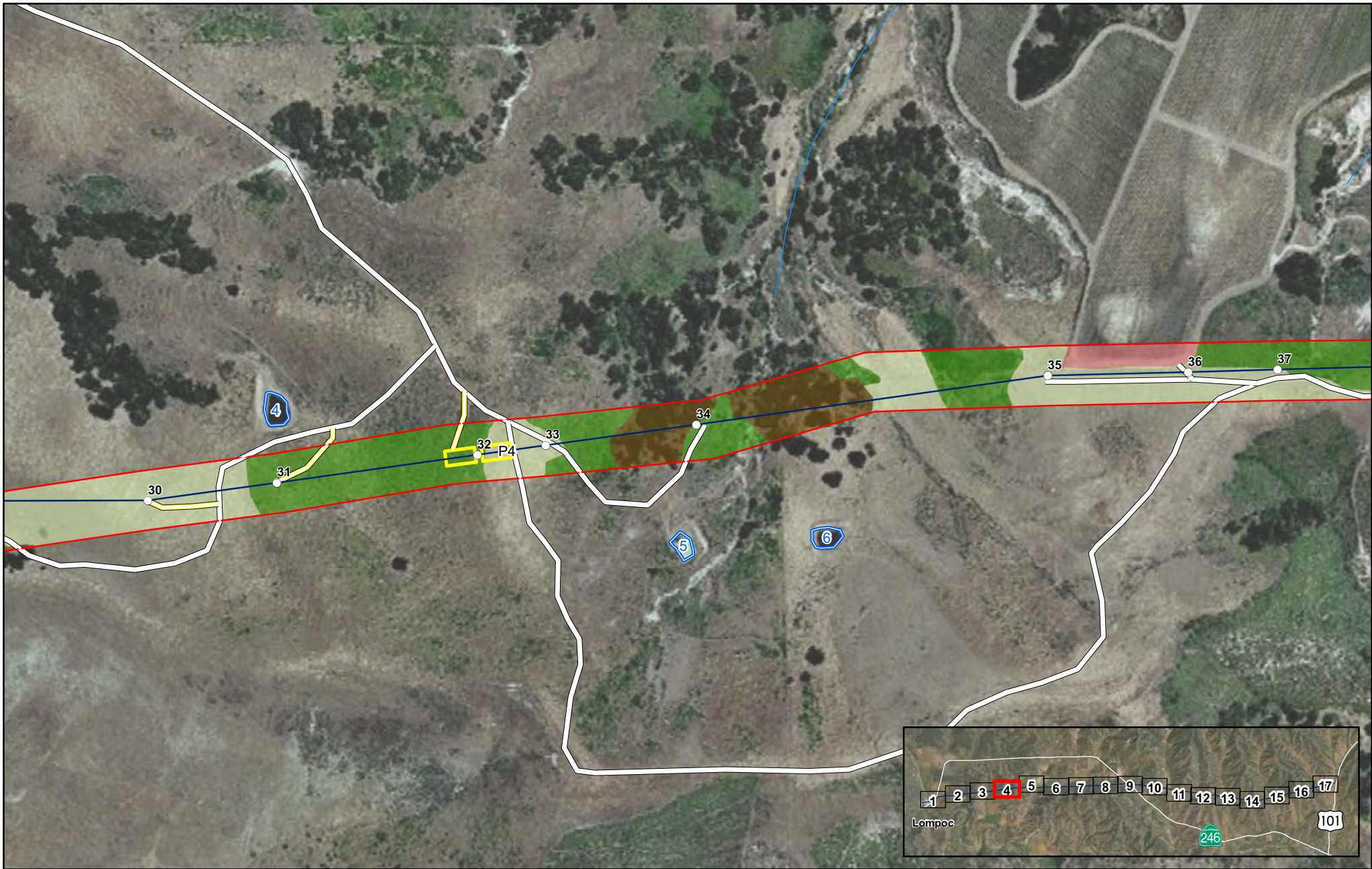
- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 3





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

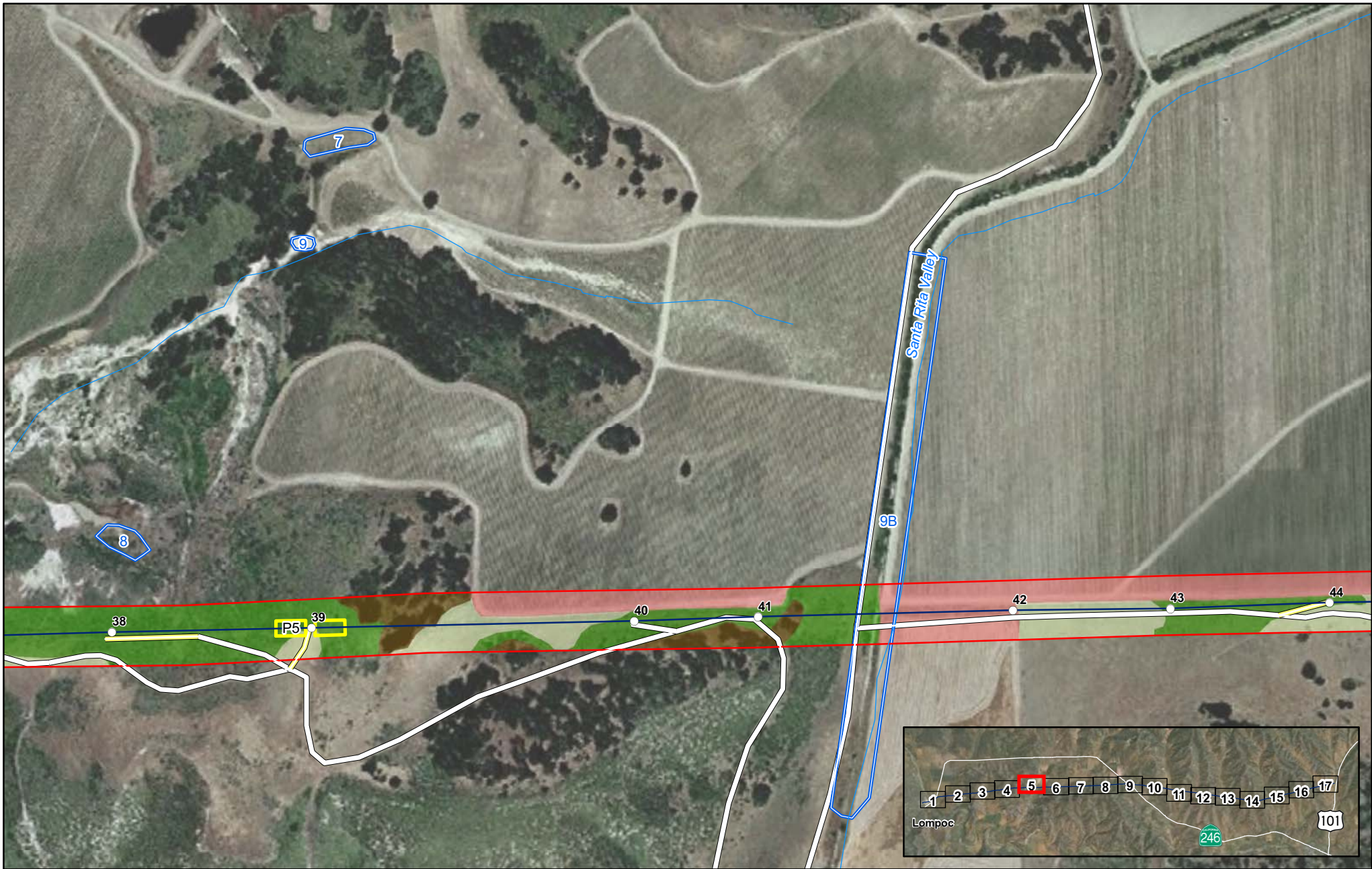
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 4

0 300 600 Feet
Scale: 1:5,200





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

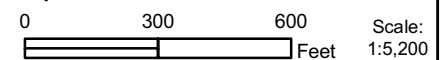
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 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

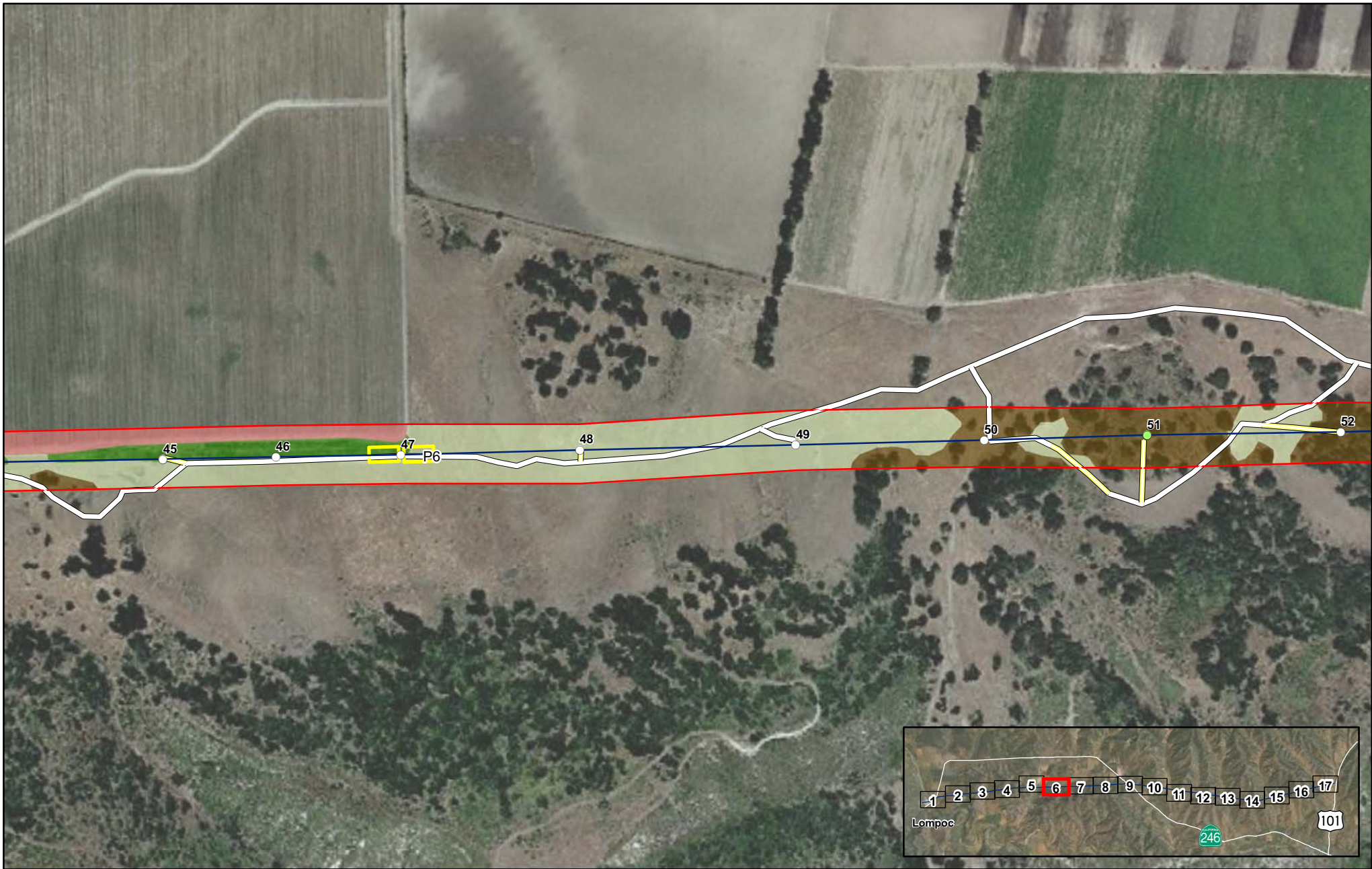
- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 5





- | | | | | |
|--|------------------------------------|------------------------------|-------------------------|---|
| ○ Power Poles to be Replaced | ○ 200' Habitat Classification Area | Natural Vegetation | Other Vegetation | County Roads |
| ● Power Poles Replaced by Helicopter | □ Potential Lay Down Area | California Annual Grassland | ✖ Agriculture | Existing Access Road |
| ● Existing Power Poles | □ Potential Pull and Tension Site | Central Coast (Lucian) Scrub | ✖ Developed | Existing Access Road Reestablished Through Grading and Vegetation Removal |
| ● Power Pole Sites with Expected Tree Management | □ Potential Staging Area | Coast Live Oak Woodland | ✖ Ruderal | Overland Access Route |
| — Power Line | — Ponds, Creeks, and Drainages | Freshwater Pond | | |
| | | Mule Fat Scrub | | |
| | | Riparian Scrub | | |

Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 6

0 300 600 Feet
Scale: 1:5,200

PG&E



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

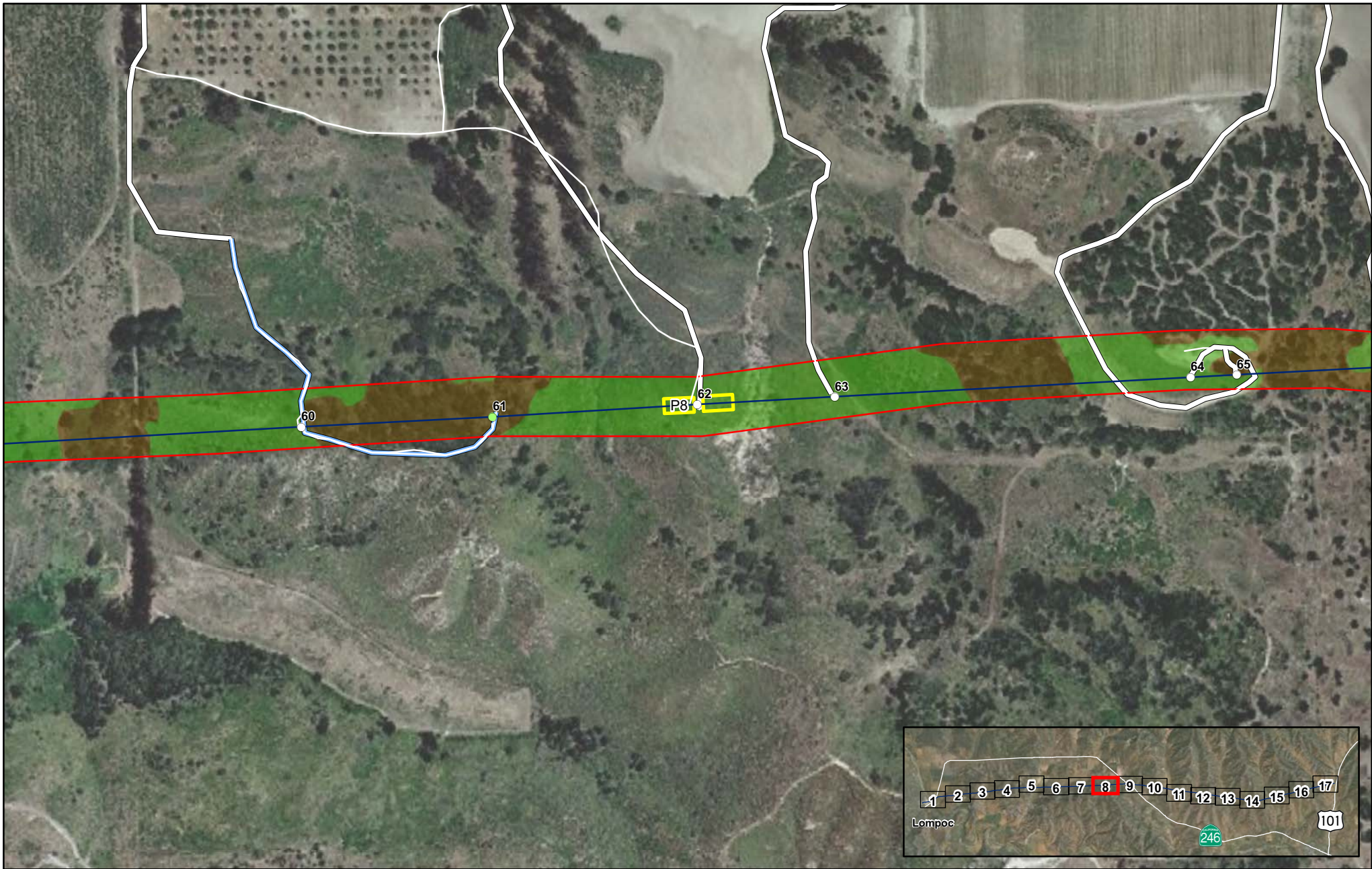


Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 7

0 300 600 Feet



Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

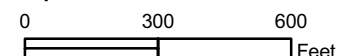
- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 8



Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

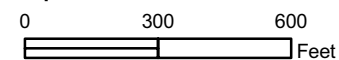
- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

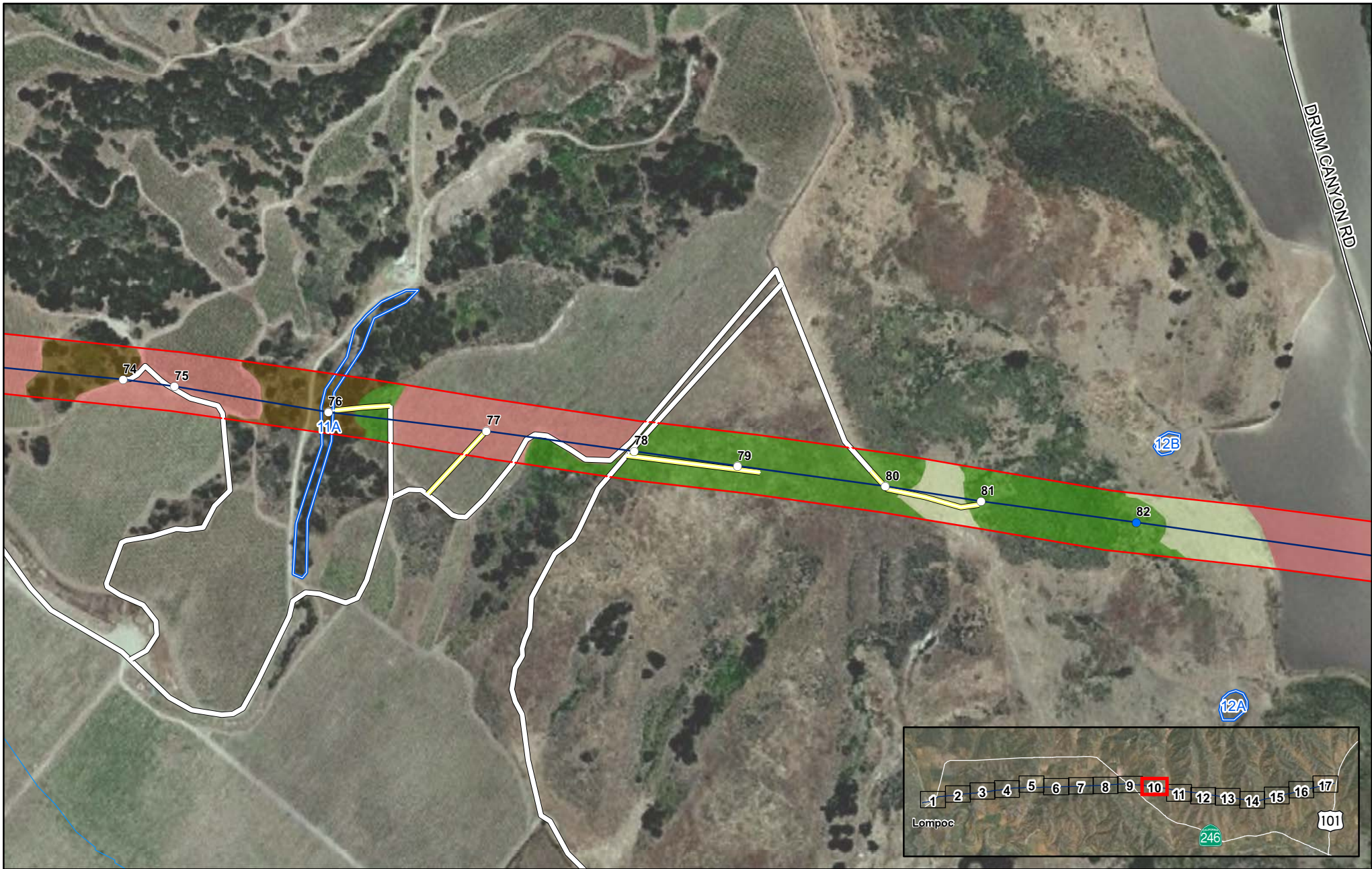
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 9



Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

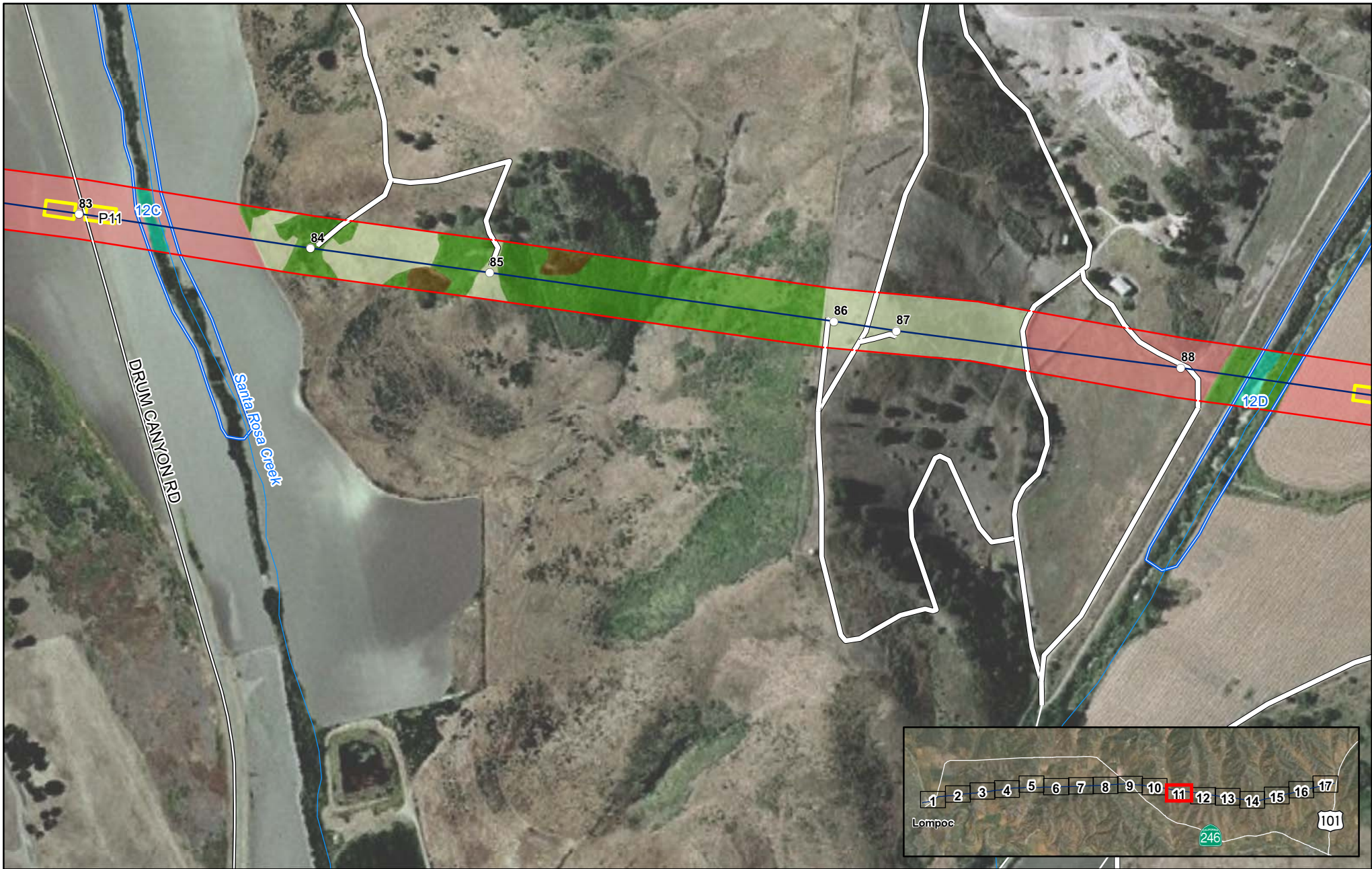
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 10

0 300 600 Feet
Scale: 1:5,200





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

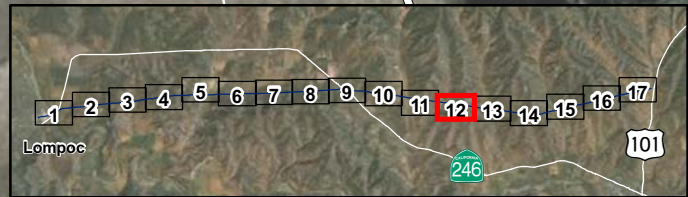
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 11

0 300 600 Feet
Scale: 1:5,200





- 

Scale:
1:5 200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

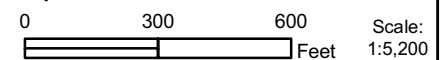
- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

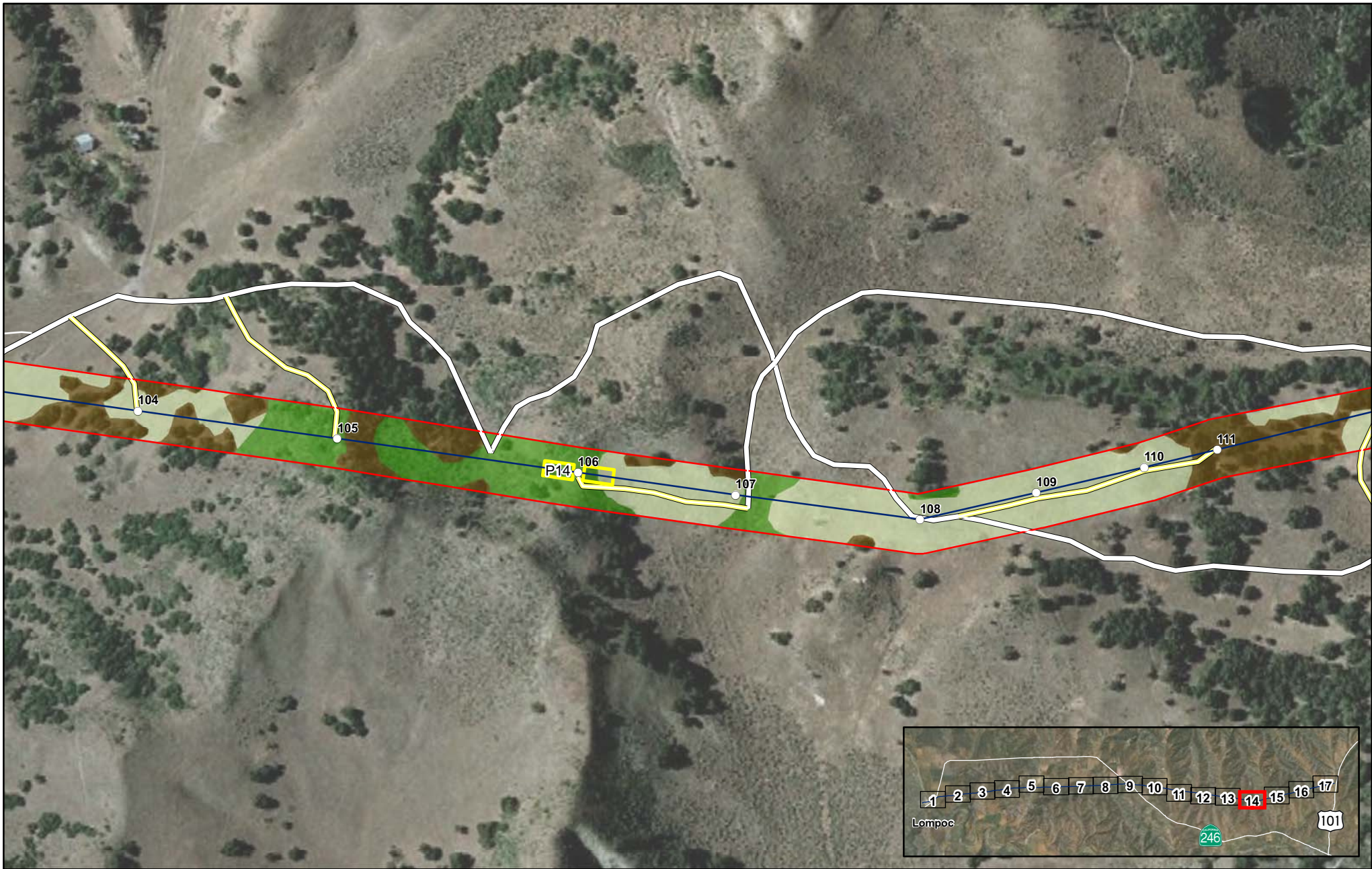
- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 13





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

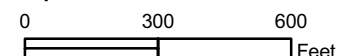
- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

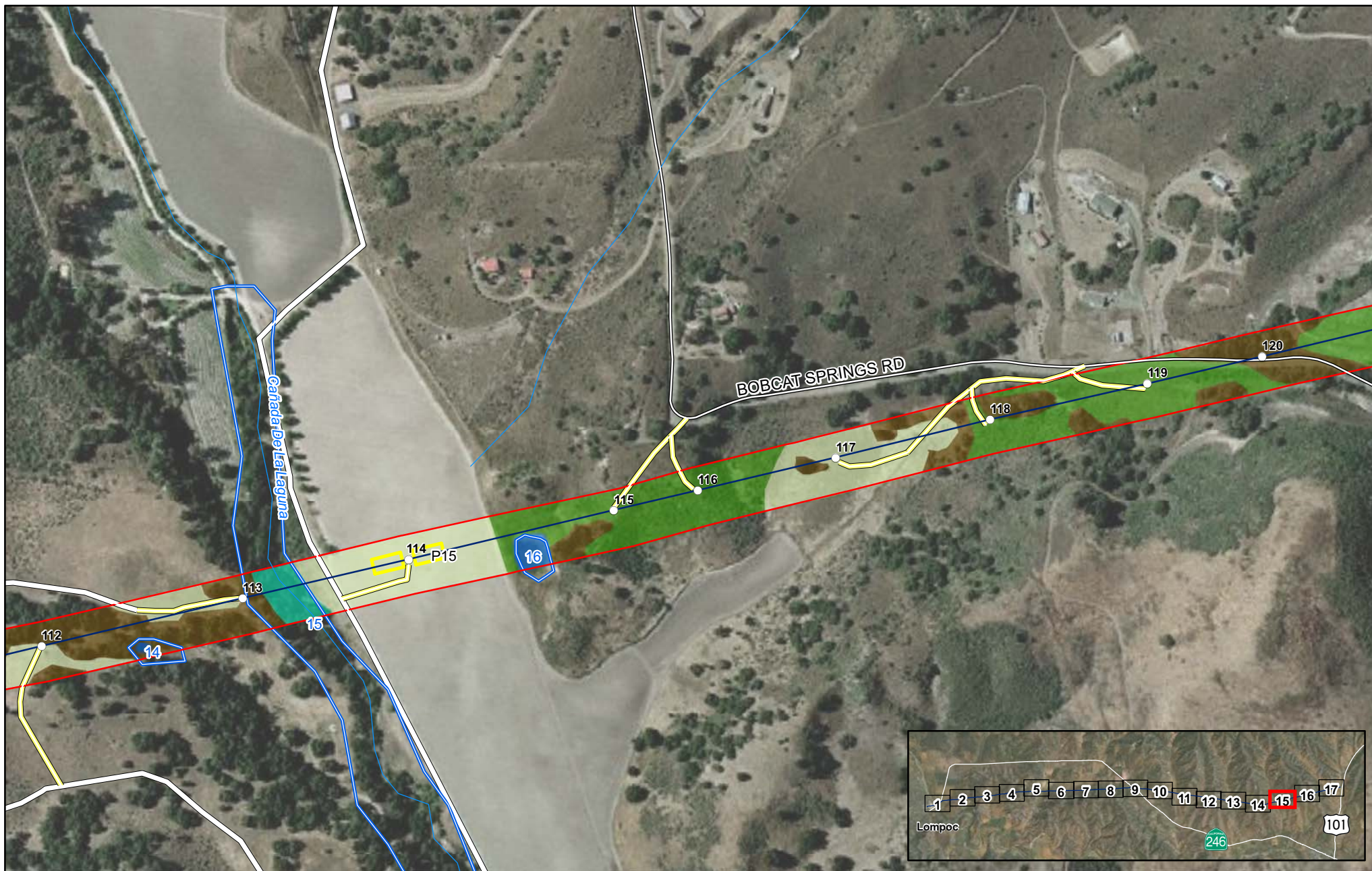
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 14



Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

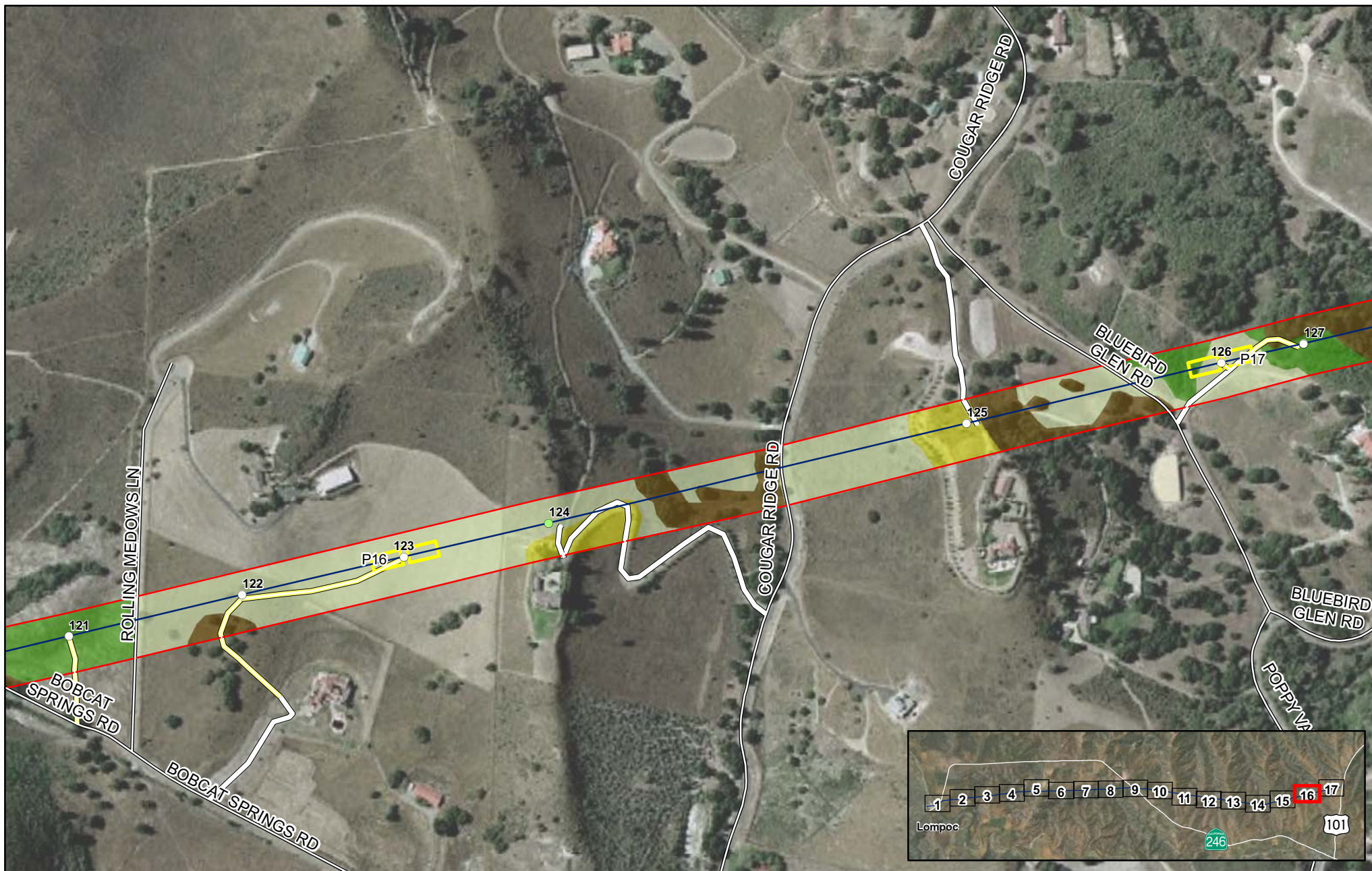


Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 15

0 300 600 Feet



Scale:
1:5,200

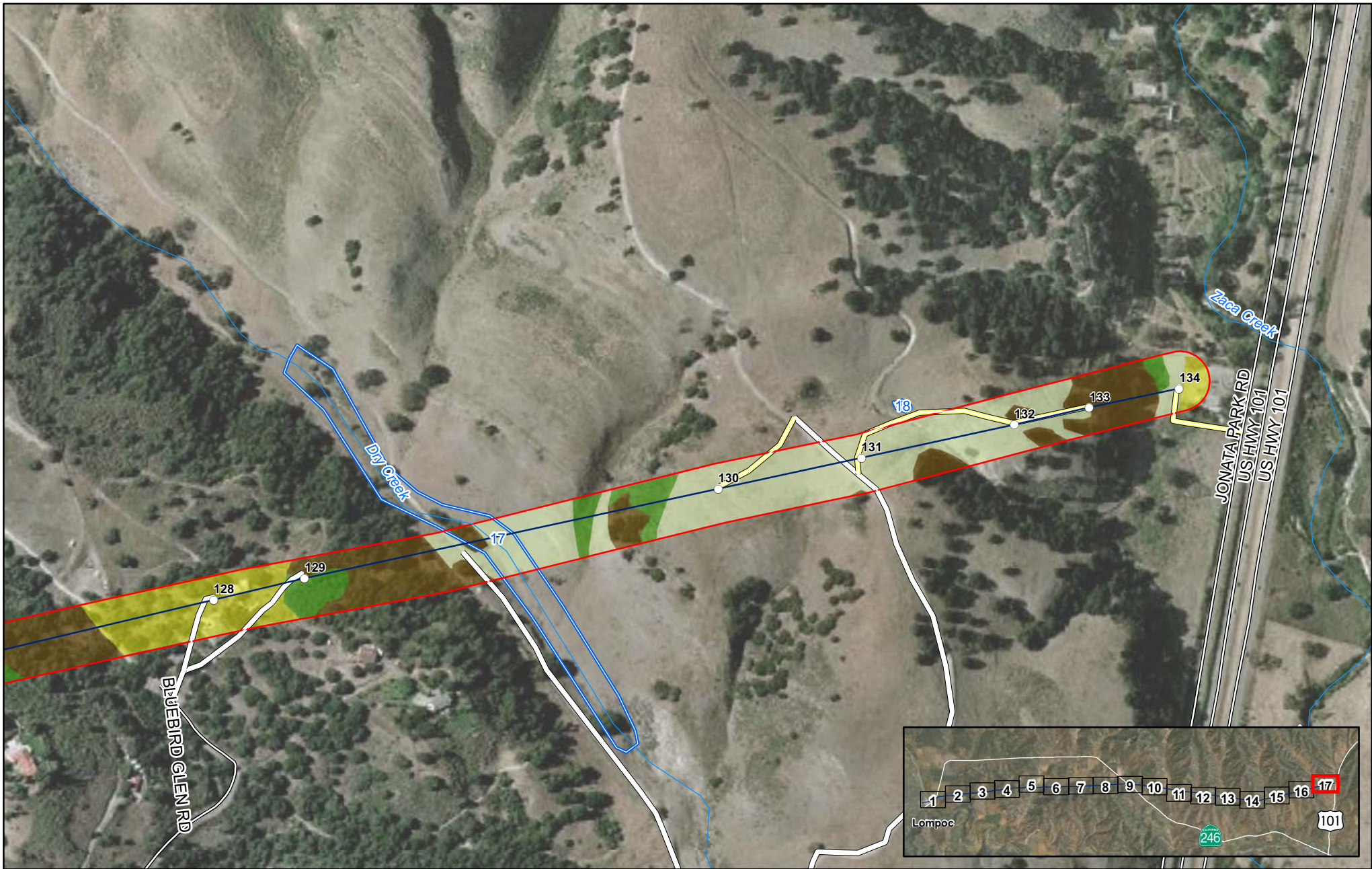


- | | | | | |
|--|------------------------------------|------------------------------|-------------------------|---|
| ○ Power Poles to be Replaced | ○ 200' Habitat Classification Area | Natural Vegetation | Other Vegetation | County Roads |
| ● Power Poles Replaced by Helicopter | □ Potential Lay Down Area | California Annual Grassland | ✂ Agriculture | Existing Access Road |
| ● Existing Power Poles | □ Potential Pull and Tension Site | Central Coast (Lucian) Scrub | Developed | Existing Access Road Reestablished Through Grading and Vegetation Removal |
| ● Power Pole Sites with Expected Tree Management | □ Potential Staging Area | Coast Live Oak Woodland | Ruderal | Overland Access Route |
| — Power Line | — Ponds, Creeks, and Drainages | Freshwater Pond | | |
| | | Mule Fat Scrub | | |
| | | Riparian Scrub | | |

Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 16

0 300 600 Feet
Scale: 1:5,200





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

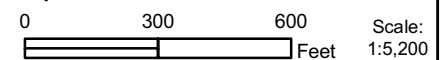
- Natural Vegetation**
- California Annual Grassland
 - Central Coast (Lucian) Scrub
 - Coast Live Oak Woodland
 - Freshwater Pond
 - Mule Fat Scrub
 - Riparian Scrub

- Other Vegetation**
- Agriculture
 - Developed
 - Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Figure 1
Habitat Classification
Cabrillo - Santa Ynez
115kV Reconductoring Project
Map 17



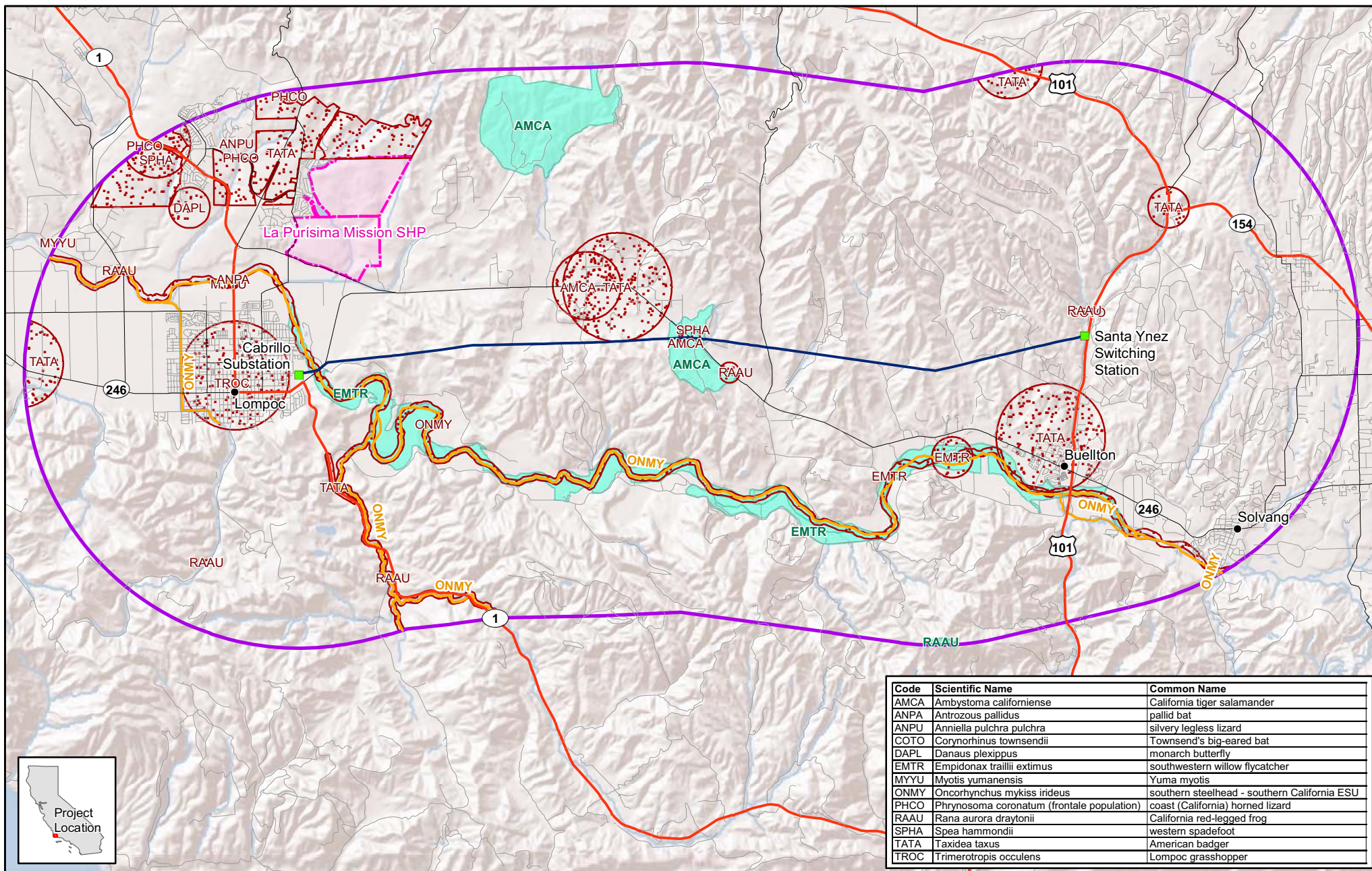


Figure 2
CNDDDB and Critical Habitat
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 1 2 3
Miles
Scale: 1:150,000



Appendix B-2

Preliminary Results of Special-Status Plant Surveys



Garcia and Associates
1512 Franklin Street, Suite 100
Oakland, CA 94612
Phone: (510) 891-0024 Fax: (510) 891-0027

To: Colleen Taylor, CH2M HILL
From: Eric Wrubel, Botanist
Date: June 24, 2009
RE: Preliminary results of special-status plant surveys for the Cabrillo-Santa Ynez Reconductoring Project

This memo documents the survey methods and special-status plant species that have been observed to date during the spring 2009 botanical surveys. The third survey is schedule for July 6-10, 2009. The rare plant survey report is expected to be completed in late summer 2009.

Rare Plant Survey Methods

Pre-field Preparations

Preparation for the protocol-level special-status plant surveys included compiling a list of special-status plants with potential to occur within the project area. The list was assembled using community and habitat information from the reconnaissance surveys and information from the California Native Plant Society's [CNPS] *Inventory of Rare and Endangered Plants of California* (CNPS 2009) and the California Natural Diversity Database [CNDDDB] (CDFG 2009a), as well as other sources listed below. A plant was considered to be of special status if it met one or more of the following criteria:

- Federally or State-listed, or proposed for listing, as rare, threatened or endangered (CDFG 2009a);
- Special Plant as defined by the California Natural Diversity Database (CDFG 2009b); or
- Listed by the California Native Plant Society in the online version of its *Inventory of Rare and Endangered Plants of California* (CNPS 2009).

A list of special-status plants with the potential to occur in the project area was compiled by conducting a 15-quadrangle search of the CNDDDB RareFind3 database (CDFG 2009b). The project

is located within the Lompoc, Los Alamos, and Zaca Creek U.S. Geological Survey (USGS) 7.5' quadrangles. The USGS 7.5' quads that were searched included Lompoc, Los Alamos, Zaca Creek, Casmalia, Orcutt, Sisquoc, Foxen Canyon, Zaca Lake, Los Olivos, Santa Ynez, Solvang, Santa Rosa Hill, Lompoc Hills, Tranquillon Mountain, and Surf. The CNPS (2009) Inventory was then queried to produce a similar list for Santa Barbara County. The specific habitats included in the query were chaparral, cismontane woodland, coastal scrub, meadows and seeps, valley and foothill grassland, riparian scrub and riparian woodland at elevations between 0 and 2,300 feet. These habitats were selected based on the similarity of their constituent species to those occurring on the project site. A total of 106 special-status plant species were identified in these queries. This list was revised and shortened to 39 taxa after considering the distributional analysis and habitat requirements of all taxa on the preliminary list. Table 1 provides a summary of information on the special-status plants with potential to occur within the project area.

Table 1. Special-status plant species with potential to occur within the Cabrillo-Santa Ynez Reconductoring Project Area.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur at the Project Site ⁴
	Federal	State	CNPS			
<i>Agrostis hooveri</i> Hoover's bent grass	-	-	1B.2	Apr-Jul	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Valley and foothill grassland/usually sandy; 20-2000 ft.	Moderate: There are 2 recorded occurrences of this species within 5 miles of the project site. Suitable habitat is present.
<i>Ancistrocarphus keilii</i> Santa Ynez groundstar	-	-	1B.1	Mar-Apr	Chaparral, Cismontane woodland/sandy; 130-425 ft.	Moderate: A recorded occurrence of this species is within 5 miles of the project site. This species is known only from the Santa Ynez Valley. Suitable habitat is present.
<i>Arctostaphylos purissima</i> La Purisima manzanita	-	-	1B.1	Nov-May	Chaparral(sandy), Coastal scrub; 200-1280 ft.	High: A recorded occurrence of this species is found in the immediate vicinity of the project site near the intersection of Campbell Road and Hwy 246. Suitable habitat is present.
<i>Arctostaphylos rudis</i> sand mesa manzanita	-	-	1B.2	Nov-Feb	Chaparral(maritime), Coastal scrub/sandy; 80-1050 ft.	Moderate: There are several recorded occurrences of this species within 5 miles of the project site. Suitable habitat is present.
<i>Arctostaphylos tomentosa</i> ssp. <i>eastwoodiana</i> Eastwood's brittle-leaf manzanita	-	-	1B.1	Mar	Chaparral(maritime, sandy) ; 300-1200 ft.	Low: Low quality habitat is present in a few locations within the project site.
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk-vetch	-	-	1B.2	Mar-Jun	Coastal scrub(clay) ; 70-300 ft.	High: A recorded occurrence of this variety occurs in the immediate vicinity of the project site between Drum Canyon Road and Hwy 101. Suitable habitat is present.
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's saltscale	-	-	1B.2	Apr-Oct	Coastal bluff scrub, Coastal scrub/alkaline; 30-650 ft.	Moderate: There is a recorded occurrence of this variety in the Zaca Lake quadrangle, which is located adjacent to the project site. Limited suitable habitat is present.
<i>California macrophylla</i> round-leaved filaree	-	-	1B.1	Mar-May	Cismontane woodland, Valley and foothill grassland/clay; 50-3900 ft.	Moderate: There is a recorded occurrence of this species in the Los Olivos quadrangle which is located adjacent to the project site. Suitable habitat is present.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur at the Project Site ⁴
	Federal	State	CNPS			
<i>Calochortus weedii. vestus</i> late-flowered mariposa lily	-	-	1B.2	Jun-Aug	Chaparral, Cismontane woodland, Riparian woodland/often serpentinite; 900-6250 ft.	Moderate: There are recorded occurrences of this variety in the Santa Rosa Hills and Santa Ynez quadrangles which are located adjacent to the project site. Suitable habitat is present.
<i>Calycadenia villosa</i> dwarf calycadenia	-	-	1B.1	May-Oct	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland/rocky, fine soils; 790-4430 ft.	Moderate: There is a recorded occurrence of this species in the Los Alamos quadrangle which contains the project site. Suitable habitat is present.
<i>Caulanthus amplexicaulis</i> var. <i>barbarae</i> Santa Barbara jewel-flower	-	-	1B.1	May-Jul	Closed-cone coniferous forest, Chaparral, Cismontane woodland/serpentinite; 1540-400 ft.	Low: Mostly restricted to serpentine soils in the San Rafael Mountains.
<i>Ceanothus cuneatus</i> var. <i>fascicularis</i> Lompoc ceanothus	-	-	4.2	Feb-April	Chaparral/sandy; 16 - 1312 ft.	Moderate: Known from sandy mesas and hills around Lompoc, and northeast of Buellton.
<i>Chorizanthe blakleyi</i> Blakley's spineflower	-	-	1B.3	Apr-Jun	Chaparral, Pinyon and juniper woodland; 1968-5248 ft.	Low: Known records of this species are restricted to the San Rafael, Sierra Madre, and Santa Ynez Mountains. Limited chaparral habitat is present within the project area.
<i>Chorizanthe rectispina</i> straight-awned spineflower	-	-	1B.3	Apr-Jul	Chaparral, Cismontane woodland, Coastal scrub; 280-3400 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the project site just west of Vandenberg Village. Suitable habitat is present.
<i>Cirsium loncholepis</i> La Graciosa thistle	FE	ST	1B.1	May-Aug	Cismontane woodland, Coastal dunes, Coastal scrub, Marshes and swamps(brackish), Valley and foothill grassland/mesic, sandy; 13-720 ft.	Low: There is a recorded occurrence of this species in the Surf quadrangle which is located adjacent to the project area. Historically known from areas near the coast in moist sandy soils associated with dune swales, margins of dune lakes and marshes, seeps, intermittent streams, and river margins and coastal wetlands in northern Santa Barbara County. Limited suitable habitat is present.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur at the Project Site ⁴
	Federal	State	CNPS			
<i>Cladium californicum</i> California sawgrass	-	-	2.2	Jun-Sep	Meadows and seeps, Marshes and swamps/alkaline or freshwater; 200-2000 ft.	Moderate: There is a recorded occurrence of this species in the Orcutt quadrangle which is located adjacent to the project area. Suitable habitat is present.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> seaside bird's-beak	-	SE	1B.1	Apr-Oct	Closed-cone coniferous forest, Chaparral(maritime), Cismontane woodland, Coastal dunes, Coastal scrub/sandy, often disturbed sites; 0-1400 ft.	Moderate: There are several recorded occurrences of this subspecies within 5 miles of the project area. Suitable habitat is present.
<i>Deinandra increscens</i> ssp. <i>foliosa</i> leafy tarplant	-	-	1B.2	Jun-Sep	Valley and foothill grassland/sandy; 980-1640 ft.	Low: There are no recorded occurrences of this subspecies within the project vicinity or surrounding quadrangles. The plant is not known to occur south of the Guadalupe quadrangle.
<i>Delphinium parryi</i> ssp. <i>blochmaniae</i> dune larkspur	-	-	1B.2	Apr-May	Chaparral, Coastal dunes; 0-650 ft.	High: There is a recorded occurrence of this subspecies in the immediate vicinity of the project area near the intersection of Campbell Road and Hwy 246. Suitable habitat is present.
<i>Delphinium umbraculorum</i> umbrella larkspur	-	-	1B.3	Apr-Jun	Cismontane woodland; 1300-5250 ft.	Moderate: There is a recorded occurrence of this species in the Los Olivos quadrangle which is located adjacent to the project area. Suitable habitat is present.
<i>Eriodictyon capitatum</i> Lompoc yerba santa	FE	SR	1B.2	May-Aug	Closed-cone coniferous forest, Chaparral(maritime)/sandy; 130-2950 ft.	Low: Known records of this species are restricted to the Santa Ynez Mountains and Burton Mesa. Limited, marginal habitat is present within the project site.
<i>Fritillaria ojaiensis</i> Ojai fritillary	-	-	1B.2	Feb-May	Broadleaved upland forest(mesic), Chaparral, Lower montane coniferous forest/rocky; 980-3270 ft.	Low: Known records of this species are restricted to the San Rafael, Sierra Madre, and Santa Ynez Mountains. Limited, marginal habitat is present within the project site.
<i>Hordeum intercedens</i> vernal barley	-	-	3.2	Mar-Jun	Coastal dunes, Coastal scrub, Valley and foothill grassland(saline flats and depressions), Vernal pools; 15-3280 ft.	Low: There are no recorded occurrences of this species within the project site or surrounding quadrangles. Habitat conditions are marginal.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur at the Project Site ⁴
	Federal	State	CNPS			
<i>Horkelia cuneata</i> ssp. <i>puberula</i> mesa horkelia	-	-	1B.1	Feb- Jul(Sep)	Chaparral(maritime), Cismontane woodland, Coastal scrub/sandy or gravelly; 230-2650 ft.	Moderate: There are several recorded occurrences of this subspecies within 5 miles of the project area. Suitable habitat is present.
<i>Horkelia cuneata</i> ssp. <i>sericea</i> Kellogg's horkelia	-	-	1B.1	Apr-Sep	Closed-cone coniferous forest, Chaparral(maritime), Coastal dunes, Coastal scrub/sandy or gravelly, openings; 33-650 ft.	Moderate: There is an extirpated occurrence of this subspecies in the Lompoc quadrangle. Suitable habitat is present.
<i>Layia heterotricha</i> pale-yellow layia	-	-	1B.1	Mar-Jun	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland/alkaline or clay; 980-5600 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the project site near Mission Village. Suitable habitat is present.
<i>Leptosiphon grandiflorus</i> large-flowered leptosiphon	-	-	4.2	Apr-Aug	Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland/usually sandy; 16-400 ft.	Low: The Consortium of California Herbaria lists a single voucher collection from Santa Barbara County; CNPS states this species has been extirpated from the county. Suitable habitat is present.
<i>Lonicera subspicata</i> var. <i>subspicata</i> Santa Barbara honeysuckle	-	-	1B.2	May- Aug(Dec- Feb)	Chaparral, Cismontane woodland, Coastal scrub; 115-3280 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the project site near La Purisima State Park. Suitable habitat is present.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> Carmel Valley malacothrix	-	-	1B.2	(Mar)Jun- Dec	Chaparral(rocky), Coastal scrub; 82-3398 ft.	Low: Only known records in Santa Barbara County are from Little Pine Mountain in the San Rafael Mountains.
<i>Micropus amphibolus</i> Mt. Diablo cottonweed	-	-	3.2	Mar-May	Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland/rocky; 148-2706 ft.	Moderate: There is a recorded occurrence of this species in the Zaca Creek quadrangle which includes a portion of the project area. Suitable habitat is present.
<i>Mimulus fremontii</i> var. <i>vandenbergensis</i> Vandenberg monkeyflower	-	-	1B.1	Apr-Jun	Chaparral, Cismontane woodland, Coastal dunes central dune scrub/sandy; often disturbed areas; 246-394 ft.	Moderate: There are several recorded occurrences of this variety within 5 miles of the project site. All known occurrences are on or within close proximity to the Vandenberg Air Force Base. Suitable habitat is present.
<i>Pseudognaphalium leucocephalum</i> white rabbit-tobacco	-	-	2.2	(Jul)Aug- Nov(Dec)	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/sandy, gravelly; 0-6900 ft.	Moderate: There is a recorded occurrence of this species in the Surf quadrangle which is located adjacent to the project site. Suitable habitat is

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur at the Project Site ⁴
	Federal	State	CNPS			
						present.
<i>Quercus dumosa</i> Nuttall's scrub oak	-	-	1B.1	Feb-Apr	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy, clay loam; 50-1300 ft.	Low: This species seldom occurs north of southern Santa Barbara County.
<i>Quercus parvula</i> var. <i>parvula</i> Santa Cruz Island oak	-	-	4.2	(Mar)Apr-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland; 100-3000 ft.	Moderate: This species is largely restricted to Santa Barbara County. Suitable habitat is present.
<i>Ribes amarum</i> var. <i>hoffmannii</i> Hoffmann's bitter gooseberry	-	-	3	Mar-Apr	Chaparral, Riparian woodland; 500-3900 ft.	Moderate: There is a recorded occurrence of this species in the Santa Ynez quadrangle which is located adjacent to the project site. Suitable habitat is present.
<i>Scrophularia atrata</i> black-flowered figwort	-	-	1B.2	Mar-Jul	Closed-cone coniferous forest, Chaparral, Coastal dunes, Coastal scrub, Riparian scrub; 33-1640 ft.	Moderate: There are several recorded occurrences of this species within 5 miles of the project site. Suitable habitat is present.
<i>Senecio aphanactis</i> chaparral ragwort	-	-	2.2	Jan-Apr	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline; 50-2625 ft.	Moderate: There are recorded occurrences of this species in the Lompoc Hills and Santa Ynez quadrangles which are located adjacent to the project site. Suitable habitat is present.
<i>Thelypteris puberula</i> var. <i>sonorensis</i> Sonoran maiden fern	-	-	2.2	Jan-Sep	Meadows and seeps(seeps and streams) ; 160-2000 ft.	Low: There are no recorded occurrences of this species within the project site or surrounding quadrangles. Habitat conditions are marginal.
<i>Thermopsis macrophylla</i> Santa Ynez false lupine	-	SR	1B.3	Apr-Jun	Chaparral(sandy, granitic, disturbed areas) ; 1390-4600 ft.	Low: There is one recorded occurrence in the Santa Ynez quadrangle which is located adjacent to the project site. Limited, marginal habitat is present within the project site

1. Scientific nomenclature based on Hickman (1993) and Jepson Online Interchange (2009); common names from Hickman (1993) and CalFlora (2009).

2. Conservation status definitions are as follows:

U.S. Fish and Wildlife Service designations:

FE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.

California Department of Fish and Game designations:

- SE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.
- ST Threatened: Any species likely to become endangered within the foreseeable future.
- SR Rare: Any species not currently threatened with extinction, but in such small numbers throughout its range that it may become endangered if its present environment worsens.

California Native Plant Society designations:

- 1B Plants rare, threatened or endangered in California and elsewhere.
- 2 Plants rare, threatened or endangered in California, but more common elsewhere.
- 3 Plants for which more information is needed – a review list.
- 4 Plants of limited distribution – a watch list.

California Native Plant Society threat categories:

- .1 Seriously endangered in California.
- .2 Fairly endangered in California.
- .3 Not very endangered in California.

3. Flowering period and habitat information from the California Native Plant Society's on-line Inventory of Rare and Endangered Plants of California (2009).

4. A plant species was determined to have potential to occur in the project area if its known or expected geographic range includes the vicinity of the project area, and if its known or expected habitat is represented within or near the project area Sources: CNPS 2009, CDFG 2009b, Jepson Online Interchange 2009 and (Smith 1998)..

Protocol-level Surveys

The goal of the protocol-level surveys was to locate all populations of special-status plants within project area, and precisely record and map their locations. Protocol-level surveys were floristic, meaning that all plant species encountered were identified to the taxonomic level needed to determine if they have special status. Surveys were conducted according to the botanical survey guidelines of the U.S. Fish and Wildlife Service (USFWS 1996), the California Department of Fish and Game (CDFG 2000), and the California Native Plant Society (CNPS 2001).

Protocol-level surveys were conducted by Garcia and Associates (GANDA) Botanists Eric Wrubel, Kathy Rindlaub and Ed Kentner. Surveyors conducted meandering transects on foot throughout the project site, focusing on microhabitats with higher likelihood to support special-status plants. The project area included the entire 40-foot wide right-of-way between Cabrillo Substation in Lompoc to Santa Ynez Switching Station near Buellton. The survey also included all access roads that may require clearing and grading activities and proposed lay down or staging areas outside the alignment. Existing access roads and proposed overland routes were not specifically included in the survey; however, any special-status species plants observed from the right-of way or while accessing the project area along these designated routes during the surveys were noted. When special-status plants were found, the location, number of individuals, flowering condition, and habitat characteristics were recorded in the field. Population size was determined by counting individuals or by visual estimates, using standard estimation techniques (Elzinga et al. 1998). Information on plant phenology, microhabitat and associated species was also noted for each mapped occurrence.

Two rounds of spring surveys were conducted on the following dates: March 2-6, 2009 and April 20-25, 2009. A third visit is scheduled for July 6-10, 2009. This range of survey dates was selected to encompass the blooming times of all of the special-status plants that could potentially occur within the project area. All areas identified as potential habitat for rare plants were visited during the times when special-status plants associated with those habitat types would be likely to be blooming and/or identifiable.

All plant species found in the project area during the first and second visits were identified to the taxonomic level needed to determine if they have special status. Samples were taken of taxa that could not be identified in the field, and were later identified using The Jepson Manual (Hickman 1993).

Special-status Plant Species observed during first two visits

Five special-status and one locally uncommon plant species have been identified to date within the right-of-way, near access roads or along overland access routes. Four special-status species are located in work areas (Appendix A). Work areas include a 40 by 100 foot area around each pole to be replaced (40 foot-wide right-of-way and fifty feet on either side of each pole). Other work areas include access roads that require clearing and grading and lay down or staging areas.

All special-status species observed during the surveys were documented and mapped, and their locations are shown in Appendix A. Special-status species that were observed within the planned

work areas are discussed below.

Nuttall's milkvetch (*Astragalus nuttallii* var. *nuttallii*) CNPS 4.2

Nuttall's milkvetch is short-statured herbaceous perennial in the pea family (*Fabaceae*). Its stems are prostrate to erect and sometimes grow in dense tangles. Its leaves are odd-1-pinnate with leaflets generally jointed to the midrib. It is distinguished by its lower stipules fused into a sheath around the stem, green color of the foliage, and lack of a stalk-like fruit base. *Astragalus nuttallii* variety *nuttallii* is distinguished by its geographic location in the southern portion of central coastal California. This species is found on ocean bluffs and rocky or sandy areas within its range.

Nuttall's milkvetch is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This species has a threat code of 2 meaning it is fairly threatened in California (CNPS 2009).

Nuttall's milkvetch is widely scattered in grasslands and access roads on sandy soils between poles 106 and 108, and was found in the Bobcat Springs area between poles 116 -121 and near pole 121 (Appendix A, Maps 30, 32 and 33). A population of approximately 20 individuals was also observed growing within the existing access road near pole 108 (Appendix A, Map 30). This species is common along access roads in the vicinity of the survey area, and vehicle travel on these roads is not expected to have a significant impact on this occurrence. Avoidance can be achieved through pre-construction flagging of this species within work areas.

Sand buck brush (*Ceanothus cuneatus* var. *fascicularis*)

Sand buck brush is a 3 to 7-foot tall shrub in the buckthorn family (*Rhamnaceae*). It has slender, flexible, arched branches with opposite leaves, ± flat leaf blades that are narrowly oblanceolate to round-obovate, and leaf margins that are generally entire. *Ceanothus. cuneatus* variety *fascicularis* is distinguished by its blue to pale-blue flowers and narrowly oblanceolate closely clustered leaves. It is known from chaparral and coastal sandy mesas below 1300 feet in Santa Barbara and San Luis Obispo Counties.

Sand buck brush is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This species has a threat code of 2 meaning it is fairly threatened in California (CNPS 2009).

Sand buck brush was found during the surveys in open oak woodlands on sandy soils, associated with coast live oak (*Quercus agrifolia*) and non-native annual grass species. A large sand buckbrush individual was found within the planned disturbance area on the east side of pole 111 (Appendix A, Map 31). Scattered individuals were also observed in the vicinity of an overland access route near poles 115 and numerous individuals were found in the chaparral habitat around pole 129 (Appendix A, Maps 32 and 36). Avoidance can be achieved through pre-construction flagging of this species within work areas.

San Luis Obispo wallflower (*Erysimum capitatum* ssp. *lompocense*) CNPS 4.2

San Luis Obispo wallflower is an orange to yellow-flowered biennial or short-lived perennial in the mustard family (*Brassicaceae*) that is generally between 20 and 40 inches tall. *Erysimum capitatum* variety *lompocense* is distinguished by its elongate caudex, narrowly lanceolate lower leaves, and spreading, ± flattened, generally irregularly curved fruit. It is found on sandy hillsides and mesas in the outer South Coast Ranges.

This species is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This variety has a threat code of 2 meaning it is fairly threatened in California (CNPS 2009).

San Luis Obispo wallflower was found in several locations within the right-of-way during the surveys, but only one individual was found in a planned disturbance area, at pole 97 about 6.5 feet west of the pole (Appendix A, map 27). This pole is slated for replacement using a helicopter, which will limit the amount of ground disturbance in this area. Avoidance can be achieved through pre-construction flagging of this species within work areas.

Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) CNPS 1B.1

Mesa horkelia is a low-growing herbaceous perennial in the rose family (*Rosaceae*). It has a matted growth form, with green or grayish pinnately divided leaves and white flowers. It is generally found in dry, sandy habitats of the south coast and south coast ranges. *Horkelia cuneata* subspecies *cuneata* is distinguished from other *H. cuneata* subspecies by its glandular-hairy foliage and the glabrous inner rim of its hypanthium and it tends to be found in more inland locations than the other *H. cuneata* subspecies.

This species is not state or federally listed, but is included on CNPS's List 1B, meaning that it is rare, threatened or endangered in California and elsewhere. This variety has a threat code of 1 meaning it is seriously endangered in California (CNPS 2009).

Mesa horkelia was found at one location during the surveys. A population of approximately 20 individuals was located within the ROW between poles 61 and 62 (Appendix A, map 17). The population is not located in a planned disturbance area or access route.

California spineflower (*Mucronea californica*) CNPS 4.2

California spineflower is a diminutive annual plant in the buckwheat family (*Polygonaceae*). Its small, white to pink flowers are subtended by spiny bracts. It is distinguished from the only other *Mucronea* species in California by its bracts occurring on only one side of the stem and its entire perianth lobes. It is known from sandy soils near the coast and in the coastal ranges of central and southern California in coastal scrub and chaparral vegetation.

This species is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This variety has a threat code of 2 meaning it is fairly threatened in California (CNPS 2009).

California spineflower was found in one location during the surveys, near a planned overland access route to pole 121 (Appendix A, map 33). A small population of five individuals was observed in sandy soils at this location during the April surveys. The population is not located in a planned disturbance area, and is not in the path of the planned overland access route.

Desert Scrub Oak (*Quercus Palmeri*)

An individual desert scrub oak (*Quercus palmeri*) was found in the planned disturbance area at pole 111 (Appendix A, map 31). It is a large (6.5 feet tall) shrub located on the northwest side of the pole. Pre-construction flagging can be used to avoid this species within the pole work area. Desert scrub oak does not have statewide special-status, but is locally uncommon in Santa Barbara County (Smith 1998, Jepson Online Interchange 2009).

Areas to visit in third survey

A third survey scheduled for July 6-10, 2009 will include habitat that could support late-blooming sensitive species (Appendix A. maps 1-37, identified in purple). Potential habitat for late blooming special-status plant species in the survey area includes California Annual Grassland on sandy soils, Central Coast (Lucian) Scrub, Coast Live Oak Woodland, Mule Fat Scrub, Riparian Scrub, and Chamise Chaparral. A small stand of Chamise Chaparral was found within the survey area at pole 129 (Appendix A, map 36). Chamise Chaparral was not previously identified in the Biological Resources Technical Report as a vegetation type occurring within the survey area.

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Appendix A:

Locations of Special-Status Species Observed in March and April 2009 and Areas Remaining to be Surveyed



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

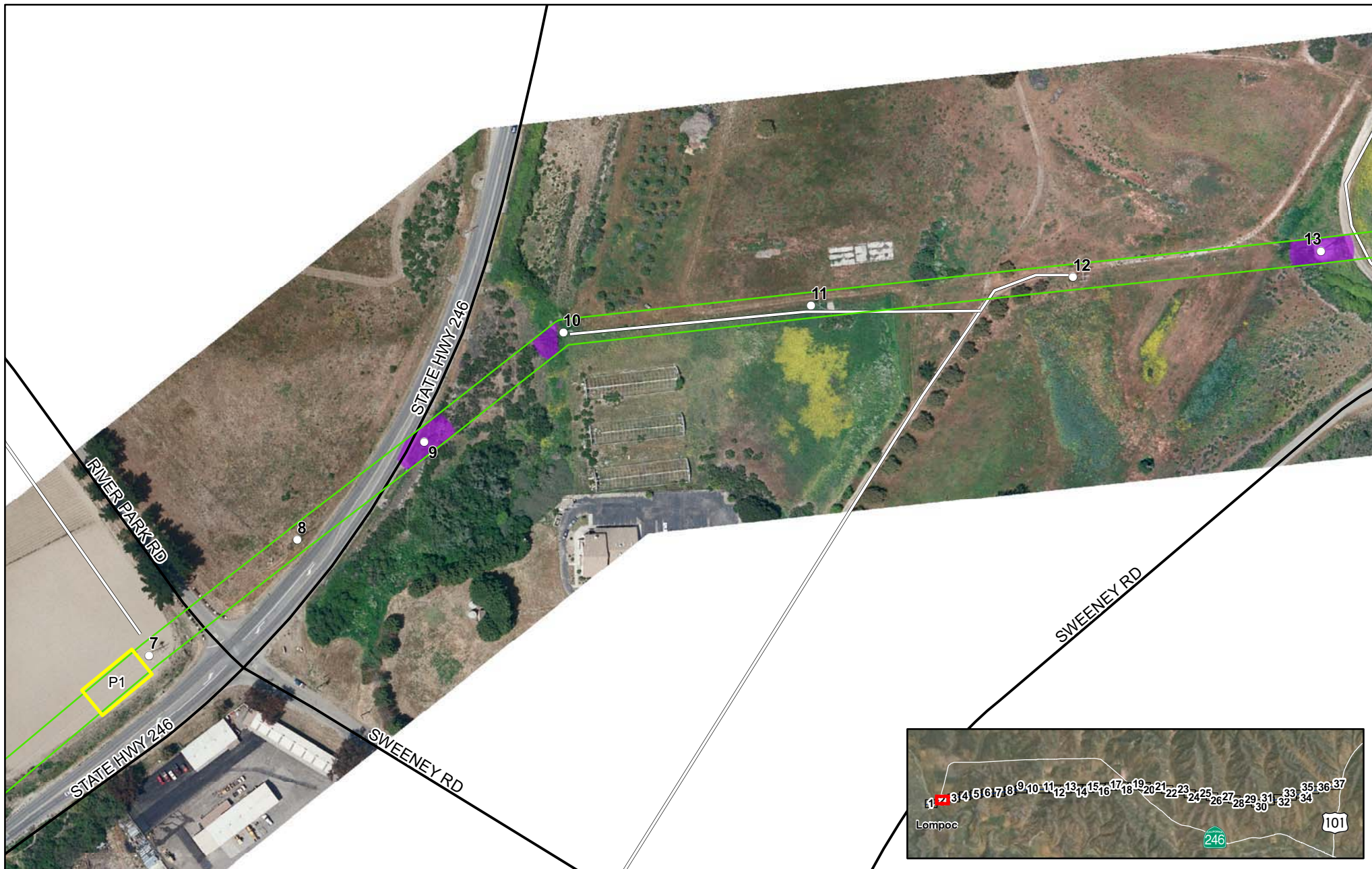


Rare Plant Survey Map 1
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

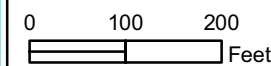
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

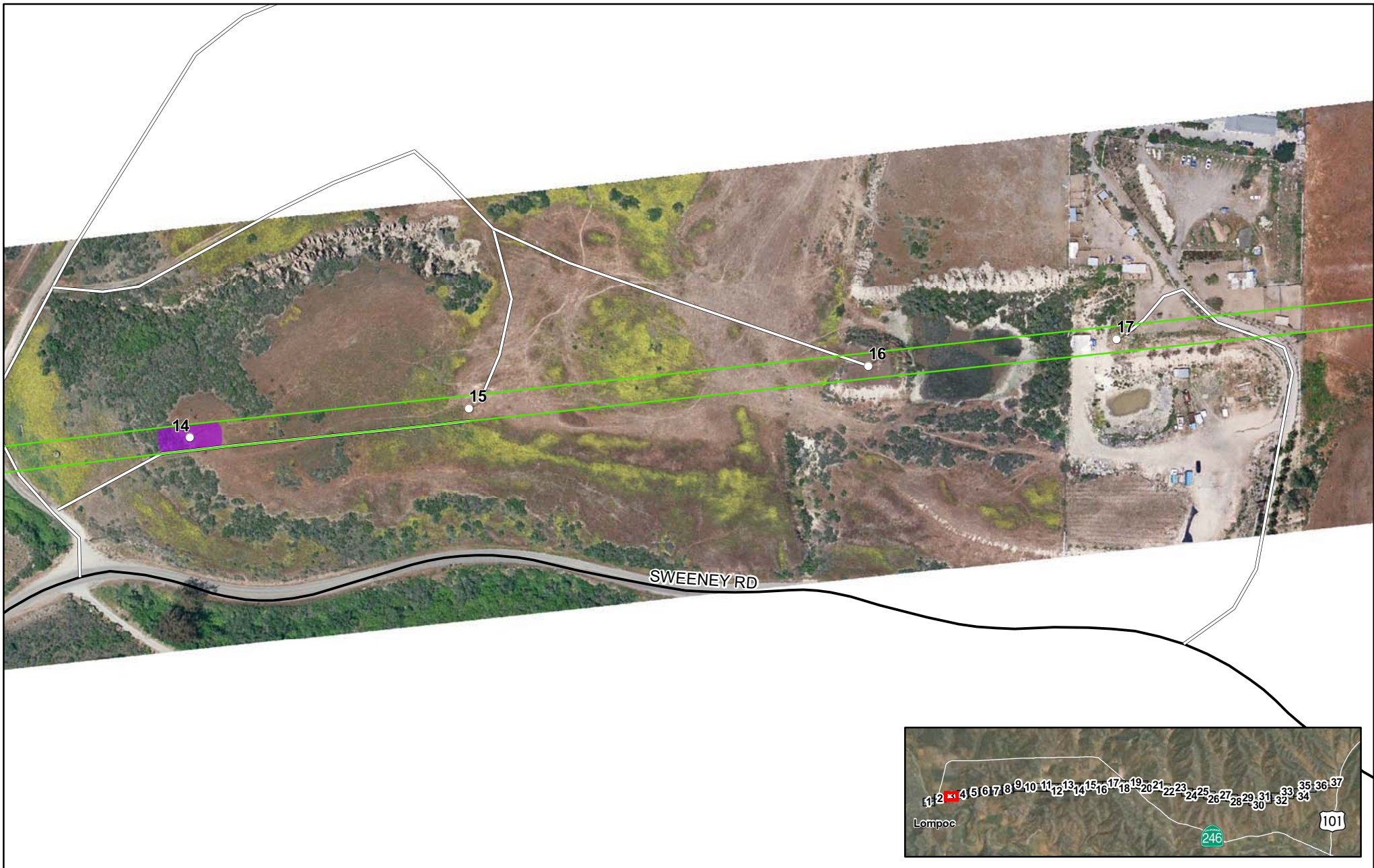
- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲



Rare Plant Survey Map 2
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲



Rare Plant Survey Map 3
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲

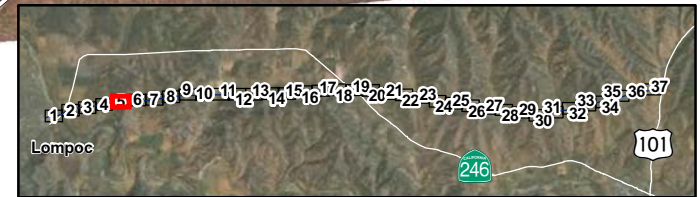
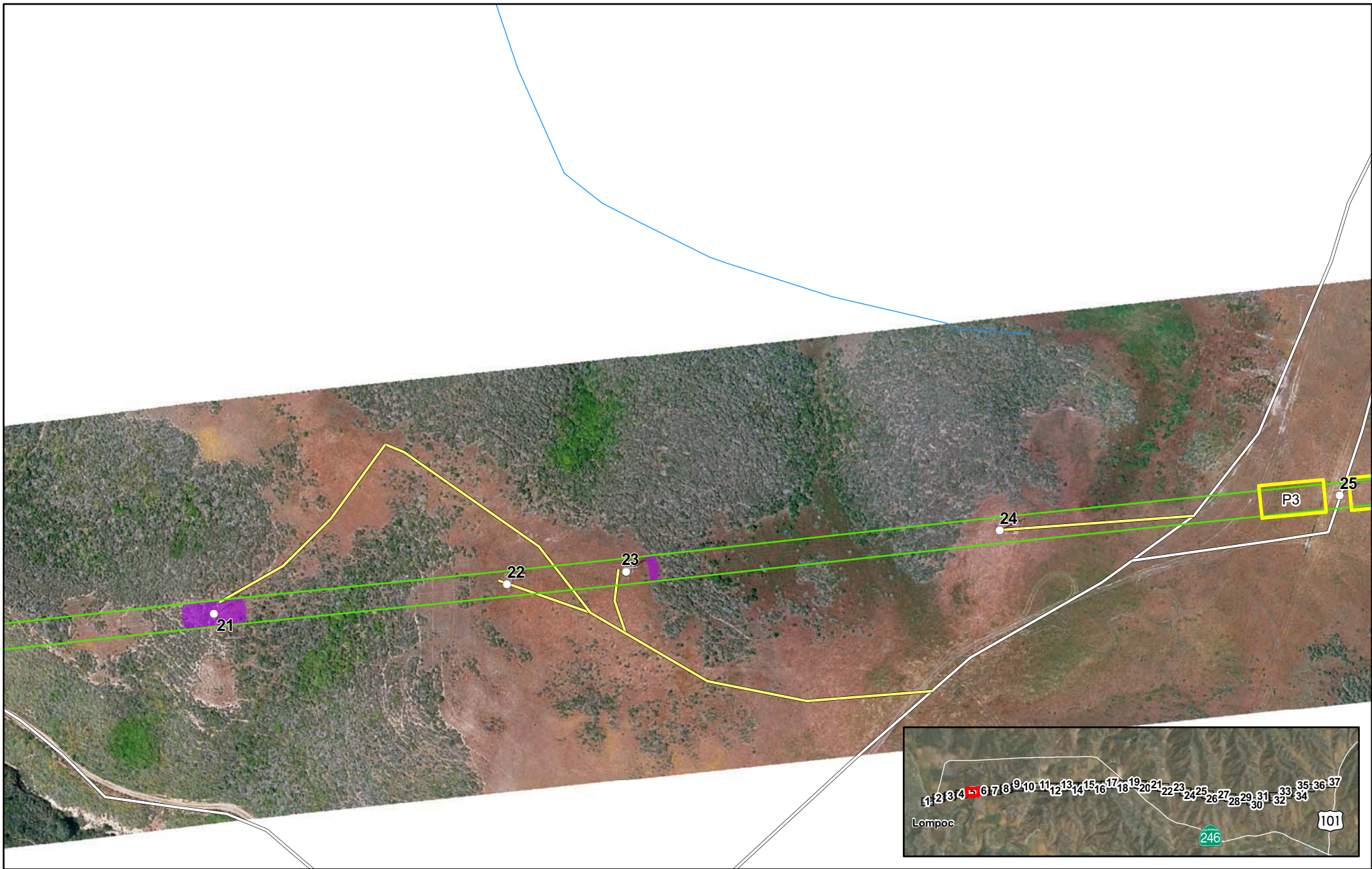


Rare Plant Survey Map 4
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

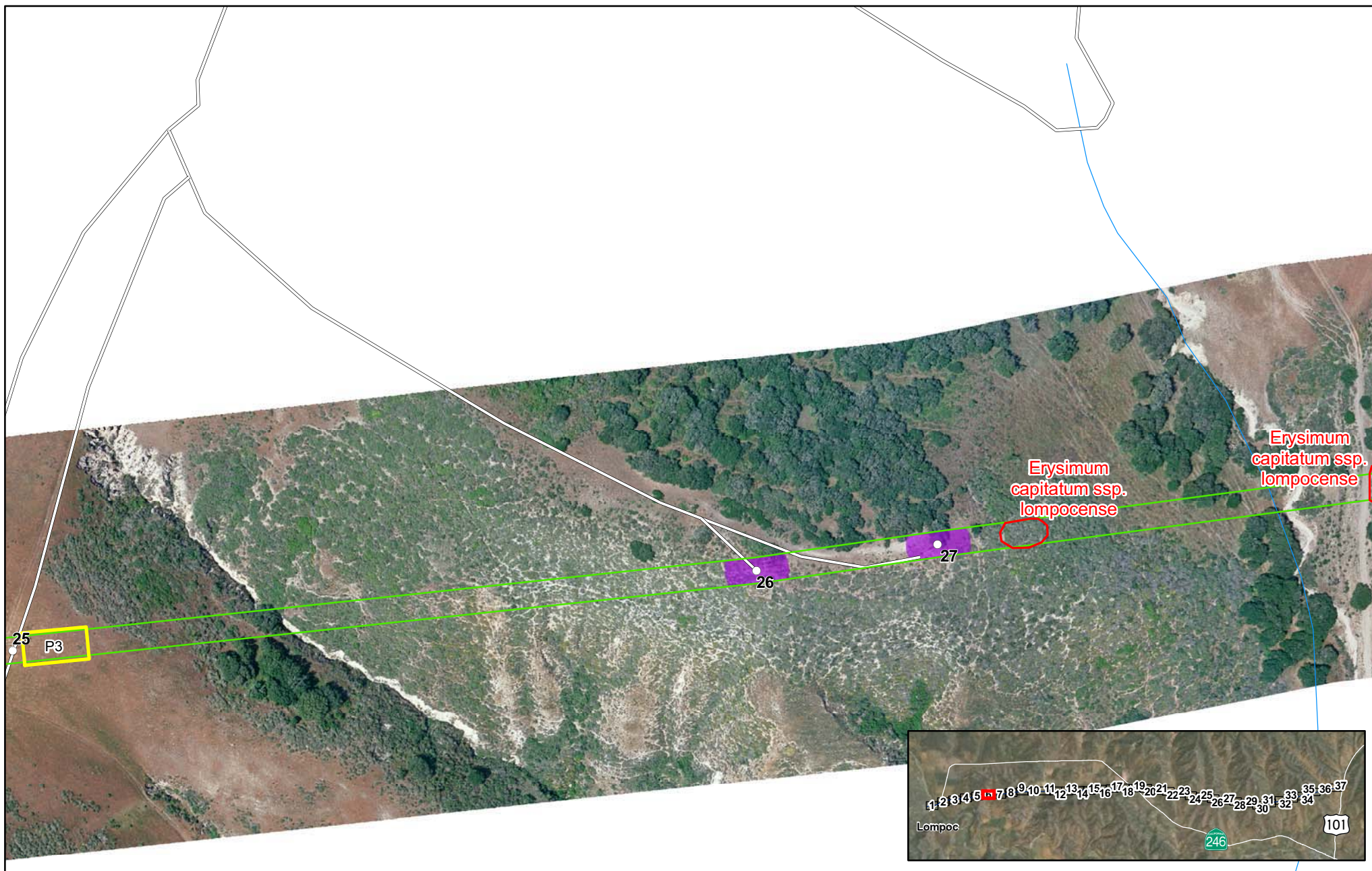


Rare Plant Survey Map 5
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

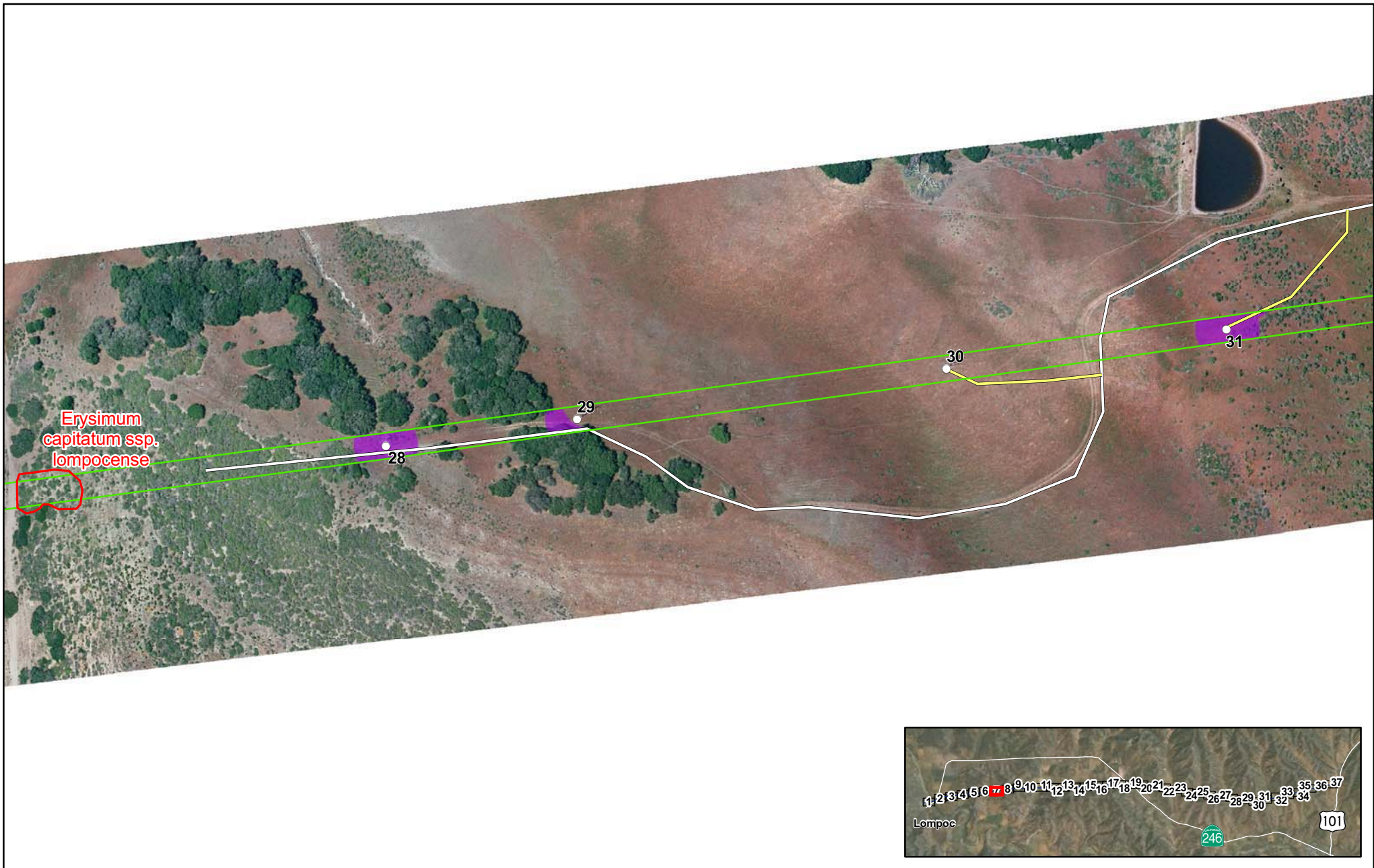


Rare Plant Survey Map 6
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
-

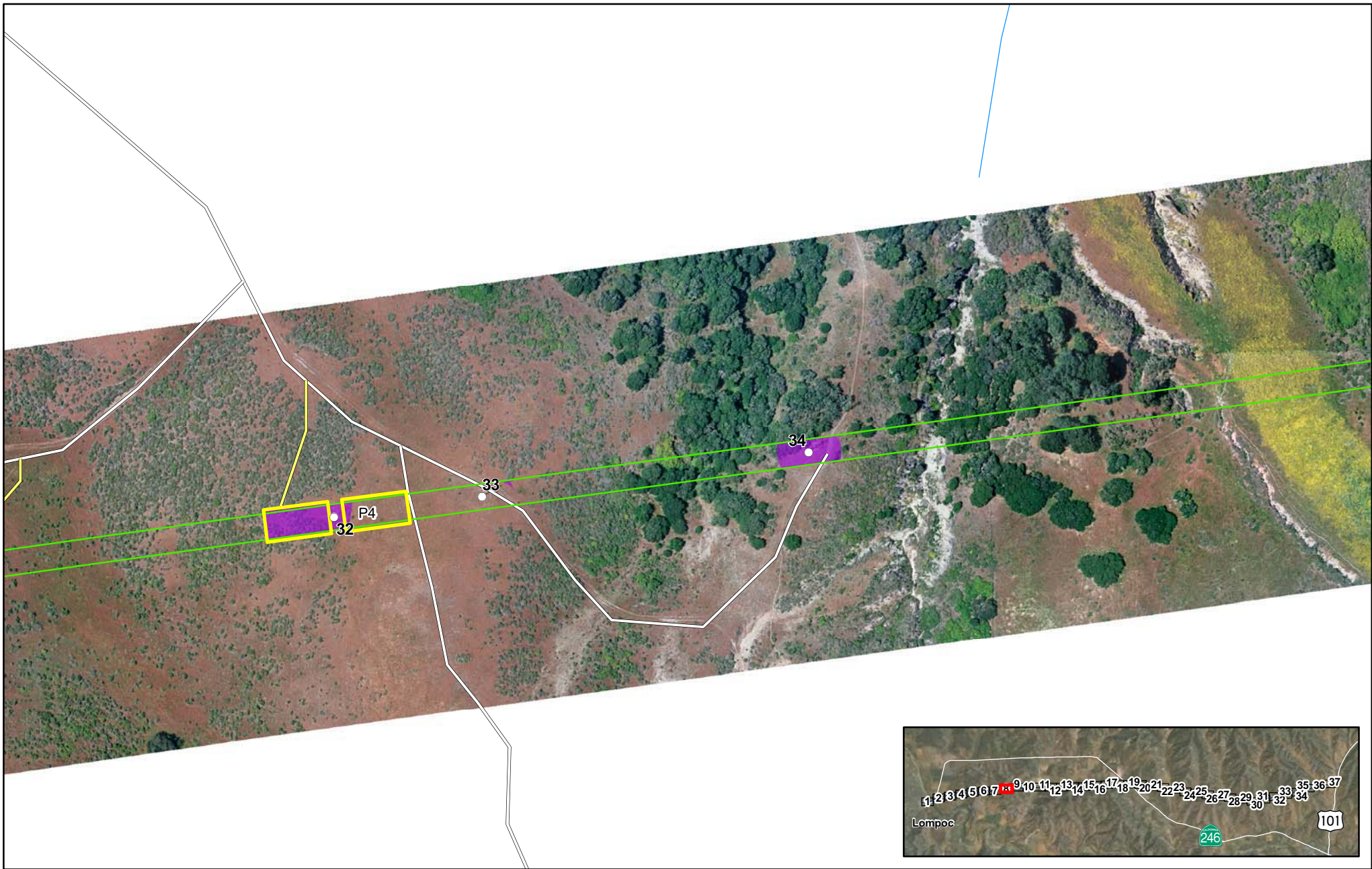


Rare Plant Survey Map 7
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

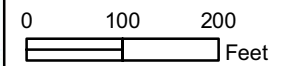
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲



Rare Plant Survey Map 8
Cabrillo - Santa Ynez
115kV Reconductoring Project



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲

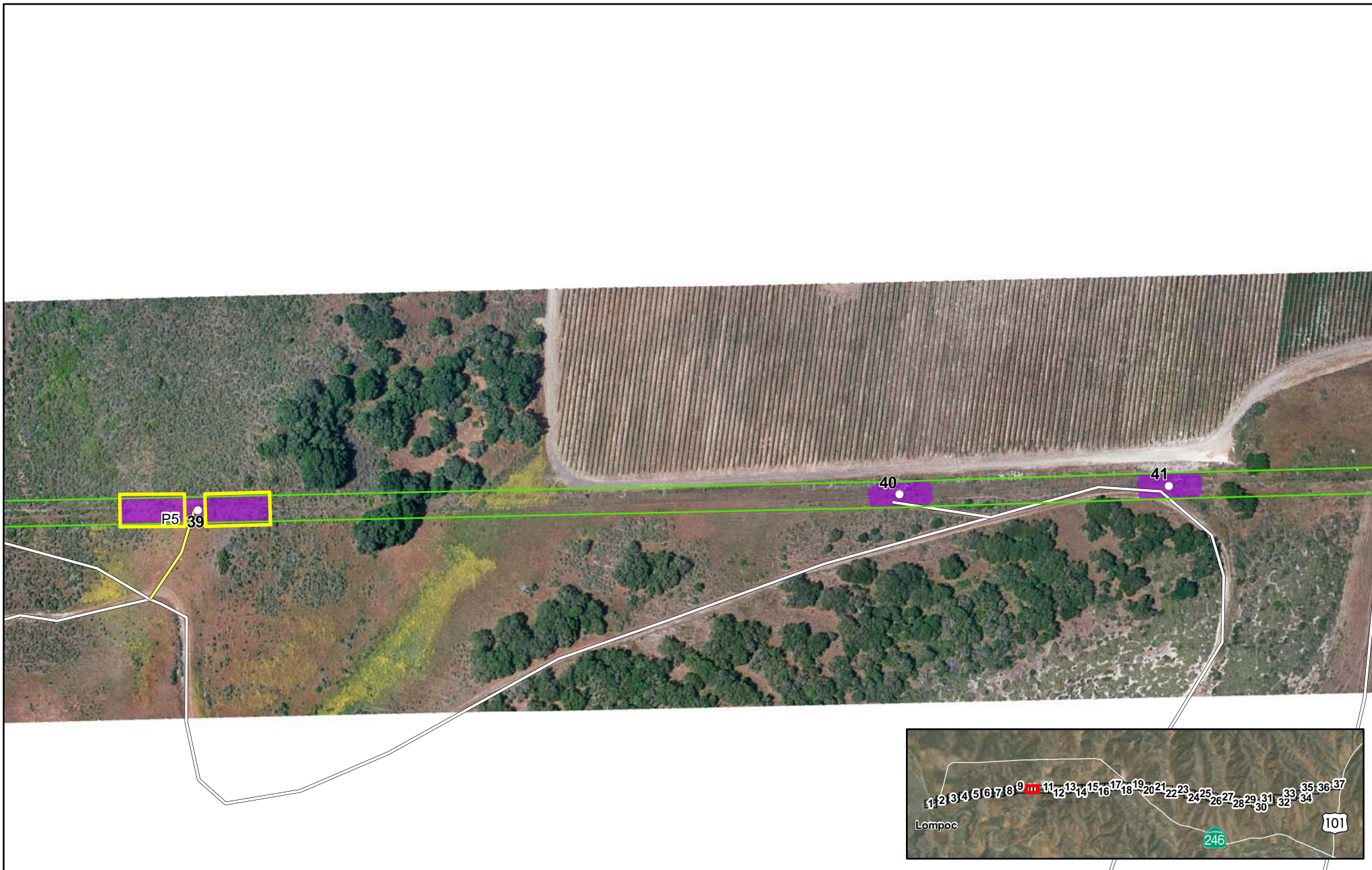


Rare Plant Survey Map 9
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲



Rare Plant Survey Map 10
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

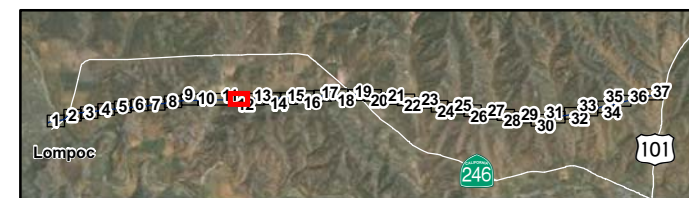


Rare Plant Survey Map 11
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

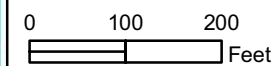
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

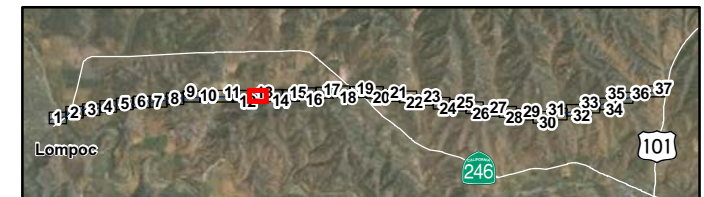
- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞



Rare Plant Survey Map 12
Cabrillo - Santa Ynez
115kV Reconductoring Project



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

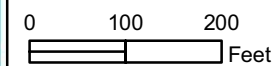
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

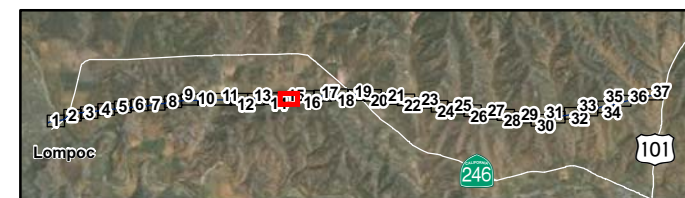
- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞



Rare Plant Survey Map 13
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

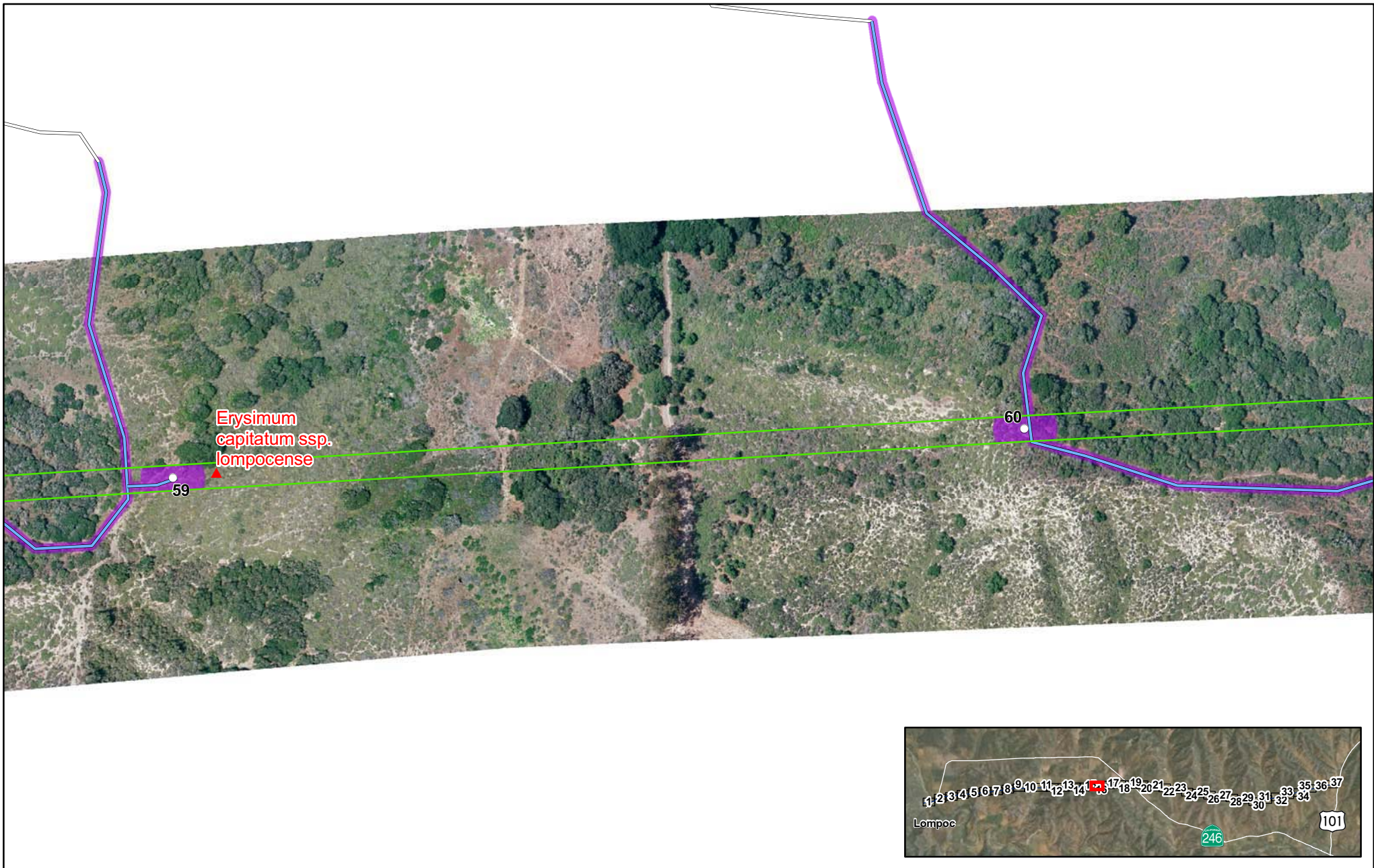


Rare Plant Survey Map 15
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

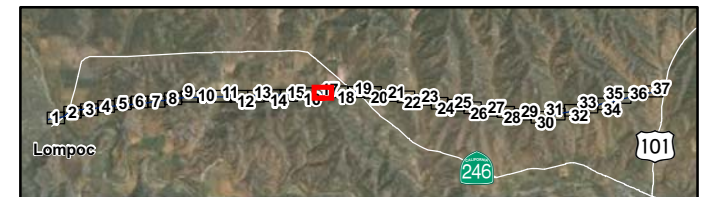


Rare Plant Survey Map 16
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

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| ○ Power Poles to be Replaced | H Laydown Area for Helicopter | County Roads |
| ● Power Poles Replaced by Helicopter | Orange Box Potential Lay Down Area | Existing Access Road |
| ● Existing Power Poles | Yellow Box Potential Pull and Tension Site | Existing Access Road Reestablished Through Grading and Vegetation Removal |
| ● Power Pole Sites with Expected Tree Management | Pink Box Potential Staging Area | Overland Access Route |
| Green Line Power Line ROW (40') | Blue Line Rivers/Creeks | |

Remaining Rare Plant Survey Areas: July 2009

Rare Plant Occurrences

Red Triangle

Rare Plant Survey Map 17
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

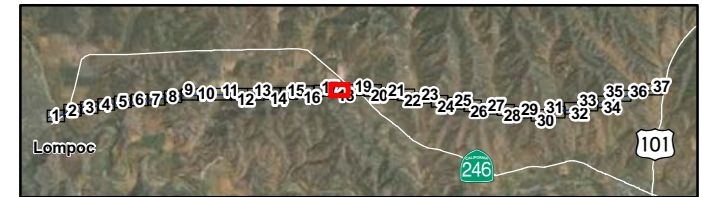
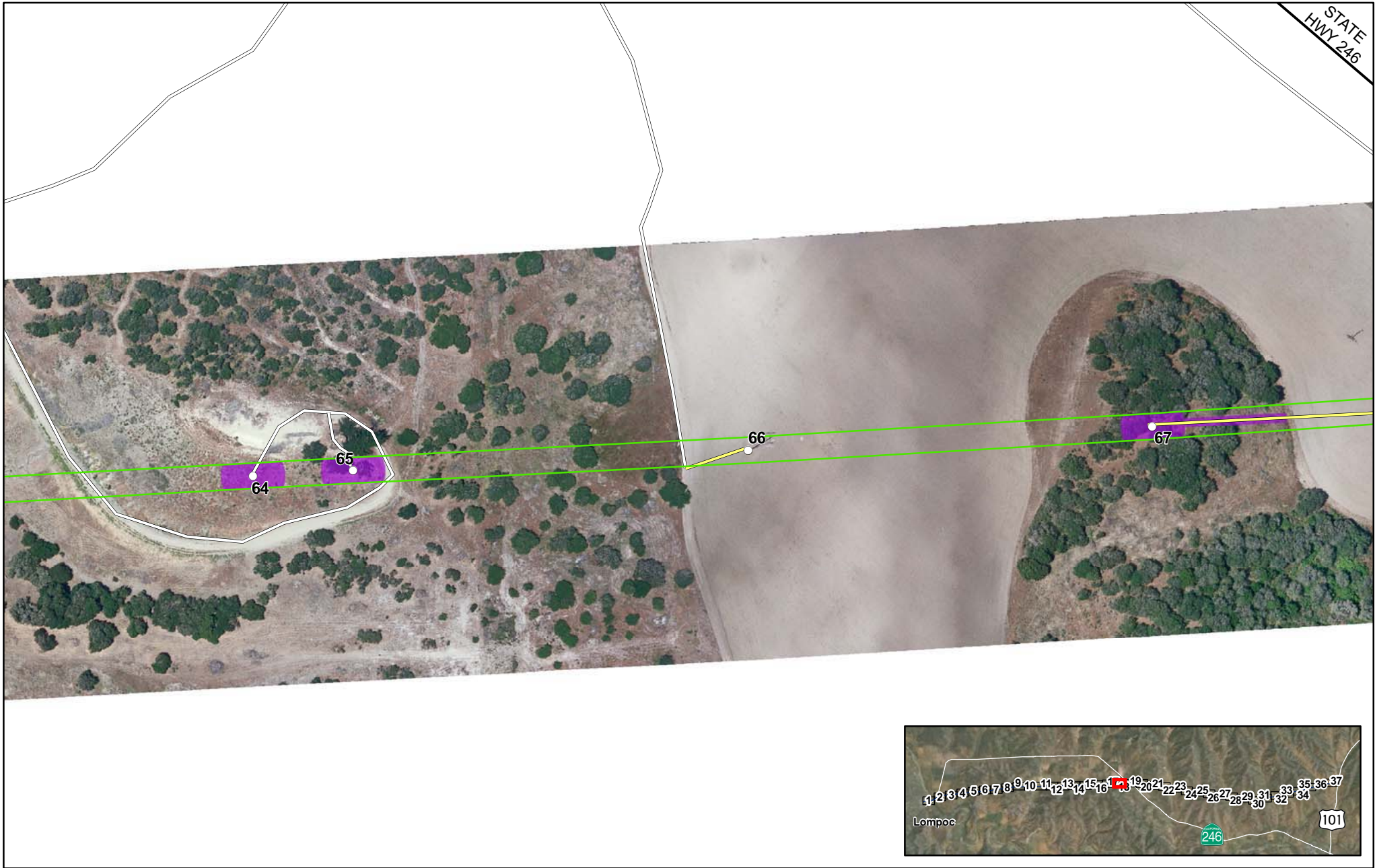


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STATE
HWY 246



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲

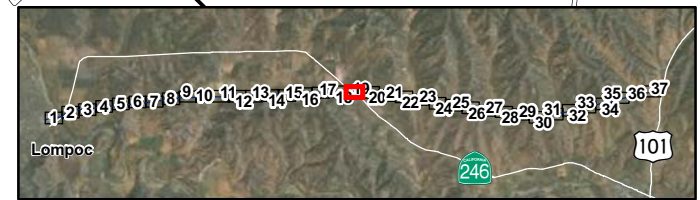


Rare Plant Survey Map 18
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



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| ○ Power Poles to be Replaced | H Laydown Area for Helicopter | County Roads |
| ● Power Poles Replaced by Helicopter | □ Potential Lay Down Area | Existing Access Road |
| ● Existing Power Poles | □ Potential Pull and Tension Site | Existing Access Road Reestablished Through Grading and Vegetation Removal |
| ● Power Pole Sites with Expected Tree Management | □ Potential Staging Area | Overland Access Route |
| □ Power Line ROW (40') | ~ Rivers/Creeks | |

Remaining Rare Plant Survey Areas: July 2009

Rare Plant Occurrences

▲



Rare Plant Survey Map 19
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

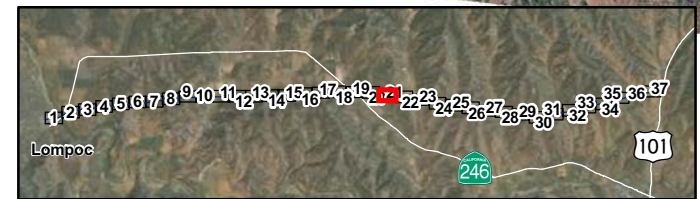


Rare Plant Survey Map 20
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲

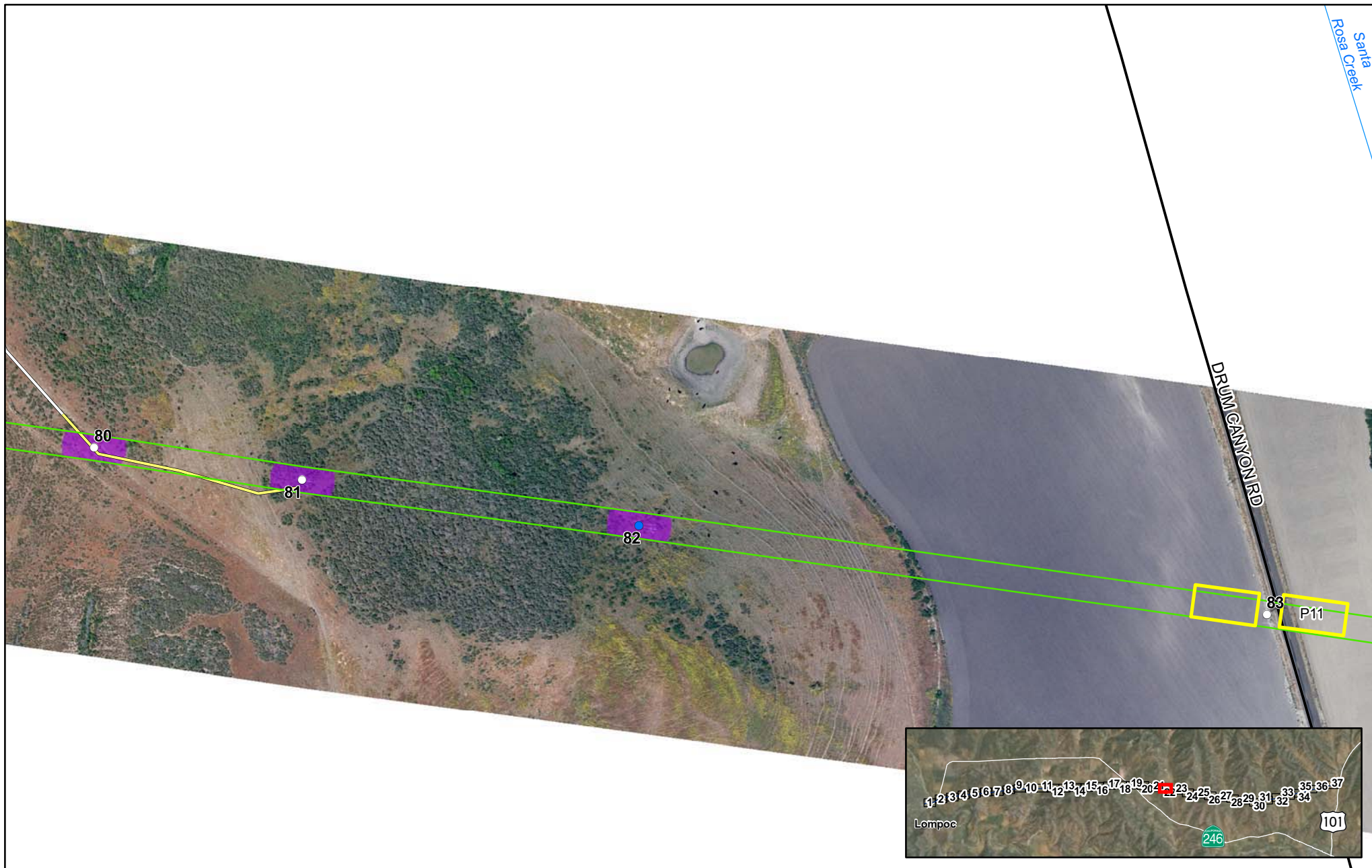


Rare Plant Survey Map 21
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲

Rare Plant Survey Map 22
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

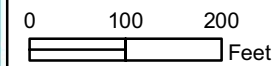
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

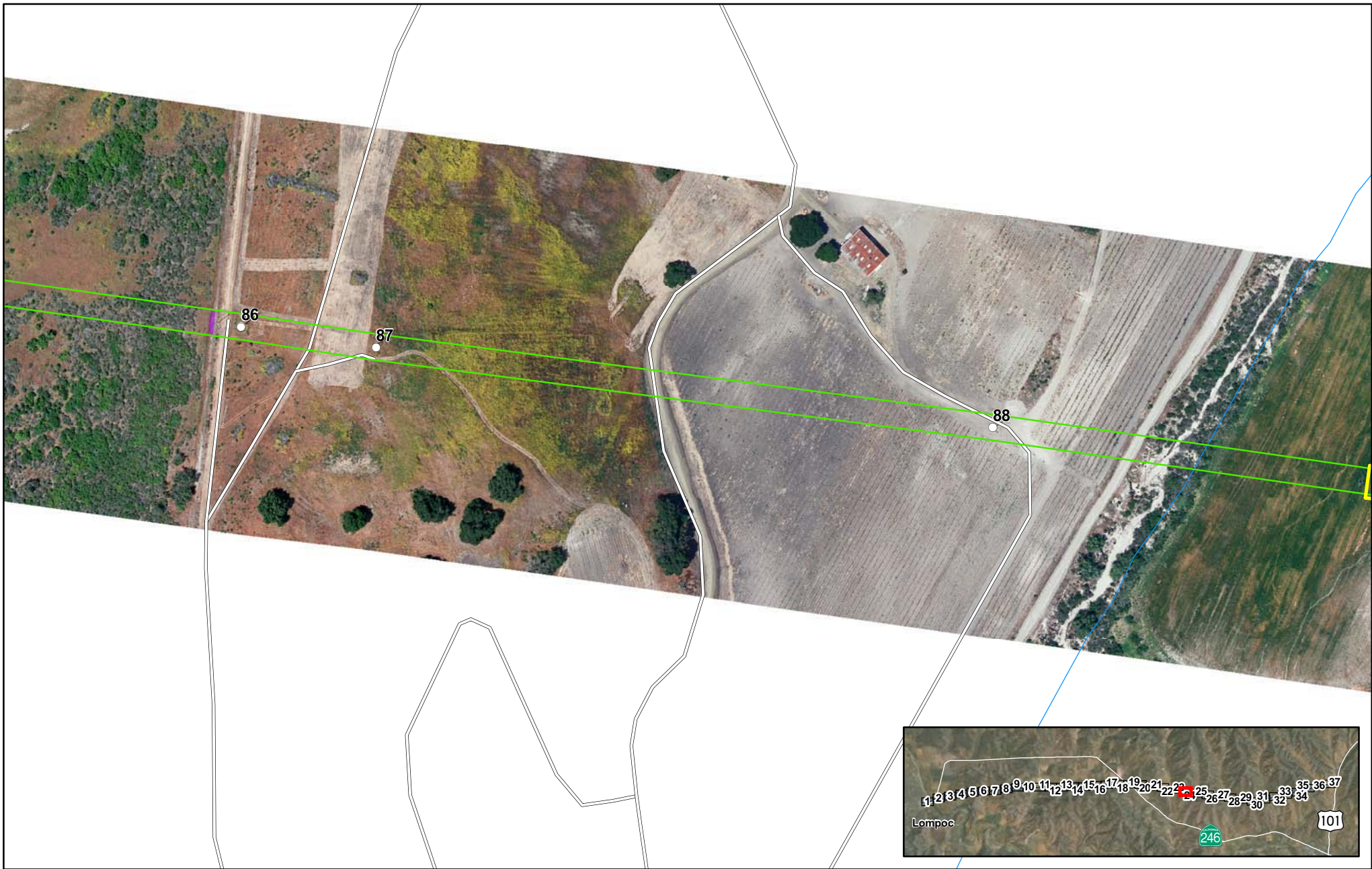
- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞



Rare Plant Survey Map 23
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**



Rare Plant Survey Map 24
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲

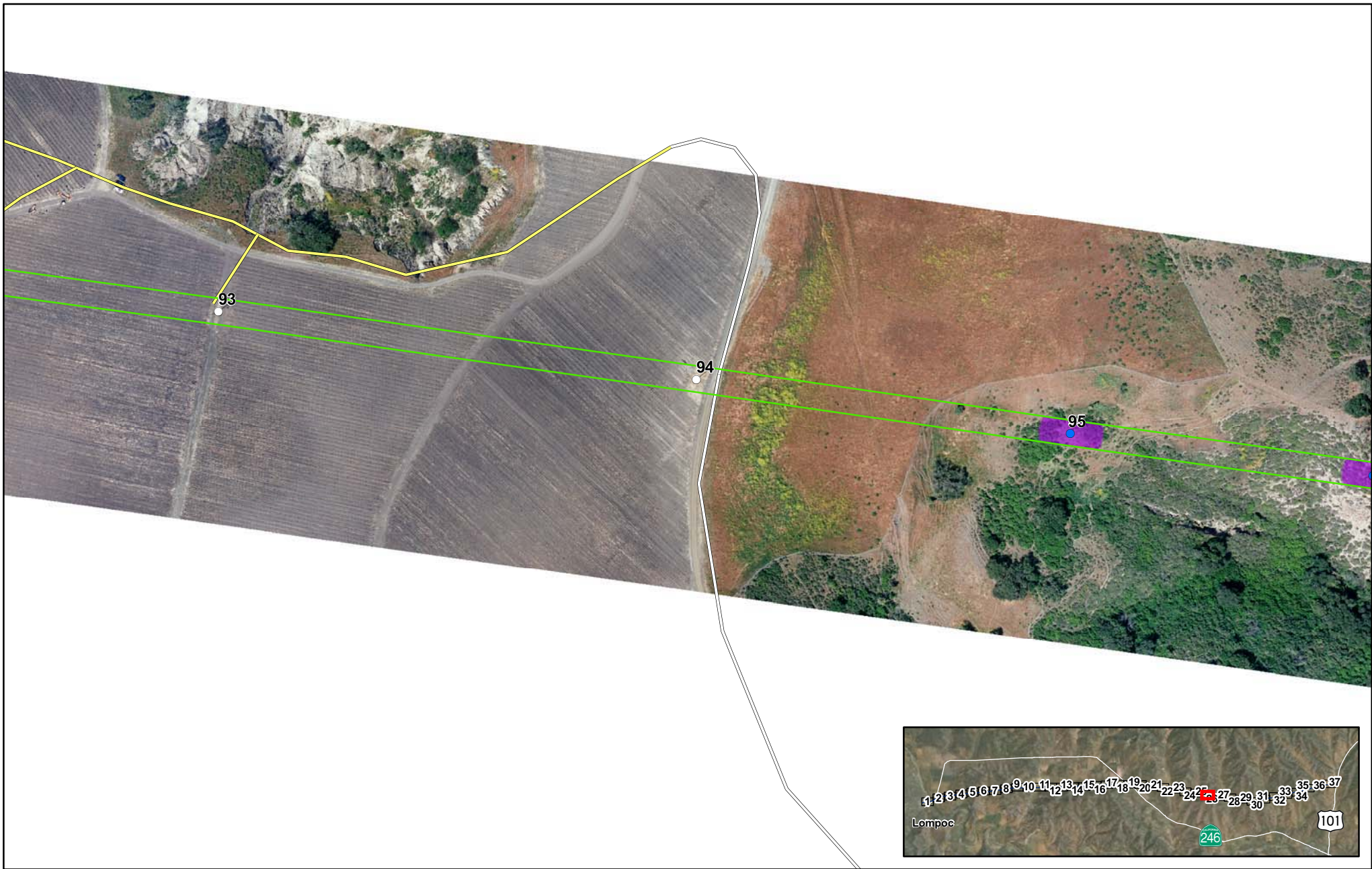


Rare Plant Survey Map 25
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞



Rare Plant Survey Map 26
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

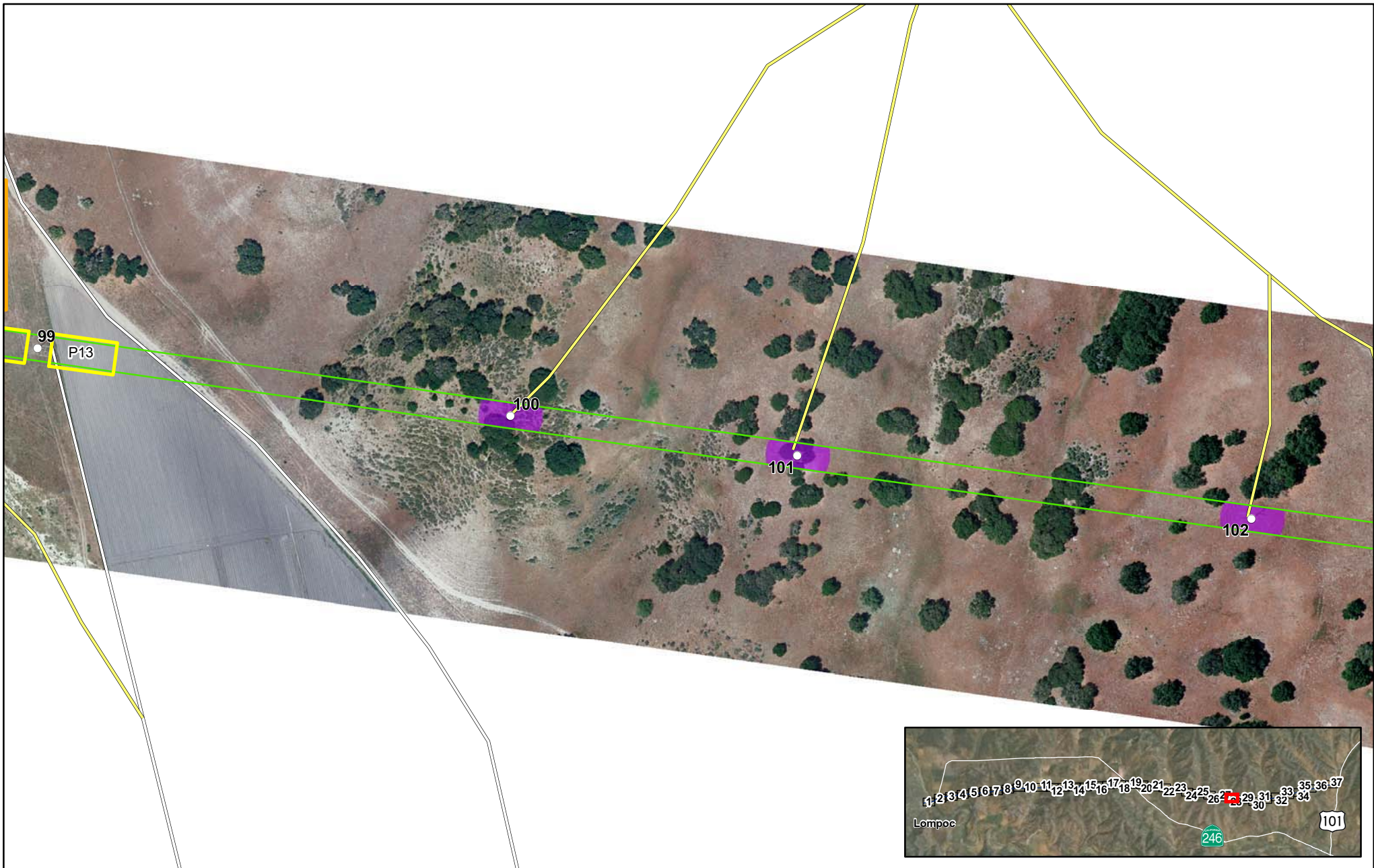


Rare Plant Survey Map 27
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

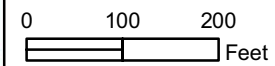
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

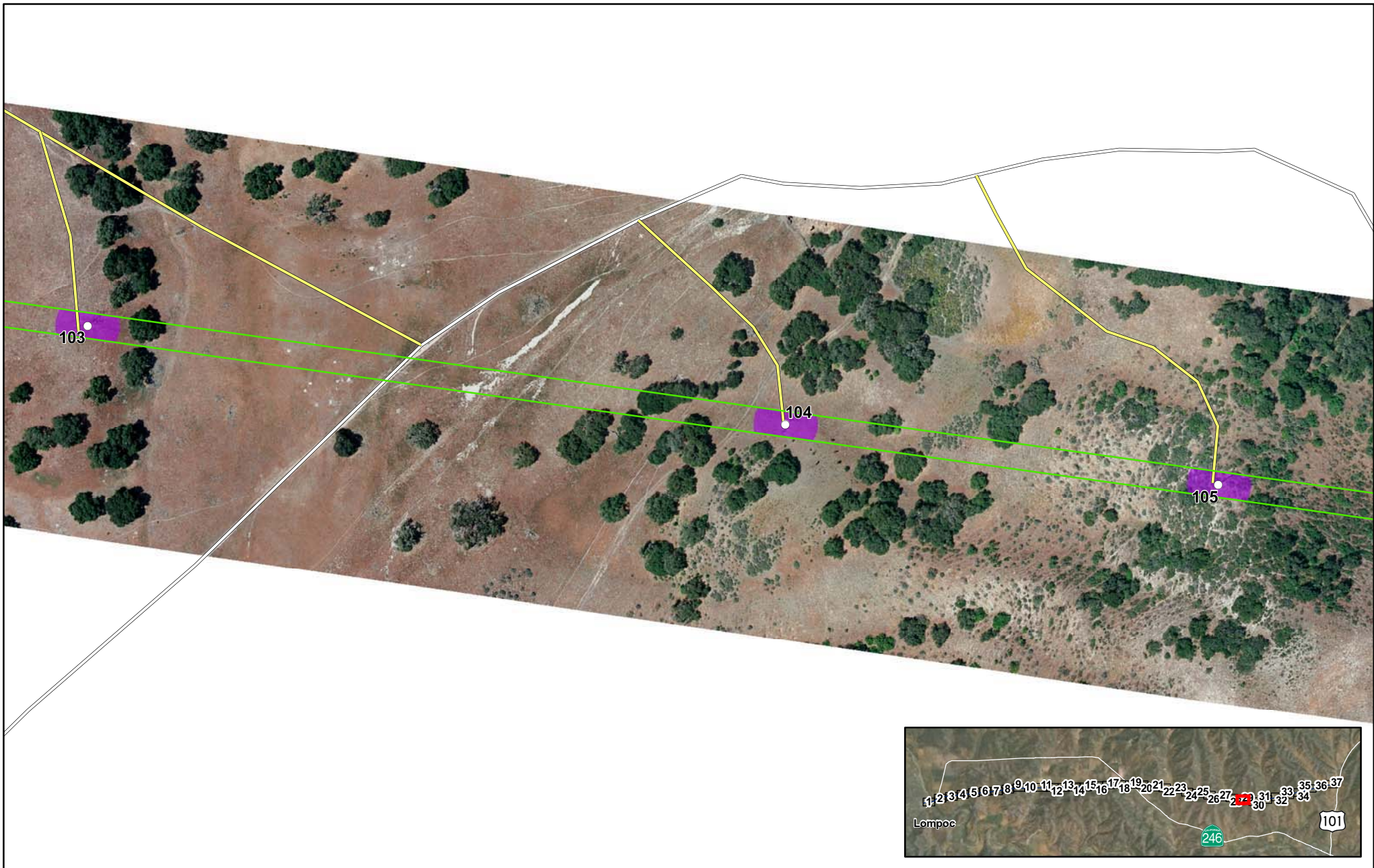
- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲



Rare Plant Survey Map 28
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

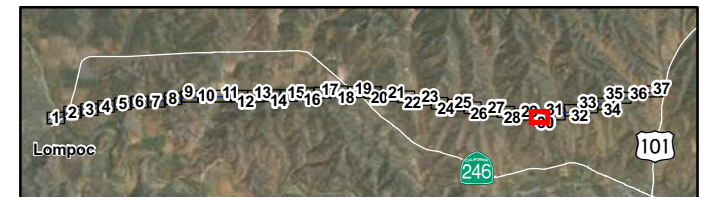
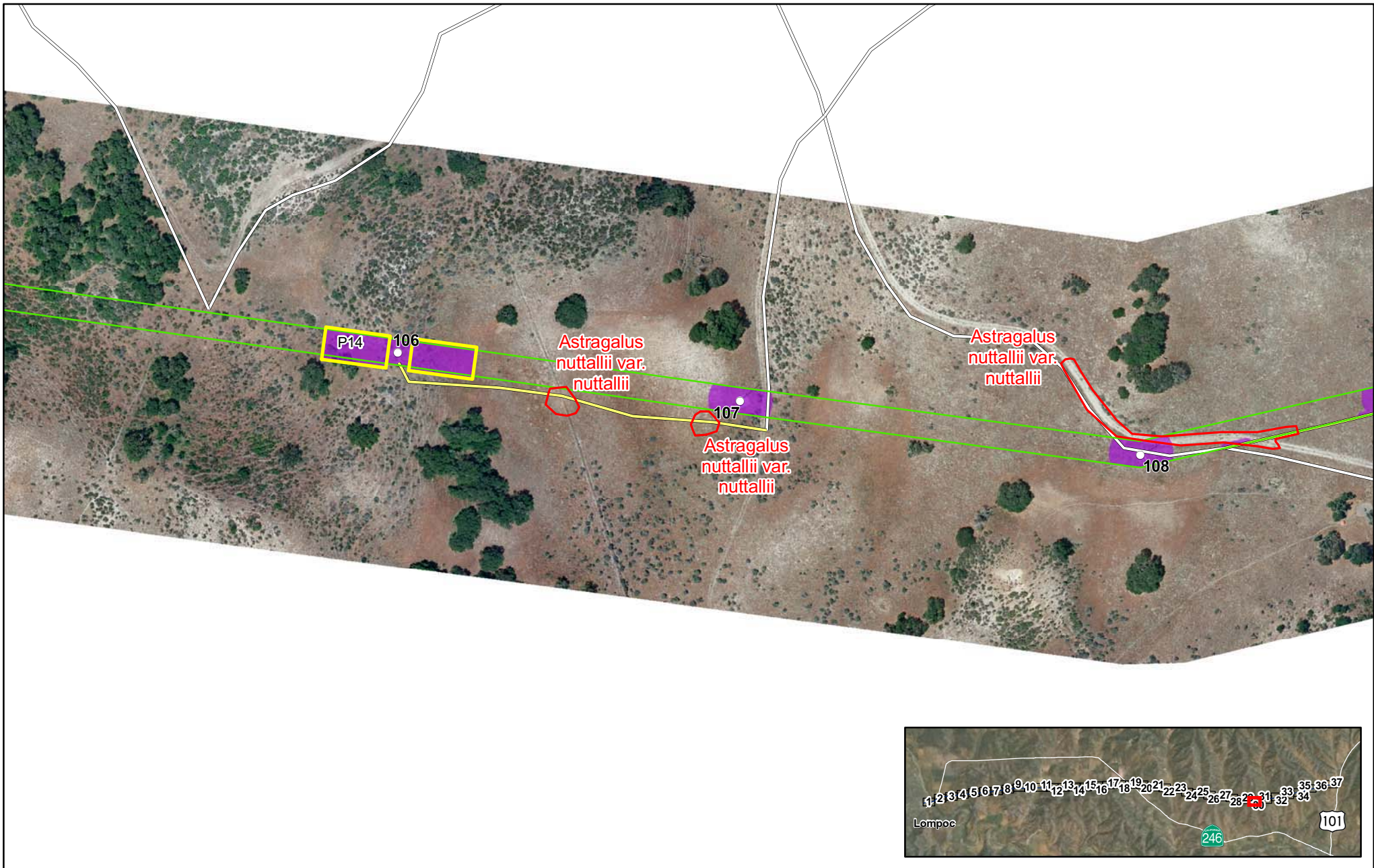


Rare Plant Survey Map 29
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet

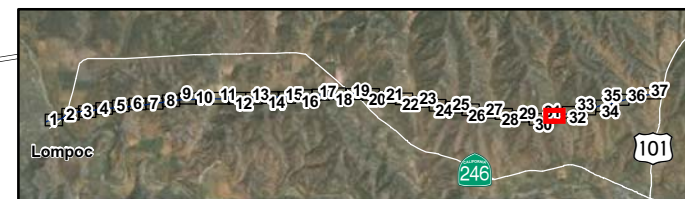


Scale:
1:2,400



○ Power Poles to be Replaced ● Power Poles Replaced by Helicopter ● Existing Power Poles ● Power Pole Sites with Expected Tree Management □ Power Line ROW (40')	H Laydown Area for Helicopter □ Potential Lay Down Area □ Potential Pull and Tension Site □ Potential Staging Area ~ Rivers/Creeks	~ County Roads ~ Existing Access Road ~ Existing Access Road Reestablished Through Grading and Vegetation Removal ~ Overland Access Route	■ Remaining Rare Plant Survey Areas: July 2009 Rare Plant Occurrences ▲	Rare Plant Survey Map 30 Cabrillo - Santa Ynez 115kV Reconductoring Project 0 100 200 Feet Scale: 1:2,400
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- Remaining Rare Plant
Survey Areas: July 2009
- Rare Plant Occurrences**



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞

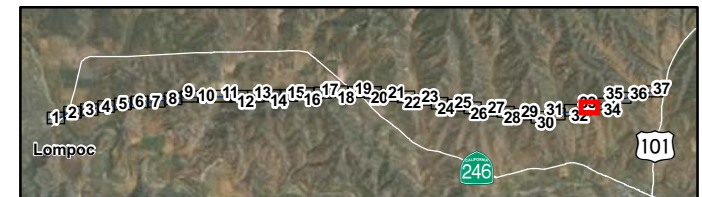


Rare Plant Survey Map 32
Cabrillo - Santa Ynez
115kV Reconductoring Project

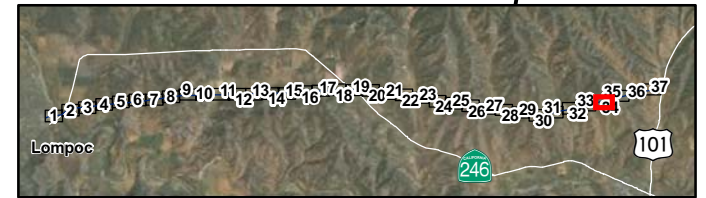
0 100 200
Feet



Scale:
1:2,400



○ Power Poles to be Replaced ● Power Poles Replaced by Helicopter ● Existing Power Poles ● Power Pole Sites with Expected Tree Management □ Power Line ROW (40')	H Laydown Area for Helicopter □ Potential Lay Down Area □ Potential Pull and Tension Site □ Potential Staging Area ~ Rivers/Creeks	~ County Roads ~ Existing Access Road ~ Existing Access Road Reestablished Through Grading and Vegetation Removal ~ Overland Access Route	■ Remaining Rare Plant Survey Areas: July 2009 Rare Plant Occurrences ▲ ☞	Rare Plant Survey Map 33 Cabrillo - Santa Ynez 115kV Reconductoring Project PG&E 0 100 200 Feet N Scale: 1:2,400
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- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ~



Rare Plant Survey Map 34
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet
 Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞



Rare Plant Survey Map 35
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲
- ☞



Rare Plant Survey Map 36
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



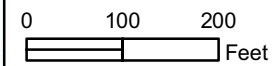
- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- ~ Rivers/Creeks

- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

- Remaining Rare Plant Survey Areas: July 2009
- Rare Plant Occurrences**
- ▲

Rare Plant Survey Map 37
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



Scale:
1:2,400

APPENDIX C-2:

RARE PLANT REPORT

SPECIAL-STATUS PLANT SURVEYS

for the

Pacific Gas and Electric
Cabrillo-Santa Ynez
115 kV Reconductoring Project

Santa Barbara County, California

Prepared by:

Garcia and Associates
1512 Franklin Street
Oakland, California
Contact: Eric Wrubel

Under direction from:

CH2M HILL
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155 Grand Avenue, Suite 1000
Oakland, California 94612

21 August 2009

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Appendices

A: Survey Area and Special-Status Plant Locations

B: Vegetation and Land Cover Types

C: Vascular Plants Observed in the Cabrillo-Santa Ynez Reconductoring Project Survey Area

D: California Natural Diversity Database Field Survey Forms

1.0 Introduction

1.1 Project Description

This report describes the protocol-level special-status plant surveys that were completed in 2009 for the Pacific Gas & Electric Company's (PG&E) Cabrillo-Santa Ynez Reconductoring Project in Santa Barbara County, California. The project includes approximately 14.6 miles of single circuit 115-kilovolt (kV) line. This report has been prepared at the request of PG&E to document the special-status plant surveys conducted for the California Environmental Quality Act review of the proposed development project.

PG&E proposes to reconductor the existing Cabrillo-Santa Ynez 115kV power line to improve line reliability for the area. The project is located in Santa Barbara County between the cities of Lompoc and Buellton, California. The right-of-way is oriented east-west roughly paralleling State Route 246 between Highway 1 in Lompoc and Highway 101, north of Buellton (Figure 1). This line connects Cabrillo Substation in Lompoc to Santa Ynez Switching Station, just west of Highway 101. This project is proposed because the existing conductors have corroded and deteriorated, leaving the line brittle and subject to failure. Overall, the project includes three components: 1) installation of 128 new light-duty steel poles with a surface treatment designed to render the appearance of natural weathering; 2) reconductoring of the single circuit 115 kV power line; and, 3) the removal of 128 wood poles.

The survey area covered approximately 71 acres including the 40-foot wide right-of-way (ROW) beneath the approximately 14.6 mile power line, and associated impact areas. Impact areas are defined here as areas in which project activity is likely to cause disturbance to natural vegetation. Planned impact areas are shown in Appendix A, Maps 1-37. They include a 40 by 100-foot area around each of the 128 poles to be replaced (50 feet on either side of each pole within the 40-foot wide ROW); 17 pull sites (areas used by the construction crews to pull and tension sock lines and/or conductors between towers); 1 helicopter staging area; and, a 12-foot buffer around access roads that require clearing and grading.

1.2 Biological Setting

The Cabrillo-Santa Ynez power line is located in northwest Santa Barbara County in the southern portion of the Central West bioregion of the California Floristic Province (Hickman 1993). The climate is Mediterranean, with a cool, wet rainy season in the winter and prolonged summer drought. The regional climate is maritime-influenced, especially towards the west. Summer fog and high winds are common. The power line originates on the western floodplain of the Santa-Ynez river in Lompoc, extends eastward through the Santa Rita Hills, and terminates in the Purissima Hills. Elevations in the survey area range from approximately 100 feet at the western end to 920 feet towards the eastern end.

Soils in the survey area alternate between sands of the Orcutt formation and clays of the Monterey formation (Dibblee, 1950). Orcutt sand is widely exposed in the hilly portions of the region, at times in lenses or bands interspersed with clay soils and at other times covering large expanses. Regional

vegetation is strongly influenced by soil conditions, and many local species display unique adaptations to sandy soils (Smith 1998).

2.0 Methods

2.1 Pre-field Preparations

Preparation for the protocol-level surveys included compiling a list of special-status plants with potential to occur within the survey area. The list was assembled using community and habitat information from the reconnaissance surveys and information from the California Native Plant Society's [CNPS] *Inventory of Rare and Endangered Plants of California* (CNPS 2009) and the California Natural Diversity Database [CNDDDB] (California Department of Fish and Game [CDFG] 2009a), as well as other sources listed below. A plant was considered to be of special status if it met one or more of the following criteria:

- Federally or State-listed, or proposed for listing, as rare, threatened or endangered (CDFG 2009b);
- Special Plant as defined by the California Natural Diversity Database (CDFG 2009c); or
- Listed by the California Native Plant Society in the online version of its *Inventory of Rare and Endangered Plants of California* (CNPS 2009).

A list of special-status plants with the potential to occur in the survey area was compiled by conducting a 15-quadrangle search of the CNDDDB RareFind3 database (CDFG 2009a). The survey area is located within the Lompoc, Los Alamos, and Zaca Creek U.S. Geological Survey (USGS) 7.5' quadrangles. The USGS 7.5' quads searched include: Lompoc, Los Alamos, Zaca Creek, Casmalia, Orcutt, Sisquoc, Foxen Canyon, Zaca Lake, Los Olivos, Santa Ynez, Solvang, Santa Rosa Hill, Lompoc Hills, Tranquillon Mountain, and Surf. The CNPS (2009) Inventory was then queried to produce a similar list for Santa Barbara County. The specific habitats included in the query were chaparral, cismontane woodland, coastal scrub, meadows and seeps, valley and foothill grassland, riparian scrub and riparian woodland at elevations between 0 and 2,000 feet. These habitats were selected based on the similarity of their constituent species to those occurring in the survey area. A total of 106 special-status plant species were identified in these queries. This list was revised and shortened to 41 taxa after considering the known distributions and habitat requirements of all taxa on the preliminary list. Table 1 provides a summary of information on the 41 special-status plants with potential to occur within the survey area.

In preparing to search for these taxa in the field, information on flowering time, conservation status, habitat preferences, geographic distribution, elevation, and known locations in the vicinity of the survey area were reviewed. This information was compiled from the sources discussed above, and other sources, including *The Jepson Manual* (Hickman 1993), the Jepson Online Interchange (2009), the CalFlora database (2009), and *A Flora of the Santa Barbara Region* (Smith 1998). Drawings, photographs, and written descriptions of all potentially occurring special-status plant species were reviewed prior to and during the survey period. Living specimens of several taxa were observed

during spring and summer visits in 2009 to the Tilden Botanical Garden, Berkeley, California.

Table 1. Special-status plants with potential to occur within the Cabrillo-Santa Ynez reconductoring Project Survey Area

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur in the Survey Area ⁴
	Federal	State	CNPS			
<i>Agrostis hooveri</i> Hoover's bent grass	-	-	1B.2	Apr-Jul	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Valley and foothill grassland/usually sandy; 20-2000 ft.	Moderate: There are 2 recorded occurrences of this species within 5 miles of the survey area. Suitable habitat is present.
<i>Ancistrocarphus keilii</i> Santa Ynez groundstar	-	-	1B.1	Mar-Apr	Chaparral, Cismontane woodland/sandy; 130-425 ft.	Moderate: A recorded occurrence of this species is within 5 miles of the survey area. This species is known only from the Santa Ynez Valley. Suitable habitat is present.
<i>Arctostaphylos purissima</i> La Purisima manzanita	-	-	1B.1	Nov-May	Chaparral (sandy), Coastal scrub; 200-1280 ft.	Present: A recorded occurrence of this species is found in the immediate vicinity of the survey area near the intersection of Campbell Road and Hwy 246. Species was observed in the survey area.
<i>Arctostaphylos rudis</i> sand mesa manzanita	-	-	1B.2	Nov-Feb	Chaparral (maritime), Coastal scrub/sandy; 80-1050 ft.	Moderate: There are several recorded occurrences of this species within 5 miles of the survey area. Suitable habitat is present.
<i>Arctostaphylos tomentosa</i> ssp. <i>eastwoodiana</i> Eastwood's brittle-leaf manzanita	-	-	1B.1	Mar	Chaparral (maritime, sandy); 300-1200 ft.	Moderate: Nearest occurrence is less than 5 miles from the survey area on the southwest side of Lompoc. Suitable habitat is present.
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk-vetch	-	-	1B.2	Mar-Jun	Coastal scrub(clay); 70-300 ft.	High: A recorded occurrence of this variety occurs in the immediate vicinity of the survey area between Drum Canyon Road and Hwy 101. Suitable habitat is present.
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's saltscale	-	-	1B.2	Apr-Oct	Coastal bluff scrub, Coastal scrub/alkaline; 30-650 ft.	Moderate: There is a recorded occurrence of this variety in the Zaca Lake quadrangle, which is located adjacent to the survey area. Limited suitable habitat is present

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur in the Survey Area ⁴
	Federal	State	CNPS			
<i>California macrophylla</i> round-leaved filaree	-	-	1B.1	Mar-May	Cismontane woodland, Valley and foothill grassland/clay; 50-3900 ft.	Moderate: There is a recorded occurrence of this species in the Los Olivos quadrangle, which is located adjacent to the survey area. Suitable habitat is present.
<i>Calochortus weedii</i> var. <i>vestus</i> late-flowered mariposa lily	-	-	1B.2	Jun-Aug	Chaparral, Cismontane woodland, Riparian woodland/often serpentinite; 900-6250 ft.	Moderate: There are recorded occurrences of this variety in the Santa Rosa Hills and Santa Ynez quadrangles, which are located adjacent to the survey area. Suitable habitat is present.
<i>Calycadenia villosa</i> dwarf calycadenia	-	-	1B.1	May-Oct	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland/rocky, fine soils; 790-4430 ft.	Moderate: There is a recorded occurrence of this species in the Los Alamos quadrangle, which contains the survey area. Suitable habitat is present.
<i>Caulanthus amplexicaulis</i> var. <i>barbarae</i> Santa Barbara jewel-flower	-	-	1B.1	May-Jul	Closed-cone coniferous forest, Chaparral, Cismontane woodland/serpentinite; 1540-400 ft.	Low: Mostly restricted to serpentine soils in the San Rafael Mountains. No reported occurrences in the vicinity of the survey area.
<i>Ceanothus cuneatus</i> var. <i>fascicularis</i> Lompoc ceanothus	-	-	4.2	Feb-April	Chaparral/sandy; 16 - 1312 ft.	Present: Known occurrences in the project vicinity, on sandy mesas and hills around Lompoc, and northeast of Buellton. Observed in the survey area during 2009 surveys.
<i>Chorizanthe blakleyi</i> Blakley's spineflower	-	-	1B.3	Apr-Jun	Chaparral, Pinyon and juniper woodland; 1968-5248 ft.	Low: Known records of this species are restricted to the San Rafael, Sierra Madre, and Santa Ynez Mountains. Limited chaparral habitat is present within the survey area.
<i>Chorizanthe rectispina</i> straight-awned spineflower	-	-	1B.3	Apr-Jul	Chaparral, Cismontane woodland, Coastal scrub; 280-3400 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the survey area just west of Vandenberg Village. Suitable habitat is present.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur in the Survey Area ⁴
	Federal	State	CNPS			
<i>Cirsium loncholepis</i> La Graciosa thistle	FE	ST	1B.1	May-Aug	Cismontane woodland, Coastal dunes, Coastal scrub, Marshes and swamps(brackish), Valley and foothill grassland/mesic, sandy; 13-720 ft.	Low: There is a recorded occurrence of this species in the Surf quadrangle, which is located, adjacent to the survey area. Historically known from areas near the coast in moist sandy soils associated with dune swales, margins of dune lakes and marshes, seeps, intermittent streams, and river margins and coastal wetlands in northern Santa Barbara County. Limited suitable habitat is present.
<i>Cladium californicum</i> California sawgrass	-	-	2.2	Jun-Sep	Meadows and seeps, Marshes and swamps/alkaline or freshwater; 200-2000 ft.	Moderate: There is a recorded occurrence of this species in the Orcutt quadrangle, which is located adjacent to the survey area. Suitable habitat is present.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> seaside bird's-beak	-	SE	1B.1	Apr-Oct	Closed-cone coniferous forest, Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub/sandy, often disturbed sites; 0-1400 ft.	Moderate: There are several recorded occurrences of this subspecies within 5 miles of the survey area. Suitable habitat is present.
<i>Deinandra (Hemizonia) increscens</i> ssp. <i>foliosa</i> leafy tarplant	-	-	1B.2	Jun-Sep	Valley and foothill grassland/sandy; 980-1640 ft.	Low: There are no recorded occurrences of this subspecies within the vicinity of the survey area or surrounding quadrangles. The plant is not known to occur south of the Guadalupe quadrangle.
<i>Deinandra (Hemizonia) increscens</i> ssp. <i>villosa</i> Gaviota tarplant	FE	SE	1B.1	May-Oct	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; 115-1400 ft.	Low: There are no recorded occurrences of this subspecies within the vicinity of the survey area or surrounding quadrangles. Known primarily from coastal plains in Santa Barbara County.
<i>Delphinium parryi</i> ssp. <i>blochmaniae</i> dune larkspur	-	-	1B.2	Apr-May	Chaparral, Coastal dunes; 0-650 ft.	High: There is a recorded occurrence of this subspecies in the immediate vicinity of the survey area near the intersection of Campbell Road and Hwy 246. Suitable habitat is present.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur in the Survey Area ⁴
	Federal	State	CNPS			
<i>Delphinium umbraculorum</i> umbrella larkspur	-	-	1B.3	Apr-Jun	Cismontane woodland; 1300-5250 ft.	Moderate: There is a recorded occurrence of this species in the Los Olivos quadrangle, which is located, adjacent to the survey area. Suitable habitat is present.
<i>Eriodictyon capitatum</i> Lompoc yerba santa	FE	SR	1B.2	May-Aug	Closed-cone coniferous forest, Chaparral (maritime)/sandy; 130-2950 ft.	Low: Known records of this species are restricted to the Santa Ynez Mountains and Burton Mesa. Limited, marginal habitat is present within the survey area.
<i>Erysimum capitatum</i> var. <i>lompocense</i> San Luis Obispo wallflower	-	-	4.2	Feb-May	Chaparral, Coastal scrub/sandy; 200-1650 ft.	Present: The Consortium of California Herbaria lists several collections from the Lompoc quadrangle, in which the survey area is located. The species was observed in the survey area in 2009.
<i>Fritillaria ojaiensis</i> Ojai fritillary	-	-	1B.2	Feb-May	Broadleaved upland forest (mesic), Chaparral, Lower montane coniferous forest/rocky; 980-3270 ft.	Low: Known records of this species are restricted to the San Rafael, Sierra Madre, and Santa Ynez Mountains. Limited, marginal habitat is present within the survey area.
<i>Hordeum intercedens</i> vernal barley	-	-	3.2	Mar-Jun	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools; 15-3280 ft.	Low: There are no recorded occurrences of this species within the survey area or surrounding quadrangles. Habitat conditions are marginal.
<i>Horkelia cuneata</i> ssp. <i>puberula</i> mesa horkelia	-	-	1B.1	Feb-Jul(Sep)	Chaparral (maritime), Cismontane woodland, Coastal scrub/sandy or gravelly; 230-2650 ft.	Present: There are several recorded occurrences of this subspecies within 5 miles of the survey area. The species was observed in the survey area in 2009.
<i>Horkelia cuneata</i> ssp. <i>sericea</i> Kellogg's horkelia	-	-	1B.1	Apr-Sep	Closed-cone coniferous forest, Chaparral (maritime), Coastal dunes, Coastal scrub/sandy or gravelly, openings; 33-650 ft.	Moderate: There is an extirpated occurrence of this subspecies in the Lompoc quadrangle. Suitable habitat is present.
<i>Layia heterotricha</i> pale-yellow layia	-	-	1B.1	Mar-Jun	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland/alkaline or clay; 980-5600 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the survey area near Mission Village. Suitable habitat is present.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur in the Survey Area ⁴
	Federal	State	CNPS			
<i>Leptosiphon grandiflorus</i> large-flowered leptosiphon	-	-	4.2	Apr-Aug	Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland/usually sandy; 16-400 ft.	Low: The Consortium of California Herbaria lists a single voucher collection from Santa Barbara County; CNPS states this species has been extirpated from the county. Suitable habitat is present.
<i>Lonicera subspicata</i> var. <i>subspicata</i> Santa Barbara honeysuckle	-	-	1B.2	May-Aug(Dec-Feb)	Chaparral, Cismontane woodland, Coastal scrub; 115-3280 ft.	Moderate: A recorded occurrence of this species is located within 5 miles of the survey area near La Purisima State Park. Suitable habitat is present.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> Carmel Valley malacothrix	-	-	1B.2	(Mar)Jun-Dec	Chaparral(rocky), Coastal scrub; 82-3398 ft.	Low: Only known records in Santa Barbara County are from Little Pine Mountain in the San Rafael Mountains.
<i>Micropus amphibolus</i> Mt. Diablo cottonweed	-	-	3.2	Mar-May	Broadleaf upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland/rocky; 148-2706 ft.	Moderate: There is a recorded occurrence of this species in the Zaca Creek quadrangle, which includes a portion of the survey area. Suitable habitat is present.
<i>Mimulus fremontii</i> var. <i>vandenbergensis</i> Vandenberg monkeyflower	-	-	1B.1	Apr-Jun	Chaparral, Cismontane woodland, Coastal dunes central dune scrub/sandy; often disturbed areas; 246-394 ft.	Moderate: There are several recorded occurrences of this variety within 5 miles of the survey area. All known occurrences are on or within close proximity to the Vandenberg Air Force Base. Suitable habitat is present.
<i>Monardella undulata</i> Curlyleaf monardella	-	-	4.2	May-Sep	Closed-cone coniferous forest, Chaparral, Coastal dunes, Coastal prairie, Coastal scrub, Lower montane coniferous forest(ponderosa pine sandhills)/sandy; 0-100 ft.	Present: The Consortium of California Herbaria lists several collections from the Lompoc quadrangle, in which the survey area is located. The species was observed in the survey area in 2009.
<i>Mucronea californica</i> California spineflower	-	-	4.2	Mar-Jul(Aug)	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland/sandy; 0-4600 ft.	Present: The Consortium of California Herbaria lists several collections from the Lompoc quadrangle, in which the survey area is located. The species was observed in the survey area in 2009.
<i>Pseudognaphalium leucocephalum</i> white rabbit-tobacco	-	-	2.2	(Jul)Aug-Nov(Dec)	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/sandy, gravelly; 0-6900 ft.	Moderate: There is a recorded occurrence of this species in the Surf quadrangle, which is located adjacent to the survey area. Suitable habitat is present.

Common name ¹ Scientific name	Listing Status ²			Flowering Period ³	Habitat Preferences ³	Potential to Occur in the Survey Area ⁴
	Federal	State	CNPS			
<i>Quercus dumosa</i> Nuttall's scrub oak	-	-	1B.1	Feb-Apr	Closed-cone coniferous forest, Chaparral, Coastal scrub/sandy, clay loam; 50-1300 ft.	Low: This species seldom occurs north of southern Santa Barbara County. No reported occurrences in the vicinity of the survey area.
<i>Quercus palmeri</i> desert scrub oak	-	-	- Locally rare (Wilken 2007)	Mar-May	Chaparral	Present: The Consortium of California Herbaria lists several collections from the Zaca Creek quadrangle, in which the survey area is located. The species was observed in the survey area in 2009.
<i>Quercus parvula</i> var. <i>parvula</i> Santa Cruz Island oak	-	-	4.2	(Mar)Apr- Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland; 100-3000 ft.	Moderate: This species is largely restricted to Santa Barbara County. Suitable habitat is present. Known to occur in the Santa Ynez Mountains and Purissima Hills near Lompoc.
<i>Ribes amarum</i> var. <i>hoffmannii</i> Hoffmann's bitter gooseberry	-	-	3	Mar-Apr	Chaparral, Riparian woodland; 500- 3900 ft.	Moderate: There is a recorded occurrence of this species in the Santa Ynez quadrangle, which is located adjacent to the survey area. Suitable habitat is present.
<i>Scrophularia atrata</i> black-flowered figwort	-	-	1B.2	Mar-Jul	Closed-cone coniferous forest, Chaparral, Coastal dunes, Coastal scrub, Riparian scrub; 33-1640 ft.	Moderate: There are several recorded occurrences of this species within 5 miles of the survey area. Suitable habitat is present.
<i>Senecio aphanactis</i> chaparral ragwort	-	-	2.2	Jan-Apr	Chaparral, Cismontane woodland, Coastal scrub/sometimes alkaline; 50-2625 ft.	Moderate: There are recorded occurrences of this species in the Lompoc Hills and Santa Ynez quadrangles, which are located adjacent to the survey area. Suitable habitat is present.
<i>Thelypteris puberula</i> var. <i>sonorensis</i> Sonoran maiden fern	-	-	2.2	Jan-Sep	Meadows and seeps(seeps and streams) ; 160-2000 ft.	Low: There are no recorded occurrences of this species within the survey area or surrounding quadrangles. Habitat conditions are marginal.
<i>Thermopsis macrophylla</i> Santa Ynez false lupine	-	SR	1B.3	Apr-Jun	Chaparral (sandy, granitic, disturbed areas); 1390-4600 ft.	Low: There is one recorded occurrence in the Santa Ynez quadrangle, which is located adjacent to the survey area. Limited, marginal habitat is present within the survey area

1. Scientific nomenclature based on Hickman (1993) and Jepson Online Interchange (2009); common names from Hickman (1993) and CalFlora database (2009).

2. Conservation status definitions are as follows:

U.S. Fish and Wildlife Service designations:

FE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.

California Department of Fish and Game designations:

SE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.

ST Threatened: Any species likely to become endangered within the foreseeable future.

SR Rare: Any species not currently threatened with extinction, but in such small numbers throughout its range that it may become endangered if its present environment worsens.

California Native Plant Society designations:

1B Plants rare, threatened or endangered in California and elsewhere.

2 Plants rare, threatened or endangered in California, but more common elsewhere.

3 Plants for which more information is needed – a review list.

4 Plants of limited distribution – a watch list.

California Native Plant Society threat categories:

.1 Seriously endangered in California.

.2 Fairly endangered in California.

.3 Not very endangered in California.

3. Flowering period and habitat information from the California Native Plant Society's online Inventory of Rare and Endangered Plants of California (2009).

Flowering period and habitat information for *Quercus palmeri* from Hickman (1993), Nixon (1997), and CalFlora database (2009).

4. A plant species was determined to have potential to occur in the survey area if its known or expected geographic range includes the vicinity of the survey area, and if its known or expected habitat is represented within or near the survey area

Sources: CNPS 2009, CDFG 2009a, Jepson Online Interchange 2009 and Smith 1998.

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2.2 Reference Populations

A reference population of the California state-listed endangered seaside bird's-beak (*Cordylanthus rigidus* ssp. *littoralis*) was visited by Garcia and Associates (GANDA) botanist Eric Wrubel on July 6, 2009 at Mission La Purissima State Park in Lompoc, California. A population of approximately 150 individuals was observed in early bloom on sandy soils on a gentle east-facing slope.

Reference site visits for the remaining 40 species in Table 1 were impractical due to one or more of the following: 1) the large number of potentially occurring special-status plants, 2) the large range in their flowering times (January through November), 3) the uncertain status of many recorded locations, 4) the lack of precise information on the location and land ownership of many local populations, and 5) the lack of access to many local populations 10 miles or less from the survey area, many of which are on private property, or on property to which access is restricted to limited days and hours.

For the special-status species for which suitable habitat was identified in the survey area, collection dates were checked through the Consortium of California Herbaria (Jepson Online Interchange 2009) for herbarium specimens collected in Santa Barbara County to determine likely flowering times. Surveys were timed to encompass the blooming times of all special-status species, as determined from herbarium collection records.

2.3 Reconnaissance-level Surveys

Reconnaissance-level surveys were conducted along the ROW by GANDA botanist Onkar Singh and GANDA wildlife biologist Loni Cooper on January 20-23, 2009. The purpose of these surveys was to field-verify the mapped vegetation typing that was based on remote GIS sensing techniques. The survey area included a 200-foot wide buffer centered on the 14.6 mile-long power line. Appendix B, Maps 1-17 shows the extent of vegetation and land cover types identified during these surveys.

2.4 Protocol-level Surveys

The goal of the protocol-level surveys was to locate all populations of special-status plants within the survey area, and precisely record and map their locations. Protocol-level surveys were floristic, meaning that all plant species encountered were identified to the taxonomic level needed to determine if they have special status. Surveys were conducted according to the botanical survey guidelines of the U.S. Fish and Wildlife Service (USFWS 1996), the California Department of Fish and Game (CDFG 2000), and the California Native Plant Society (CNPS 2001).

Protocol-level surveys were conducted by GANDA botanists Eric Wrubel, Kathy Rindlaub, and Ed Kentner. Surveyors conducted meandering transects on foot throughout the survey area, focusing on microhabitats with higher likelihood to support special-status plants. The survey area included the entire 40-foot wide ROW between Cabrillo Substation in Lompoc and Santa Ynez Switching Station near Buellton, as well as all planned impact areas as defined above. The late-season surveys (July),

were confined solely to the planned impact areas. When special-status plants were found, the location, number of individuals, flowering condition, and habitat characteristics were recorded in the field. Population size was determined by counting individuals or by visual estimates, using standard estimation techniques (Elzinga et al. 1998). The locations of all special-status plant species and sensitive plant communities observed within survey area were mapped using a Trimble GeoExplorer III GPS unit (10-foot accuracy). Information on plant phenology, microhabitat and associated species was also noted for each mapped occurrence.

Surveys were conducted on the following dates: March 2-6, April 20-25, and July 6-8, 2009. This range of survey dates was selected to encompass the blooming times of all of the special-status plants that could potentially occur within the survey area. All areas identified as potential habitat for rare plants within the planned impact areas were visited during the times when special-status plants associated with those habitat types would be likely to be blooming and/or identifiable.

All plant species found in the survey area were identified to the taxonomic level needed to determine if they have special status. Samples were taken of taxa that could not be identified in the field, and were later identified using *The Jepson Manual* (Hickman 1993). A list of vascular plant taxa found within the survey area is included in Appendix C.

3.0 Results

3.1 Vegetation Types

Ten vegetation and land cover types were identified within the study area. These include seven natural vegetation types (California annual grassland, chamise chaparral, coast live oak woodland, central [Lucian] coastal scrub, riparian scrub, freshwater ponds/seeps and mule fat scrub). The other three land cover types are associated with human activities (agriculture, developed/landscaped, and ruderal). Type classifications of natural plant communities are based primarily on Holland (1986), with additional reference to the series-based vegetation classification system of Sawyer and Keeler-Wolf (1995). Human-influenced vegetation types are not included in the Holland (1986) system; some of these are included in the series described by Sawyer and Keeler-Wolf (1995). The distribution of each type found in the survey area is shown in Appendix B, Maps 1-17, and the acreage of each type is summarized in Table 2. Descriptions of all identified vegetation types are provided below.

Table 2. Extent of vegetation and land cover types within the survey area

Vegetation and Land Cover Types	Area (acres)*
<i>Natural Vegetation</i>	
California Annual Grassland	95.24
Chamise Chaparral	0.21
Coast Live Oak Woodland	72.33
Central (Lucian) Coastal Scrub	107.50
Riparian Scrub	3.87
Freshwater Pond and Seeps	1.19
Mule Fat Scrub	0.86
<i>Other Land Cover Types</i>	
Agriculture	47.58
Developed/Landscaped	10.32
Ruderal	5.41
Total	344.51

*Acreage based on 200-foot buffer along 14.6 mile power line route.

3.1.1 California Annual Grassland (Non-native)

California annual grassland is the current name for Holland's non-native grassland (Holland 1986), an upland community type composed of dense to sparse cover of mainly introduced annual grasses, usually less than 3 feet in height. California annual grassland sometimes includes remnant native perennial grasses, and native annual forbs (broad-leaved plants). In years of favorable rainfall, this vegetation type may support numerous species of native annual spring wildflowers (Holland 1986). The equivalent vegetation type in Sawyer and Keeler-Wolf (1995) is the California annual grassland series. The species composition of annual grasses and forbs varies considerably between stands. Stands that are rich in native species usually occur on unusual substrates (e.g. rocky, sandy, serpentinite, etc.) or in unusual environments (e.g. mesic, seeps, etc.).

California annual grassland is common along the entire length of the power line. Many of the grassland areas within the study area are used as pastureland for cattle grazing. Typical dominants for this vegetation type in the survey area include soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), red brome (*B. madritensis*), wild oats (*Avena* spp.), and filarees (*Erodium* spp.). Common native species in the survey area include purple needlegrass (*Nassella pulchra*), California croton (*Croton californicus*), Sandberg bluegrass (*Poa secunda*), red maids (*Calandrinia ciliata*), grassland tarweed (*Hemizonia increscens* ssp. *increscens*), miniature lupine (*Lupinus bicolor*), and common peppergrass (*Lepidium nitidum*).

3.1.2 Chamise chaparral

Chamise chaparral as described by Holland (1986) is a 3 to 9 foot tall chaparral almost

completely dominated by chamise (*Adenostoma fasciculatum*). Associated shrub and understory species contribute little to overall cover. The overstory is typically dense and the understory is usually depauperate. It is found on steep, rocky or sandy slopes in foothills and mountain ranges throughout California and usually occurs below 5,000 feet in southern California. The equivalent Sawyer and Keeler-Wolf (1995) vegetation series is the chamise series.

Chamise chaparral is very limited in the survey area, occurring only in the vicinity of pole 129 on a northeast-facing slope (Appendix B, Map 17). Associated species at this location include sticky monkeyflower (*Mimulus aurantiacus*) and black sage (*Salvia mellifera*).

3.1.3 Central (Lucian) Coastal Scrub

Central (Lucian) coastal scrub, as described by Holland (1986), is typically comprised of a dense shrub layer 3-6 feet tall with a sparse herbaceous layer below, often occurring on exposed south-facing slopes. Species composition is highly variable and is dependent upon topography, soils, aspect, and slope. The equivalent Sawyer and Keeler-Wolf (1995) vegetation series in the survey area include the California sagebrush series, the coyote bush series, and the black sage series.

Central (Lucian) coastal scrub is common throughout the survey area. Stands on clay soils are typically dominated by California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), or sawtooth goldenbush (*Hazardia squarrosa*). Dominant species commonly found on sandy soils include black sage, Menzies' goldenbush (*Isocoma menziesii*), California goldenbush (*Ericameria ericoides*), and dune lupine (*Lupinus chamissonis*). Understory species diversity is generally low on south facing exposures, but is sometimes relatively high on northern exposures. Typical understory species include sharptooth sanicle (*Sanicula arguta*), California cudweed (*Gnaphalium californicum*), yarrow (*Achillea millefolium*.), and foothill needlegrass (*Nassella lepida*).

3.1.4 Coast Live Oak Woodland

In this vegetation type, coast live oak (*Quercus agrifolia*) is the sole dominant tree in the canopy. It typically occurs on north-facing slopes and in shaded ravines, and can occur with a more open canopy in more exposed areas (Holland 1986).

Coast live oak woodland is common throughout the survey area. The understory vegetation within the oak woodlands is relatively dense and diverse. The composition of the understory varies depending on canopy density and adjacent habitats. Where there is a relatively dense canopy, the understory is dominated by herbs such as hedge nettle (*Stachys ajugoides*), hummingbird sage (*Salvia spathacea*), miners lettuce (*Claytonia perfoliata*), fiesta flower (*Pholistoma auritum*), bedstraw (*Galium aparine*), and a variety of other native annual herbs and non-native grasses. At the ecotone between coast live oak woodland and central coastal scrub, the oak canopy is less dense and the understory is dominated by shrubs such as California sagebrush, sticky monkeyflower, and toyon (*Heteromeles arbutifolia*).

3.1.5 Freshwater Ponds and Seeps

Freshwater ponds are not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Holland (1986), however, describes freshwater seeps as areas of permanently wet or moist soils consisting of low-growing perennial herbs and grasses. A single seep with active groundwater discharge was observed between poles 112 and 113 during the January 2009 reconnaissance survey. Several freshwater ponds occur scattered throughout the study area in low-lying areas in which the soil is inundated or saturated for part of the growing season. These are typically man-made stock ponds or detention basins.

Plant species composition within the freshwater pond habitat varies depending on the amount of inundation. In the larger, deeper ponds, vegetation is generally restricted to the shallow margins and includes emergent, herbaceous species such as tules (*Scirpus* spp.), broad-leaved cattail (*Typha latifolia*), and rushes (*Juncus* spp.). Shallower ponds are primarily dominated by spiny cocklebur (*Xanthium spinosum*). Dominant species associated with the freshwater seep include curly dock (*Rumex crispus*) and water cress (*Rorippa nasturtium-aquaticum*).

The ROW also crosses the wetlands northeast of SR 246 between poles 69 and 70 (Appendix A, Map 19). At this location, the ponds are dominated by pale spikerush (*Eleocharis macrostachya*). These wetlands are known to support special-status wildlife species. The wetlands are natural sag ponds (e.g., depressions created by an active fault line) that have been surveyed by local biologists since the early 1970s (GANDA, 2009a).

3.1.6 Mule Fat Scrub

Mule fat scrub, as described by Holland (1986) and Sawyer and Keeler-Wolf (1995), is a tall, herbaceous, riparian shrub community dominated by mule fat (*Baccharis salicifolia*), with a sparsely vegetated understory. This early seral vegetation type is maintained by frequent flooding and scouring that prevents the succession of this community to cottonwood- or sycamore-dominated riparian forests or woodlands.

Within the study area, mule fat scrub occurs in the active channel of the Santa Ynez River. Common understory species include white sweetclover (*Melilotus albus*) and rabbits-foot grass (*Polypogon monspeliensis*).

3.1.7 Riparian Scrub

Riparian scrub is described by Holland (1986) as a scrubby streamside thicket occurring on fine-grained sand and gravel bars along active river channels. The equivalent series in Sawyer and Keeler-Wolf (1995) is the Arroyo Willow series. It is an early seral community that in the absence of flood disturbance would succeed into a riparian forest community. Patches of this vegetation type occur along the major waterways within the survey area such as the Santa Ynez River and Santa Rosa Creek.

The riparian scrub community in the survey area is dominated by an overstory of arroyo willow with associated species such as coast live oak, sandbar willow (*Salix exigua*), coyote brush, and blue

elderberry (*Sambucus mexicana*). Understory species include spreading rush (*Juncus patens.*), mugwort (*Artemisia douglasiana*), poison hemlock (*Conium maculatum*), California blackberry (*Rubus ursinus*), straggly gooseberry (*Ribes divaricatum*), poison oak (*Toxicodendron diversilobum*), and stinging nettle (*Urtica dioica*).

3.1.8 Agriculture

Cultivated agricultural lands do not support natural vegetation; therefore, they are not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Disked fields, irrigated crops and vineyards were mapped as agriculture. Grape (*Vitis* spp.) vineyards associated with wine production are the most abundant type of agriculture within the study area. The understories of vineyards typically consist of low-growing non-native grasses or are sprayed with herbicides to prevent herbaceous vegetation growth. Areas mapped as agriculture are common throughout the study area.

3.1.9 Developed/Landscaped

This habitat type is not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Developed areas include residential, commercial and industrial infrastructure as well as hardscaped (concrete, asphalt, or gravel) areas. Vegetation, where present, typically consists of weedy species such as telegraph weed (*Heterotheca grandiflora*) or ornamental plantings such as oleander (*Nerium oleander*).

3.1.10 Ruderal Vegetation

Ruderal vegetation typically occurs in areas that have been subject to ground disturbance, often resulting in a predominance of non-native species. Ruderal vegetation is not described by Holland (1986) or Sawyer and Keeler-Wolf (1995). Within the study area, the ruderal vegetation type is restricted to the western portion of the power line from poles 2 to 19. Included within the habitat type is a portion of the floodplain of the Santa Ynez River where soil disturbance related to past human activities has created a highly disturbed landscape characterized by both native and non-native weedy species such as Menzies' goldenbush, field mustard (*Brassica rapa*), black mustard (*B. nigra*), wild radish (*Raphanus sativus*), anise (*Foeniculum vulgare*), and horseweed (*Conyza canadensis*).

3.2 Special-status Plant Species

Six special-status plant species and one locally rare species were identified within the survey area. Four special-status plants and one locally rare species are located within planned impact areas. Two special-status plant species were identified within the survey area, but outside of planned impact areas. Plants located outside of planned impact areas are unlikely to be adversely affected by construction activities.

The locations of special-status species located within planned impact areas are shown in Figures 2 through 4. The locations of all special-status species observed during the surveys are shown in Appendix A, Maps 1-37. Appendix D contains copies of the CNDDDB field survey forms for

occurrences of special-status plants found during the 2009 surveys.

Preliminary survey results identified the special-status plant species, Nuttall's milkvetch (*Astragalus nuttallii* var. *nuttallii* [CNPS 4.2]) occurring in the survey area (GANDA 2009b). The identification of this species has been revised to Pomona milkvetch (*Astragalus pomonensis*), based on a July 20, 2009 personal communication between GANDA botanist Kathy Rindlaub and Steve Junak, curator of the Santa Barbara Botanic Garden Herbarium (Junak 2009). Mr. Junak has expert knowledge of species distributions in Santa Barbara County, and informed Ms. Rindlaub that Nuttall's milkvetch grows only in dune habitats of the immediate coast in Santa Barbara County. The *Astragalus* populations found in the survey area were well inland from the coast, in the Zaca Creek USGS quadrangle. The *Astragalus* species *nuttallii* and *pomonensis* are difficult to distinguish from one-another. They are distinguished in-part by the morphology of their stipules (sheathing or not). It is often difficult to ascertain whether the stipule is sheathing and split open, or not sheathing. The specimen at hand appeared to have a split, sheathing stipule, indicating it was Nuttall's Milkvetch. However, based on Mr. Junak's knowledge of the local distribution of Nuttall's milkvetch, the identification has been revised to Pomona milkvetch. Pomona milkvetch has no special-status, and will not be further discussed in this report.

3.2.1 La Purissima manzanita (*Arctostaphylos purissima*)

La Purissima manzanita is a 3 to 15-foot tall evergreen shrub in the heath family (Ericaceae). It has a prostrate to erect trunk with red, peeling bark, and fine-bristly stems. It has leathery, overlapping, clasping leaves with deeply lobed bases. The inflorescence is a raceme. The fruits are smooth and relatively small, and the seeds are not fused together. It is endemic to the California outer South Coast Ranges and is found on sandstone outcrops and sandy soils.

La Purissima manzanita is not state or federally listed, but is included on CNPS's List 1B, meaning it is rare, threatened or endangered in California and elsewhere. This species has a threat code of .1 meaning it is seriously endangered in California (CNPS 2009).

A large La Purissima manzanita was observed in fruit during the July surveys. It was growing on the southern edge of the ROW among coast live oaks between SR 246 and pole 68 (Appendix A, Map 19). The individual was not located in a planned impact area or access route, and is unlikely to be adversely affected by construction activities. The individual was approximately 12 feet tall and wide, and conformed in all characteristics to *A. purissima*, except that the stems and inflorescence are glandular, indicating an intergrade between *A. purissima* and *A. refugioensis*. *Arctostaphylos refugioensis* is included on CNPS's List 1B.2.

3.2.2 Sand buck brush (*Ceanothus cuneatus* var. *fascicularis*)

Sand buck brush is a 3 to 7-foot tall evergreen shrub in the buckthorn family (Rhamnaceae). It has slender, flexible, arched branches with opposite leaves, more or less flat leaf blades that are narrowly oblanceolate to round-obovate, and leaf margins that are generally entire. *Ceanothus cuneatus* var. *fascicularis* is distinguished by its blue to pale-blue flowers and narrowly oblanceolate, closely clustered leaves. It is known from chaparral and coastal sandy mesas below 1300 feet in Santa

Barbara and San Luis Obispo Counties.

Sand buck brush is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This species has a threat code of .2 meaning it is fairly threatened in California (CNPS 2009).

Sand buck brush was found during the surveys in open oak woodlands on sandy soils, associated with coast live oak and non-native annual grass species, and in chamise chaparral. A large sand buck brush individual was found within the planned impact area on the east side of pole 111 (Figure 2, and Appendix A, Map 31), and scattered individuals occur in the vicinity of an overland access route to pole 116 (Figure 2, Appendix A, Map 32). Numerous individuals were also observed outside of the ROW in the chaparral habitat to the northeast of pole 129 (Appendix A, Map 36). Impacts to the sand buck brush at pole 111 and overland route to pole 116 can be minimized by flagging and avoidance.

3.2.3 San Luis Obispo wallflower (*Erysimum capitatum* var. *lompocense*)

San Luis Obispo wallflower is an orange to yellow-flowered biennial or short-lived perennial in the mustard family (Brassicaceae) that is generally between 20 and 40 inches tall. *Erysimum capitatum* var. *lompocense* is distinguished by its elongate caudex, narrowly lanceolate lower leaves, and spreading, more or less flattened, generally irregularly curved fruit. It is found on sandy hillsides and mesas in the outer South Coast Ranges.

This species is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This variety has a threat code of .2 meaning it is fairly threatened in California (CNPS 2009).

Three individuals of San Luis Obispo wallflower were found in a planned impact area at pole 97 (Figure 3 and Appendix A, Map 27). One was located about 6 feet west of the pole, and the other two were located approximately 20 and 40 feet southwest of the pole. San Luis Obispo wallflower was found in several locations within the right-of-way during the surveys (Appendix A, Maps 6, 7 and 16).

Impacts to this biennial species can be minimized by avoidance of individuals, which can be flagged by a qualified botanist prior to construction. Impacts to the soil seedbank can be minimized by restricting soil disturbance to the upper 6 inches of the soil profile, except for the pole hole area; avoiding deposition of fill soils on top of existing soil; and, conducting construction activities late in the dry season, after the plants have set seed (August – October). This pole is slated for replacement using a helicopter, which will limit the amount of ground disturbance in this area.

3.2.4 Mesa horkelia (*Horkelia cuneata* ssp. *puberula*)

Mesa horkelia is a low-growing herbaceous perennial in the rose family (Rosaceae). It has a matted growth form, with green or grayish pinnately divided leaves and white flowers. It is generally found in dry, sandy habitats of the South Coast and South Coast Ranges. *Horkelia cuneata* ssp. *puberula* is

distinguished from other *H. cuneata* subspecies by its glandular-hairy foliage, the glabrous inner rim of its hypanthium, and its relatively long flower stems. It tends to be found in more inland locations than the other *H. cuneata* subspecies. Both subspecies *puberula* and subspecies *cuneata* were found within the survey area, and apparently intergrade. All *H. cuneata* populations in the survey area have foliage that is glandular, but conform in all other aspects to subspecies *cuneata*. The relative hairyness of the inner hypanthium rim, and the length of the flower stems were used to distinguish the two.

This species is not state or federally listed, but is included on CNPS's List 1B, meaning that it is rare, threatened or endangered in California and elsewhere. This variety has a threat code of .1 meaning it is seriously endangered in California (CNPS 2009).

Mesa horkelia was found at one location during the surveys. A population of approximately 20 individuals was located within the ROW between poles 61 and 62 (Appendix A, Map 17). The population is not located in a planned impact area or access route, and is not likely to be adversely affected by construction activities.

3.2.5 Curlyleaf monardella (*Monardella undulata*)

Curlyleaf monardella is an erect, herbaceous annual plant in the mint family (Lamiaceae). It grows from 4 to 20 inches tall, and has showy, whorled, purple flower heads. It has reddish stems and pungent, aromatic foliage. It is distinguished from other *Monardella* species by its wavy leaf margins and annual growth habit.

This species is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This variety has a threat code of .2 meaning it is fairly threatened in California (CNPS 2009).

Curlyleaf monardella was found in central coastal scrub vegetation at two planned impact areas during the July surveys. A population of approximately twenty individuals was observed near pole 26 (Figure 4, and Appendix A, Map 6). The plants were scattered in sandy gaps between California goldenbush and black sage. A large population of approximately 200 individuals was observed growing in a sandy portion of an access road slated for grading to access pole 57 (Figure 4, and Appendix A, Map 15). This population of curlyleaf monardella was growing at the center and edges of the road, associated with California croton. The surrounding vegetation is central coastal scrub dominated by California goldenbush and black sage.

Impacts to the soil seedbank can be minimized by restricting soil disturbance to the upper 6 inches of the soil profile, except for the pole hole area; avoiding deposition of fill soils on top of existing soil; and, conducting construction activities late in the dry season, after the plants have set seed (August – October).

3.2.6 California spineflower (*Mucronea californica*)

California spineflower is a diminutive annual plant in the buckwheat family (Polygonaceae). Its

small, white to pink flowers are subtended by spiny bracts. It is distinguished from the only other *Mucronea* species in California by its bracts occurring on only one side of the stem and its entire perianth lobes. It is known from sandy soils near the coast and in the coastal ranges of central and southern California in coastal scrub and chaparral vegetation.

This species is not state or federally listed, but is included on CNPS's List 4, a watch list for plants of limited distribution or infrequent occurrences throughout a broader area in California. This variety has a threat code of .2 meaning it is fairly threatened in California (CNPS 2009).

California spineflower was found in sandy soils at the planned impact area around pole 26 during the July surveys (Figure 4 and Appendix A, Map 6). This population of approximately 100 individuals was observed growing in central coastal scrub, scattered in sandy gaps between California goldenbush and black sage. California spineflower was also observed near the planned overland access route to pole 121 (Appendix A, Map 33). This population of approximately 300 individuals was observed growing in California annual grassland in sandy soils with ripgut brome, California croton, and leather spineflower (*Lastarriaea coriacea*). This population is not located in a planned impact area, and is not in the path of the planned overland access route.

Impacts to the soil seedbank can be minimized by restricting soil disturbance to the upper 6 inches of the soil profile, except for the pole hole area; avoiding deposition of fill soils on top of existing soil; and, conducting construction activities late in the dry season, after the plants have set seed (August – October).

3.2.7 Desert Scrub Oak (*Quercus palmeri*)

Desert scrub oak is a 3 to 18-foot tall evergreen shrub in the oak family (Fagaceae). It has rigid spreading twigs, and leathery spiny leaves. The upper leaf surface is dark green and smooth. The lower leaf surface is glandular and minutely hairy when young, and pale gray-green when older. The acorn caps are bowl-shaped, densely hairy, and typically remain attached to the branches after the acorns fall off. It is a wide-ranging species that occurs throughout southwestern North America, but is uncommon throughout its range (Nixon, 1997).

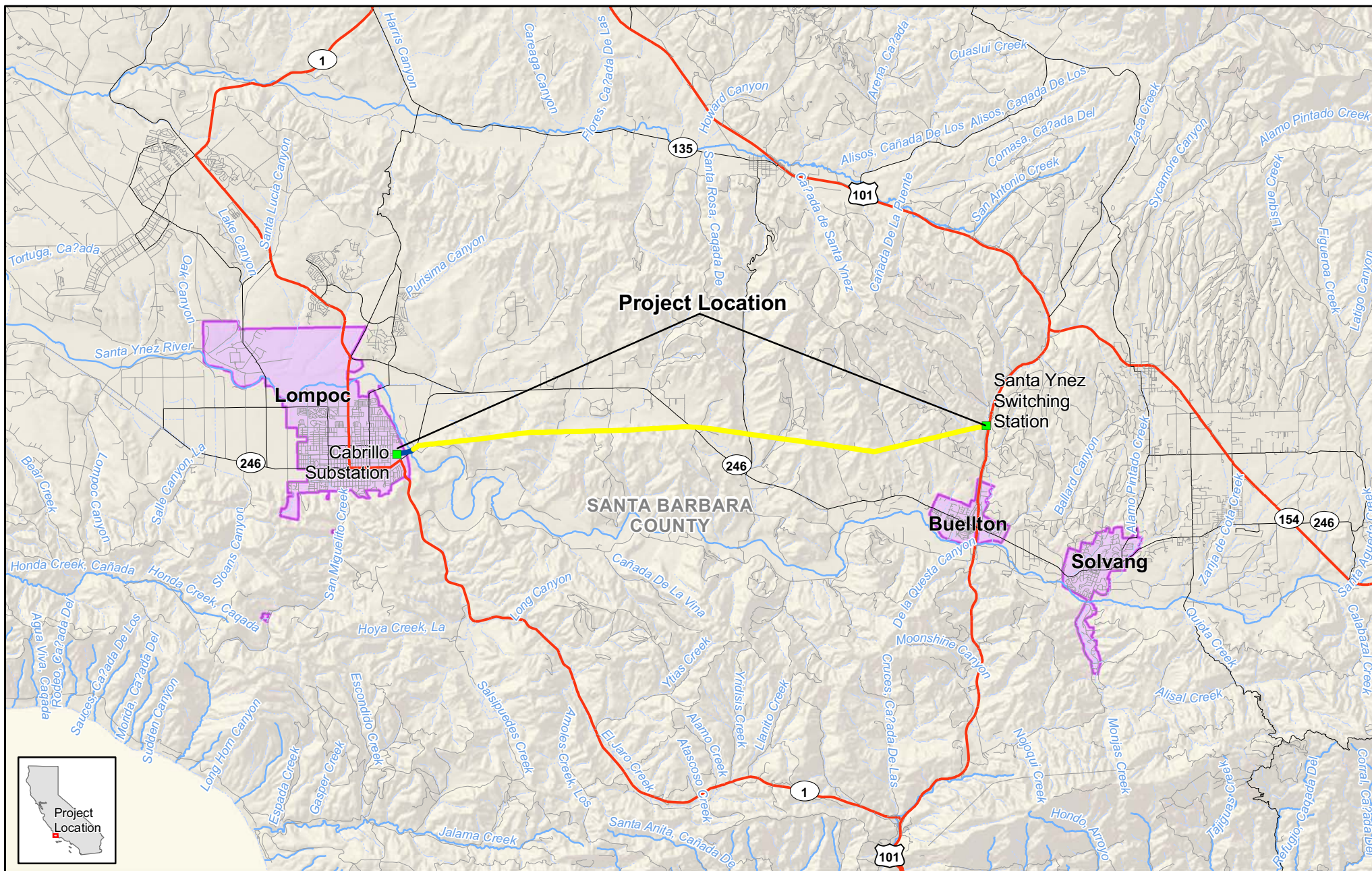
An individual desert scrub oak was found in the planned impact area at pole 111 (Figure 2 and Appendix A, Map 31). It is a large (7-foot) shrub located on the northwest side of the pole. Desert scrub oak was also observed near the planned overland access route to pole 121 (Appendix A, Map 33). This population is not located in a planned impact area, and is not in the path of the planned overland access route.

Desert scrub oak does not have statewide special status, but it should be noted that it is locally uncommon in Santa Barbara County (Smith 1998, Jepson Online Interchange 2009), and has been placed on a list of locally rare plants in Santa Barbara County (Wilken, 2007).

Impacts to the desert scrub oak at pole 111 can be minimized by flagging and avoidance. If pruning is necessary, it would ideally be minimal, and be conducted during the dry season, when the oak is semi-dormant and less susceptible to rot (July – September).

3.3 Discussion

No federally listed or state-listed plants were observed in the survey area during the 2009 protocol-level surveys. Four CNPS list 4 species, and the locally rare desert scrub oak were observed within planned impact areas as discussed above. The CNPS list 4 species include sand buck brush, San Luis Obispo wallflower, curlyleaf monardella, and California spineflower. Minimization of construction related impacts to each of these species is discussed above. Two CNPS list 1B species were observed within the ROW, but outside of planned impact areas. They include mesa horkelia and La Purissima manzanita. These plant populations are unlikely to be adversely affected by project activities.



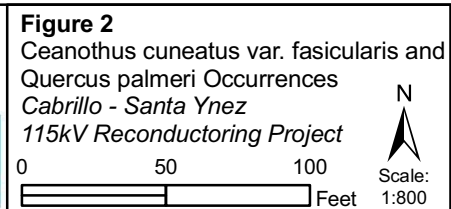
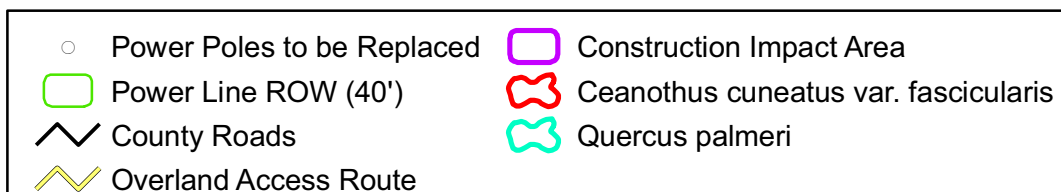
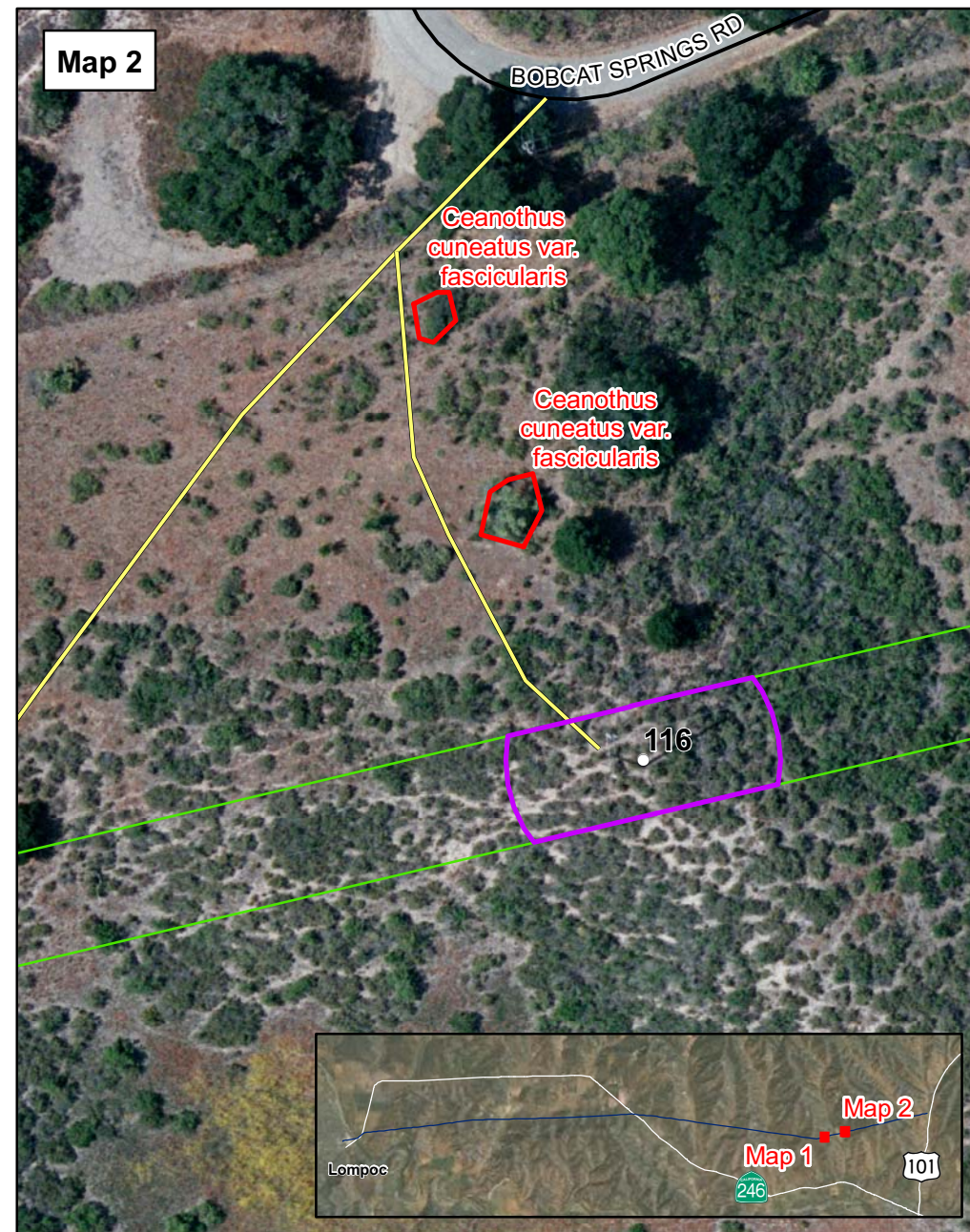
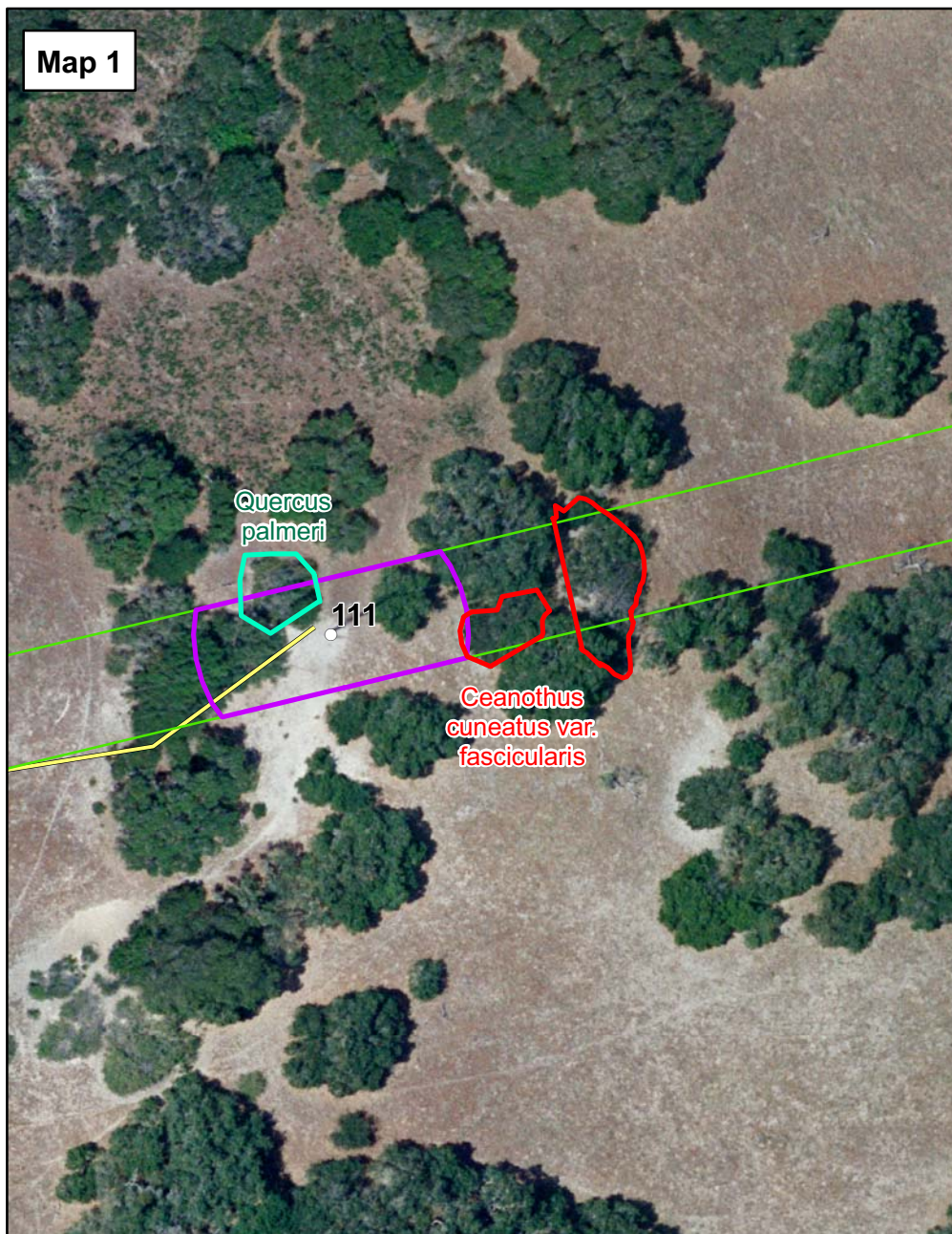
- | | | |
|-----------------------------|-----------------|------------|
| Substation | City Boundaries | Highway |
| Work Proposed on Power Line | Creeks | Major Road |
| Reconductoring | Rivers | Local Road |
| Insulator Replacement Only | | |



Figure 1
Project Location
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 2 4 Miles
Scale: 1:200,000







- Power Poles Replaced by Helicopter
- Power Line ROW (40')
- Construction Impact Area

- ▲ *Erysimum capitatum ssp. lompocense* Occurrences

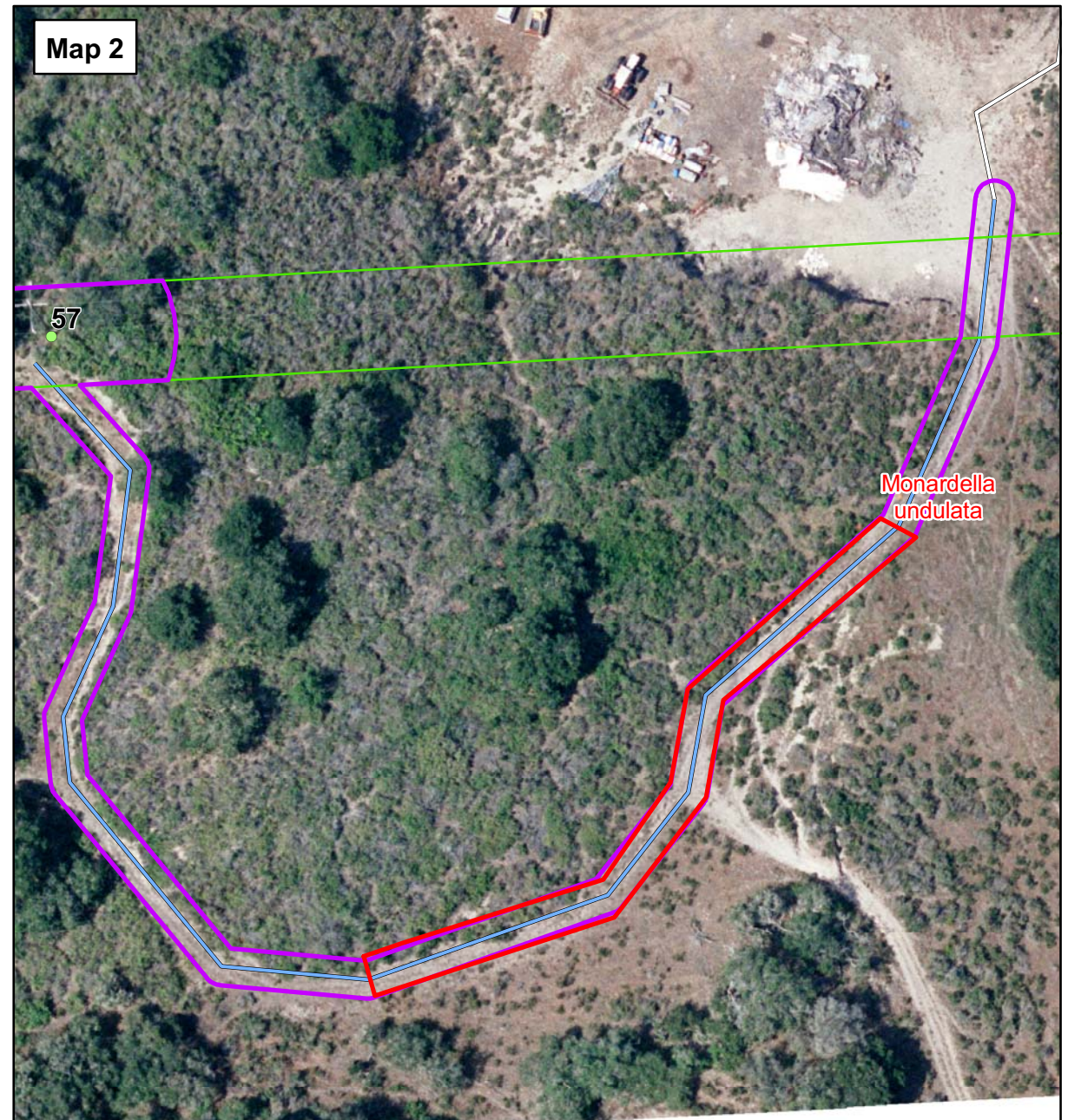
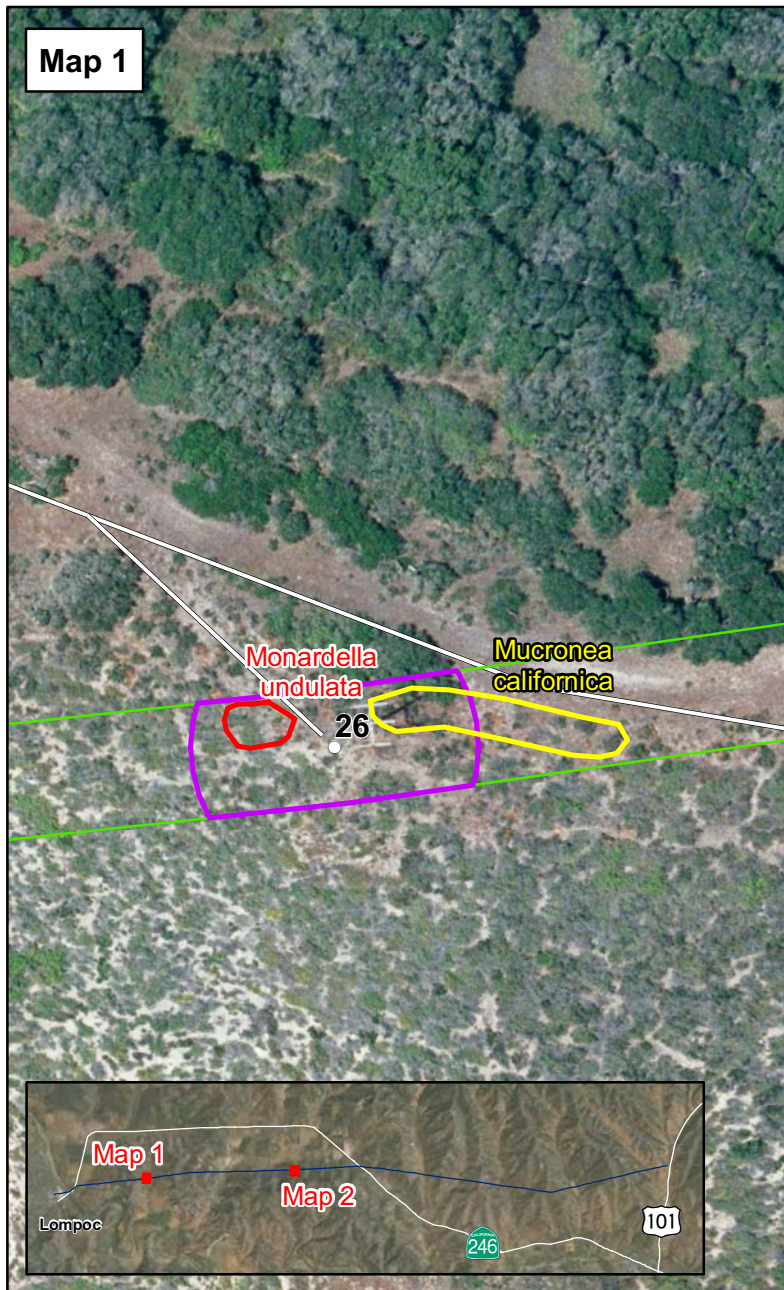


Figure 3
Erysimum capitatum ssp. lompocense
 Occurrences
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 50 100
 Feet

Scale: 1:800

N

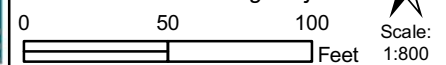


- Power Poles to be Replaced
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')
- Construction Impact Area
- Existing Access Road
- Existing Access Road
- Reestablished Through Grading and Vegetation Removal

- Monardella undulata
- Mucronea californica



Figure 4
Monardella undulata and
Mucronea californica Occurrences
Cabrillo - Santa Ynez
115kV Reconductoring Project



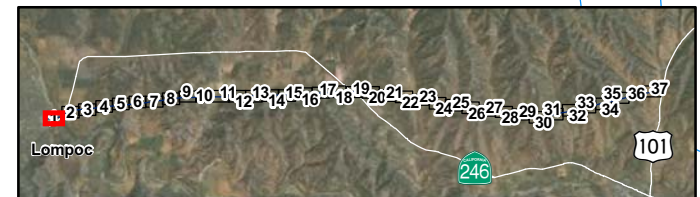
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Appendix A:

**Survey Area and
Special-Status Plant Locations**



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

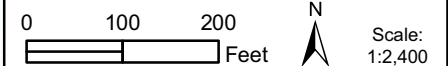
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

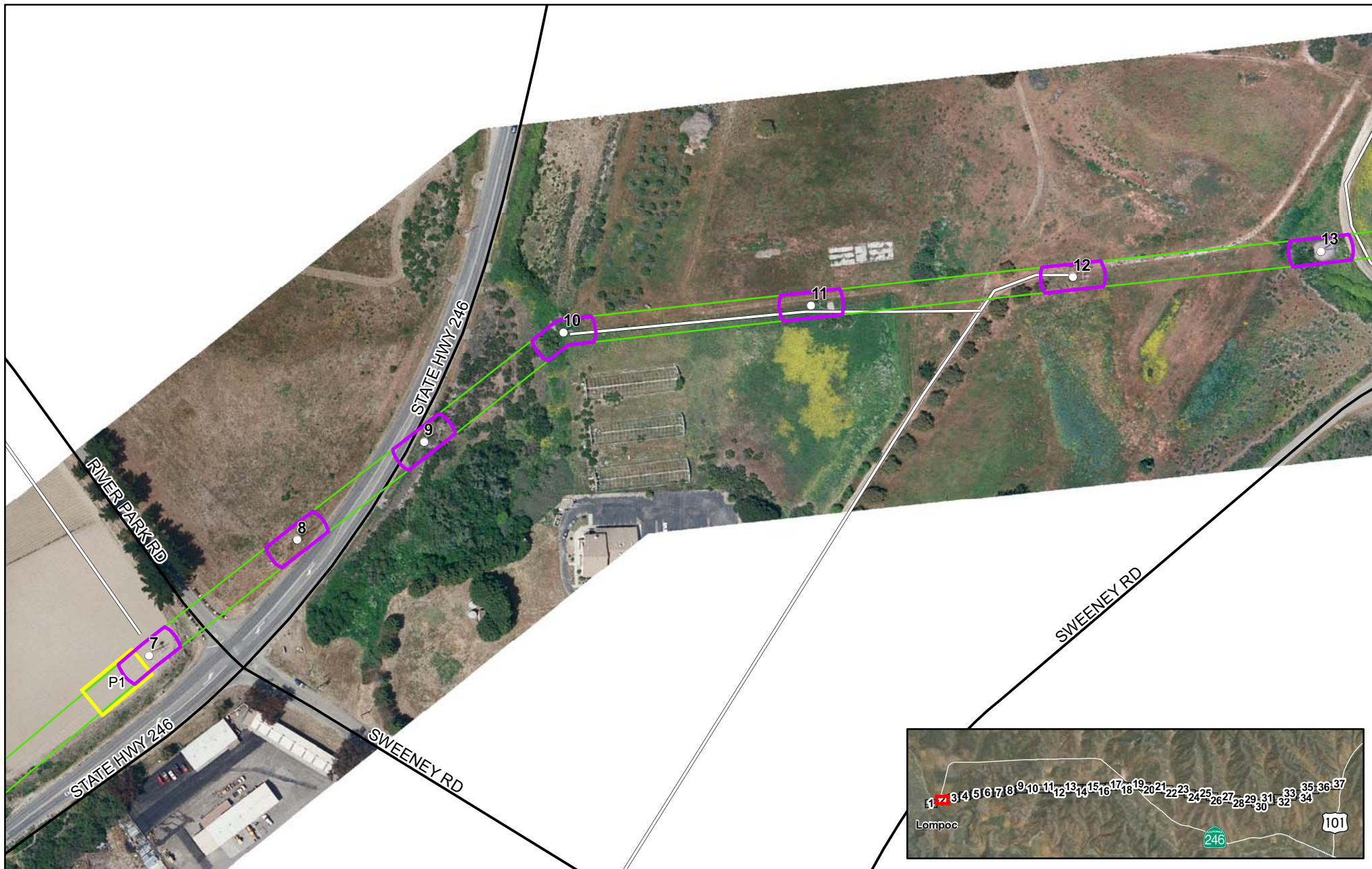
- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 1**
Cabrillo - Santa Ynez
115kV Reconductoring Project





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences

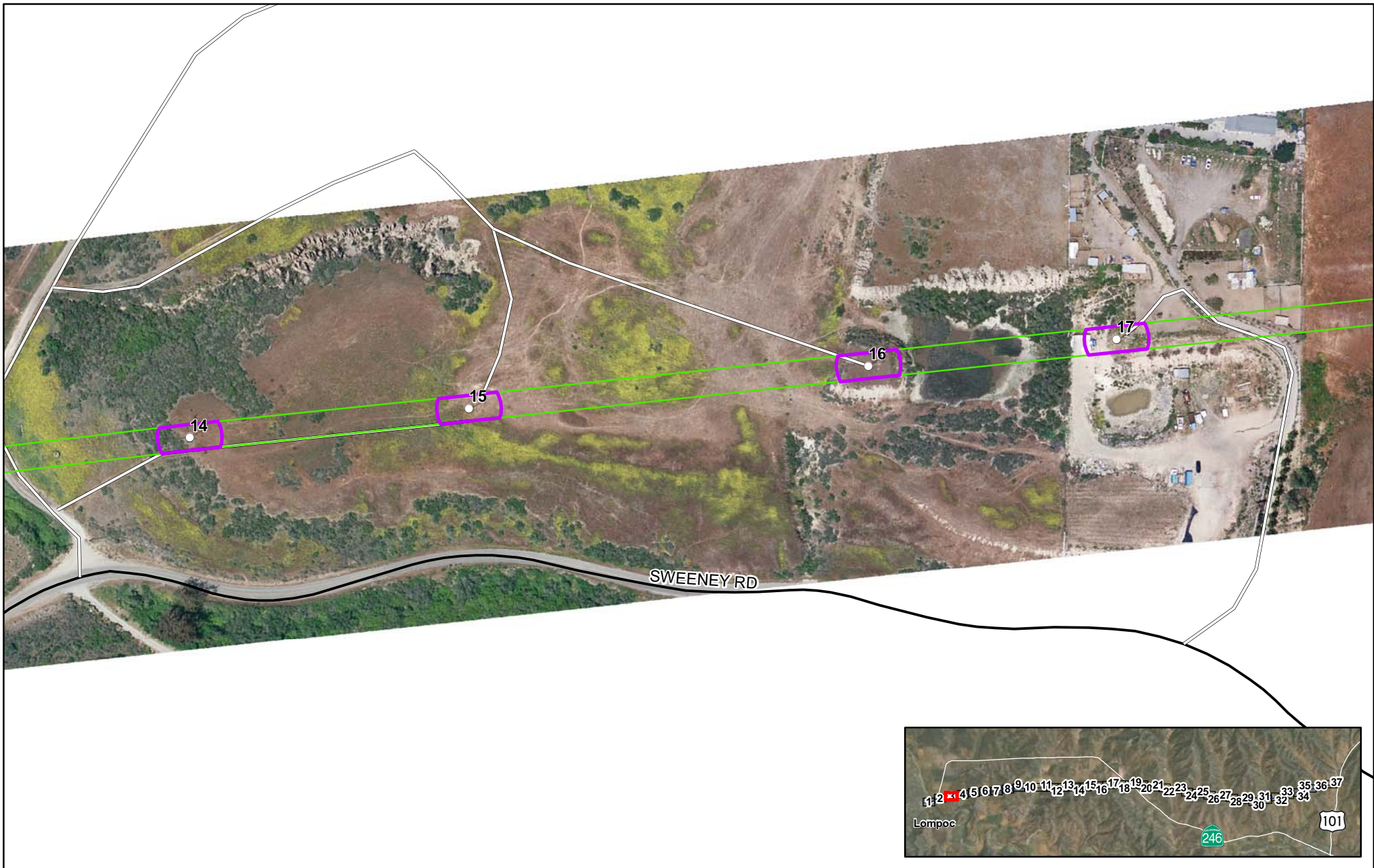


Survey Area and Special-status Plant Locations **Map 2**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

Rare Plant Occurrences

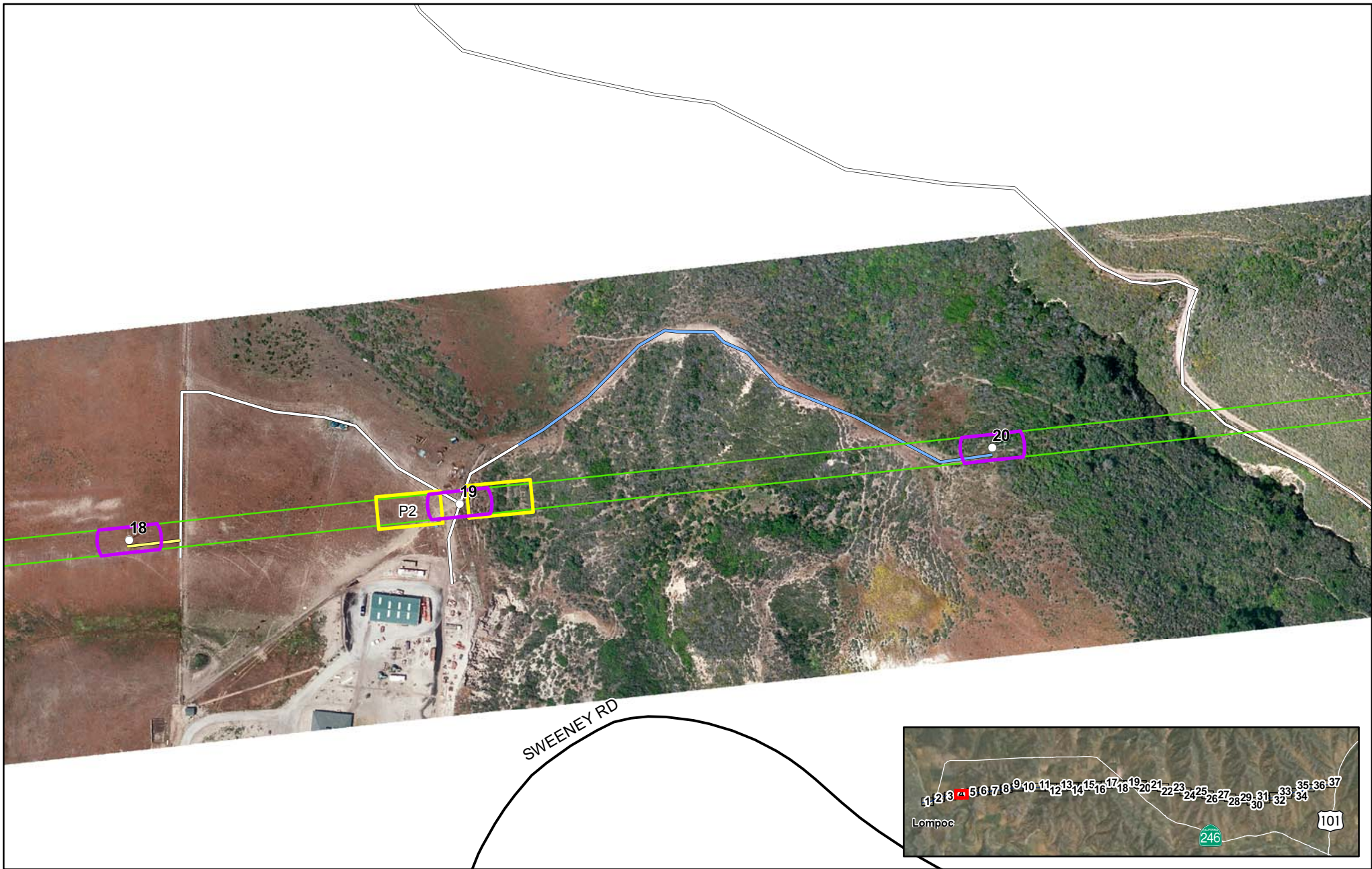


Survey Area and Special-status Plant Locations **Map 3**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

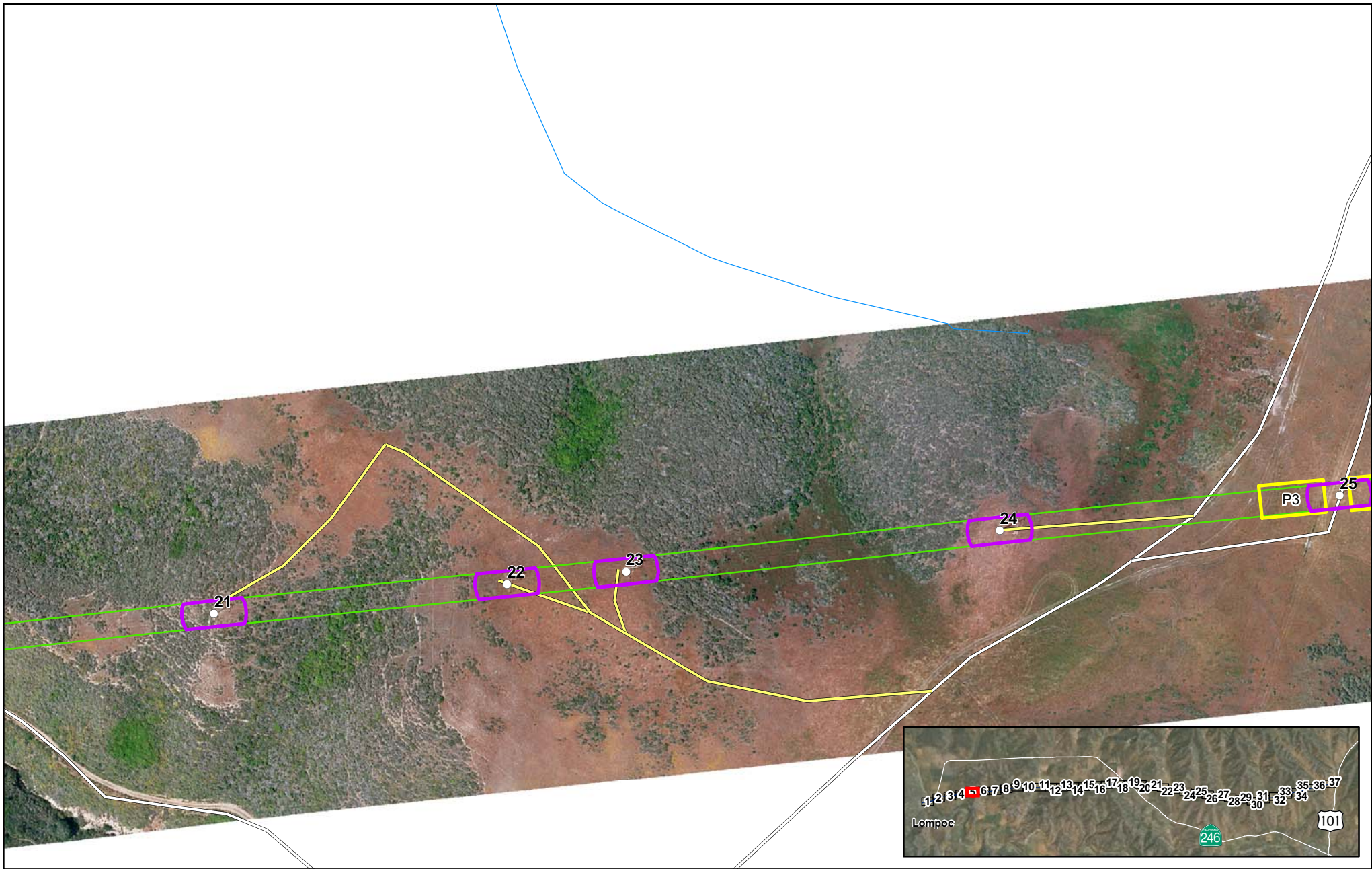
- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 4**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

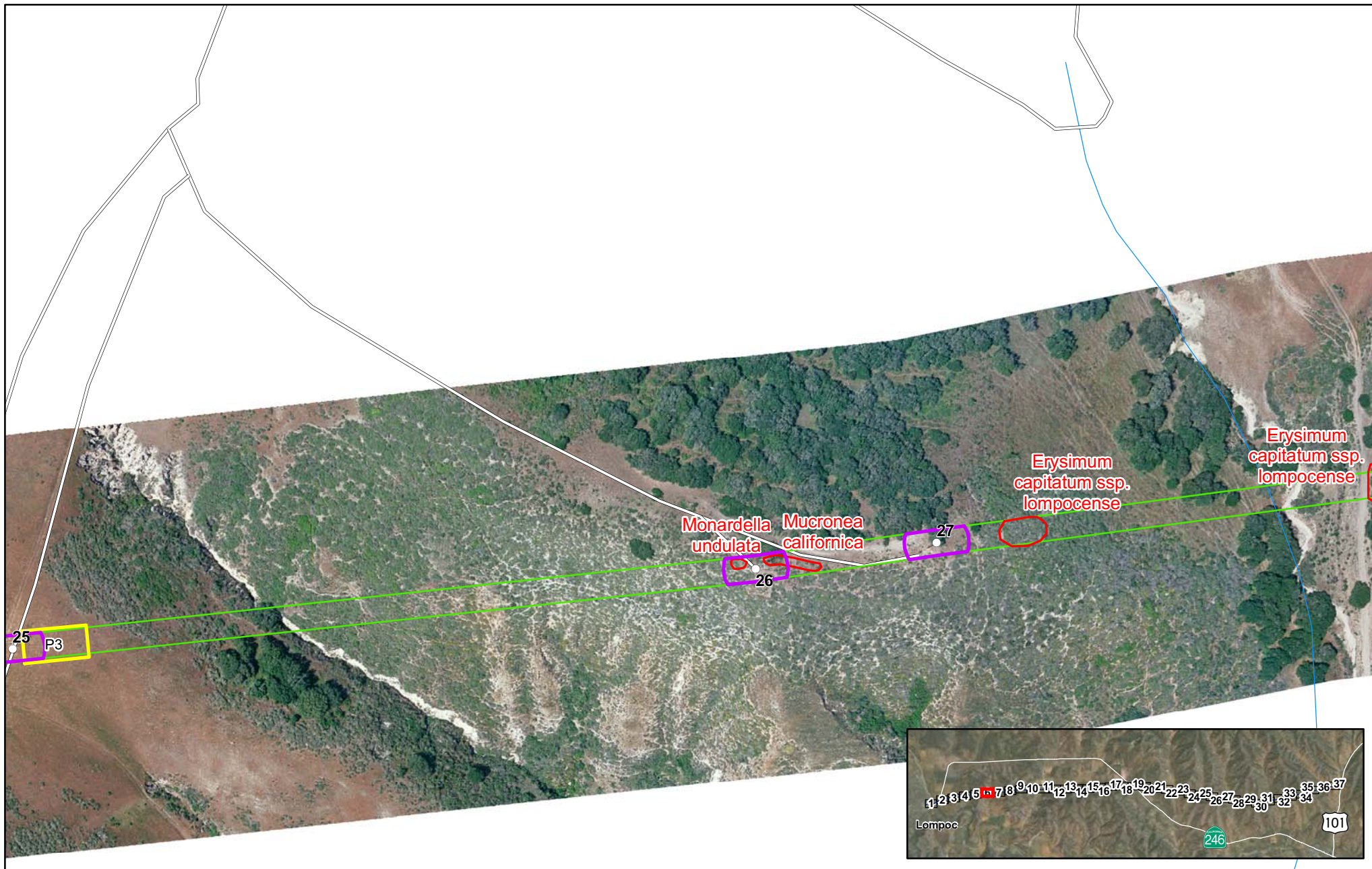
- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 5**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200 Feet
 Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences

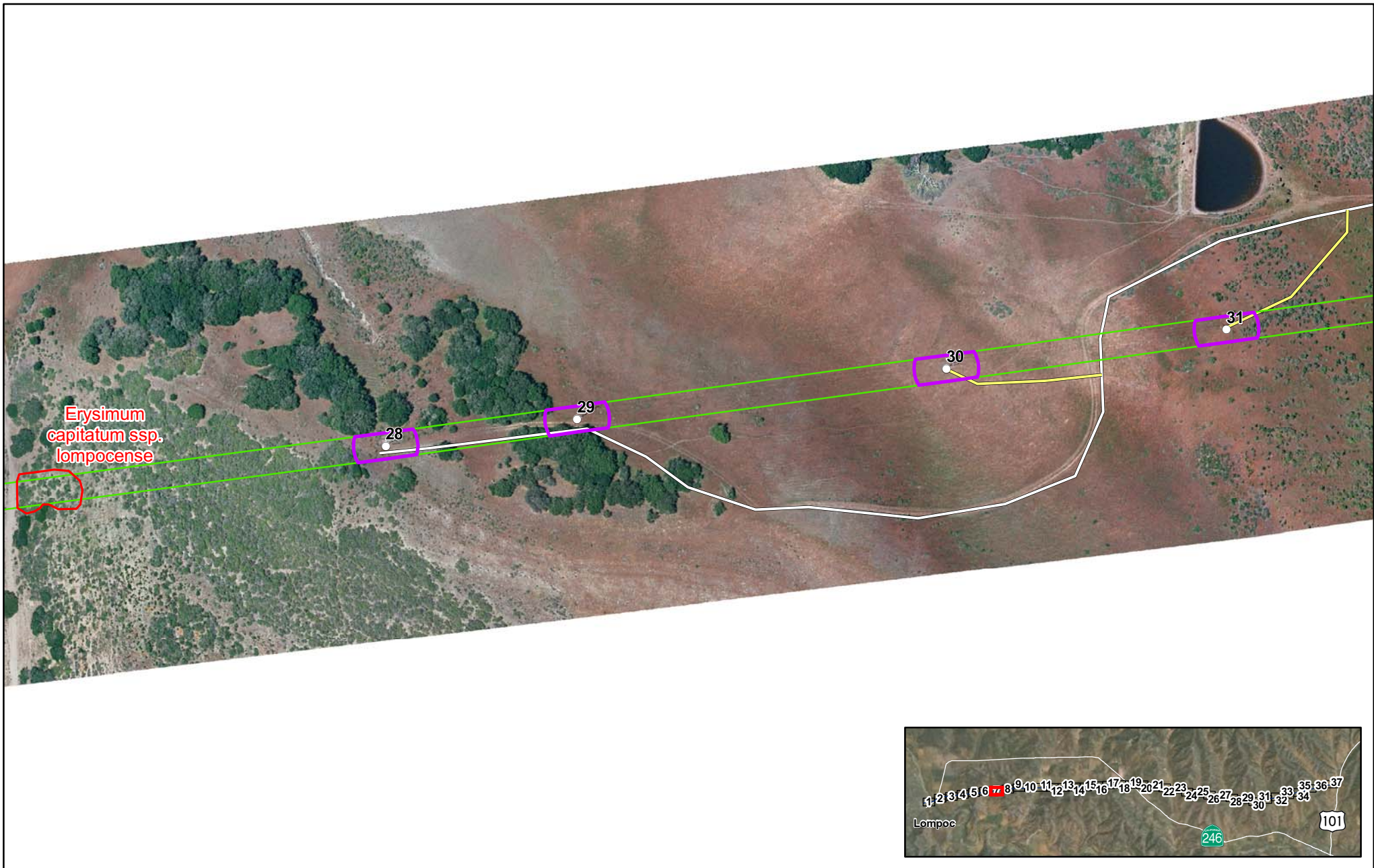


Survey Area and Special-status Plant Locations **Map 6**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

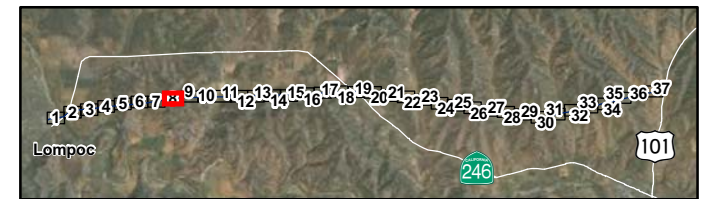
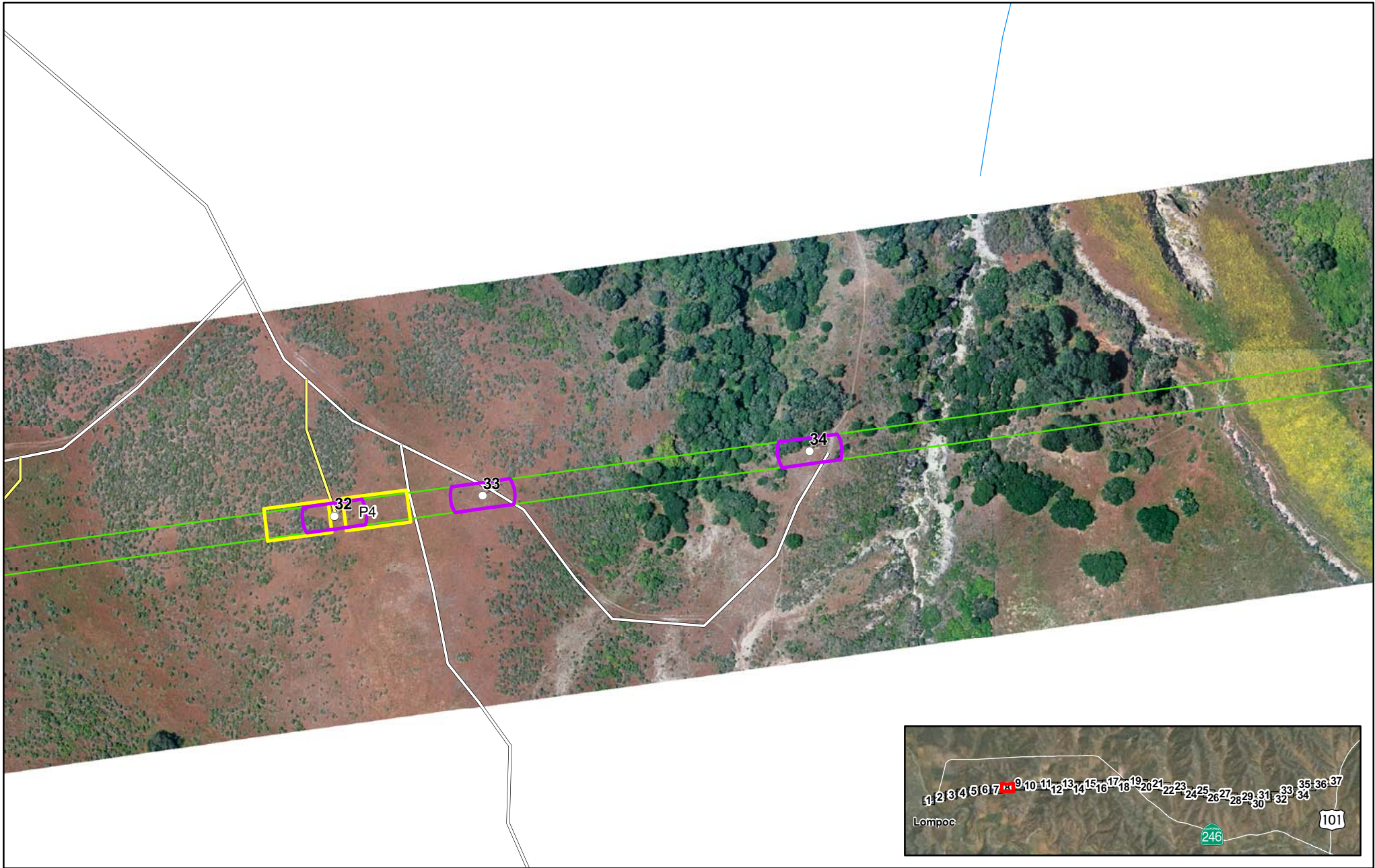
- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 7**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 8**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 9**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200 Feet
 Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences

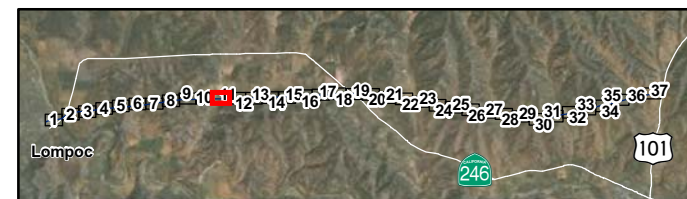


Survey Area and Special-status Plant Locations **Map 10**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



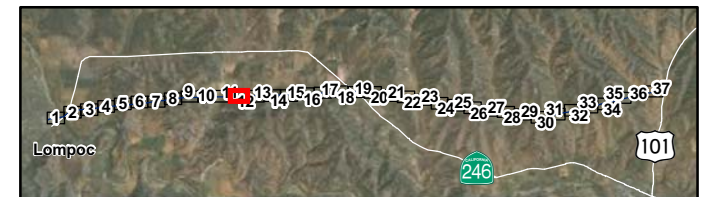
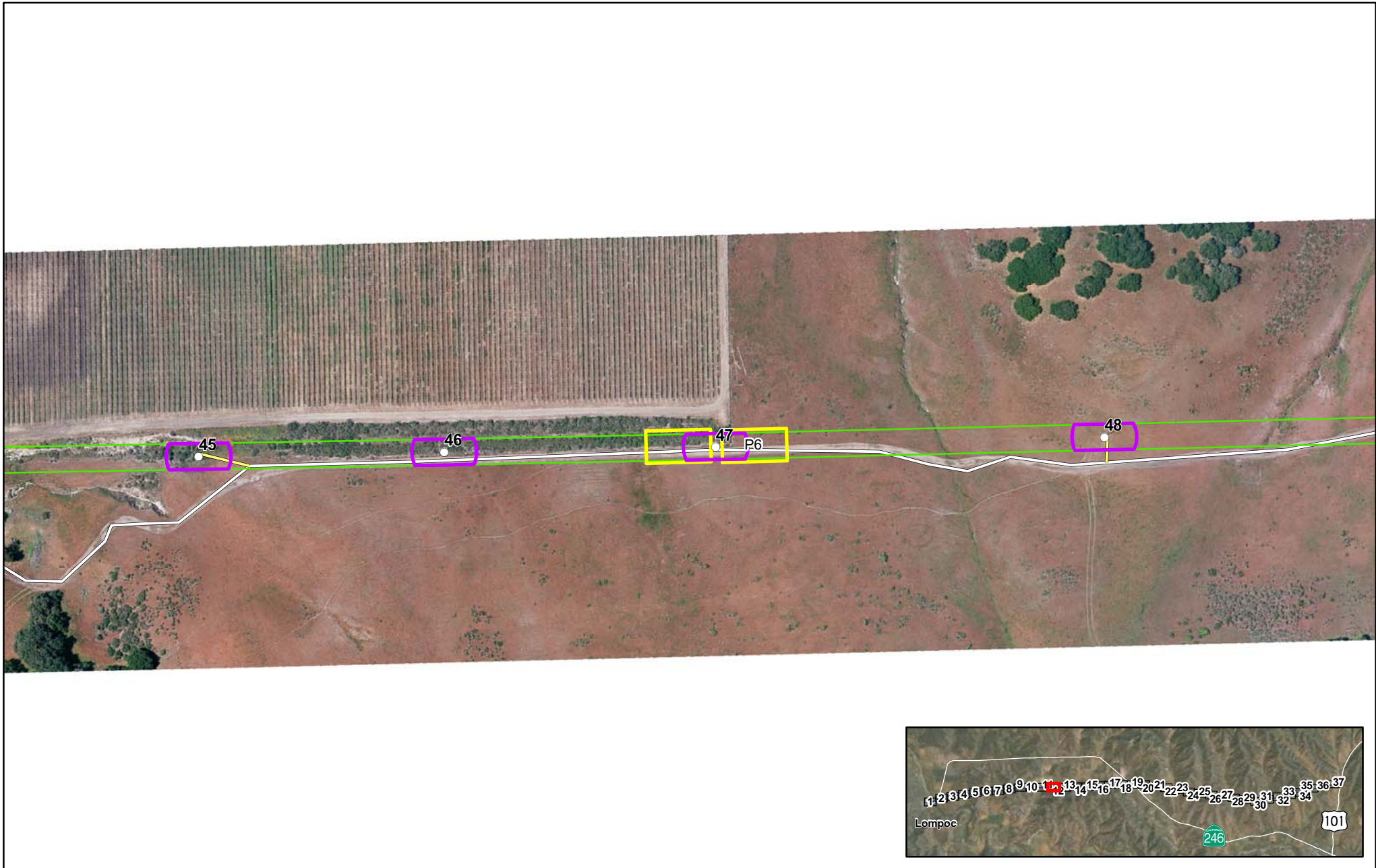
Scale:
 1:2,400



- 



Scale:
1:2,400

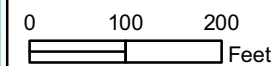


- | | | |
|--|--------------------------------------|---|
| ○ Power Poles to be Replaced | H Laydown Area for Helicopter | Rivers/Creeks |
| ● Power Poles Replaced by Helicopter | Potential Lay Down Area | County Roads |
| ● Existing Power Poles | Potential Pull and Tension Site | Existing Access Road |
| ● Power Pole Sites with Expected Tree Management | Potential Staging Area | Existing Access Road Reestablished Through Grading and Vegetation Removal |
| Power Line ROW (40') | Impact Areas | Overland Access Route |

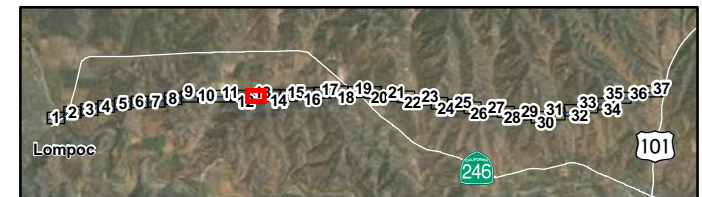
Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 12**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 13**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

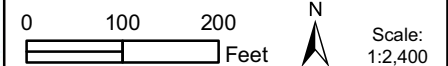
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 14**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 15**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

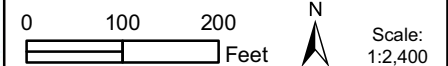
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

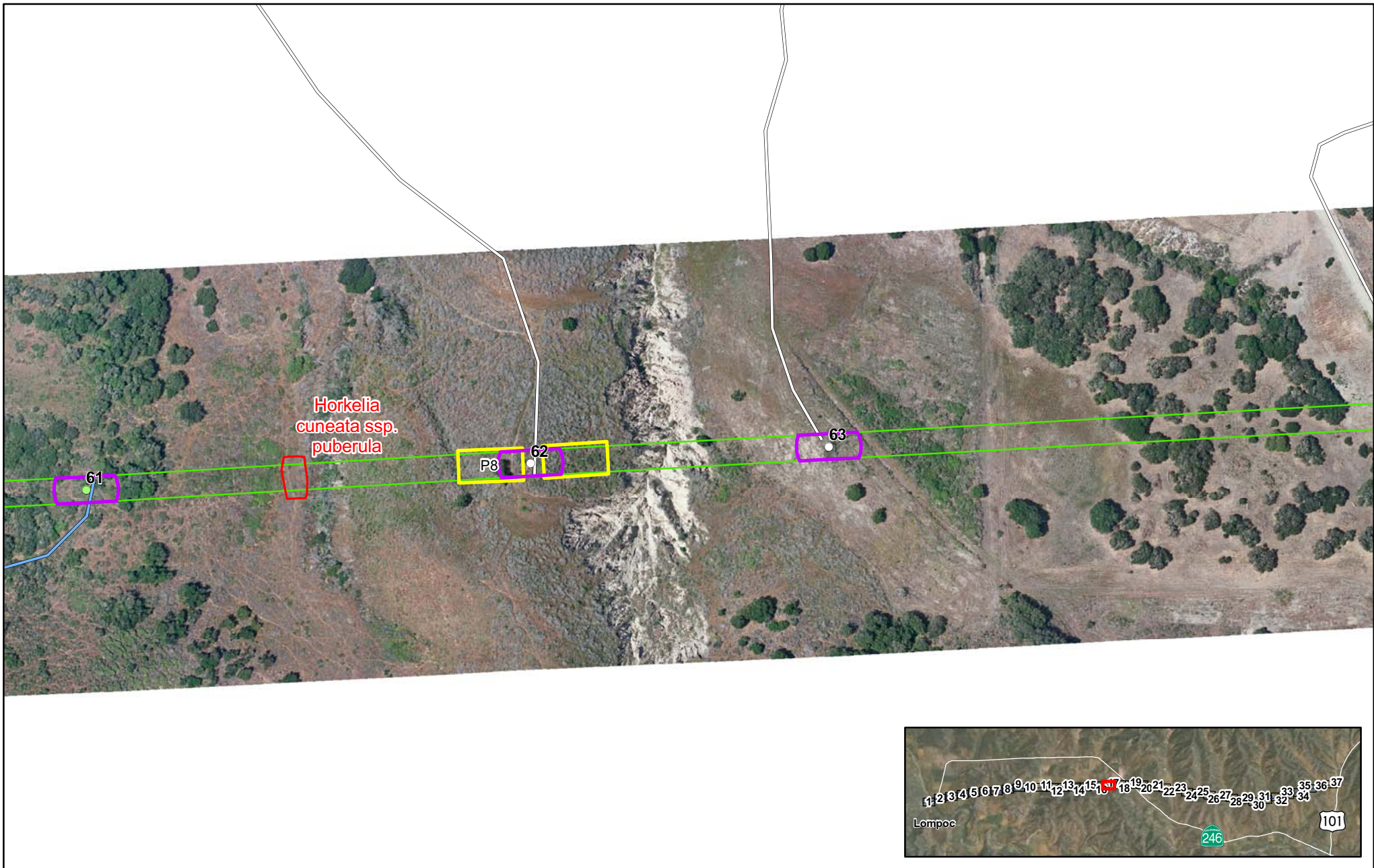
- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 16**
Cabrillo - Santa Ynez
115kV Reconductoring Project





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

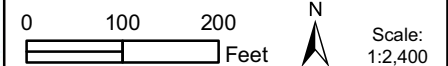
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

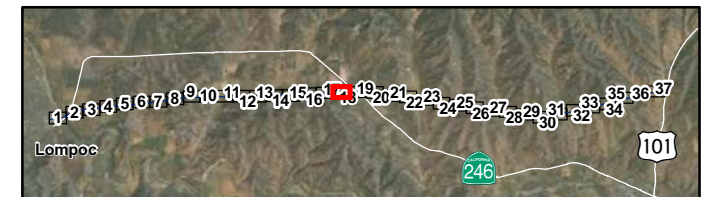
Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 17**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project



STATE
HWY 246



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')
- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

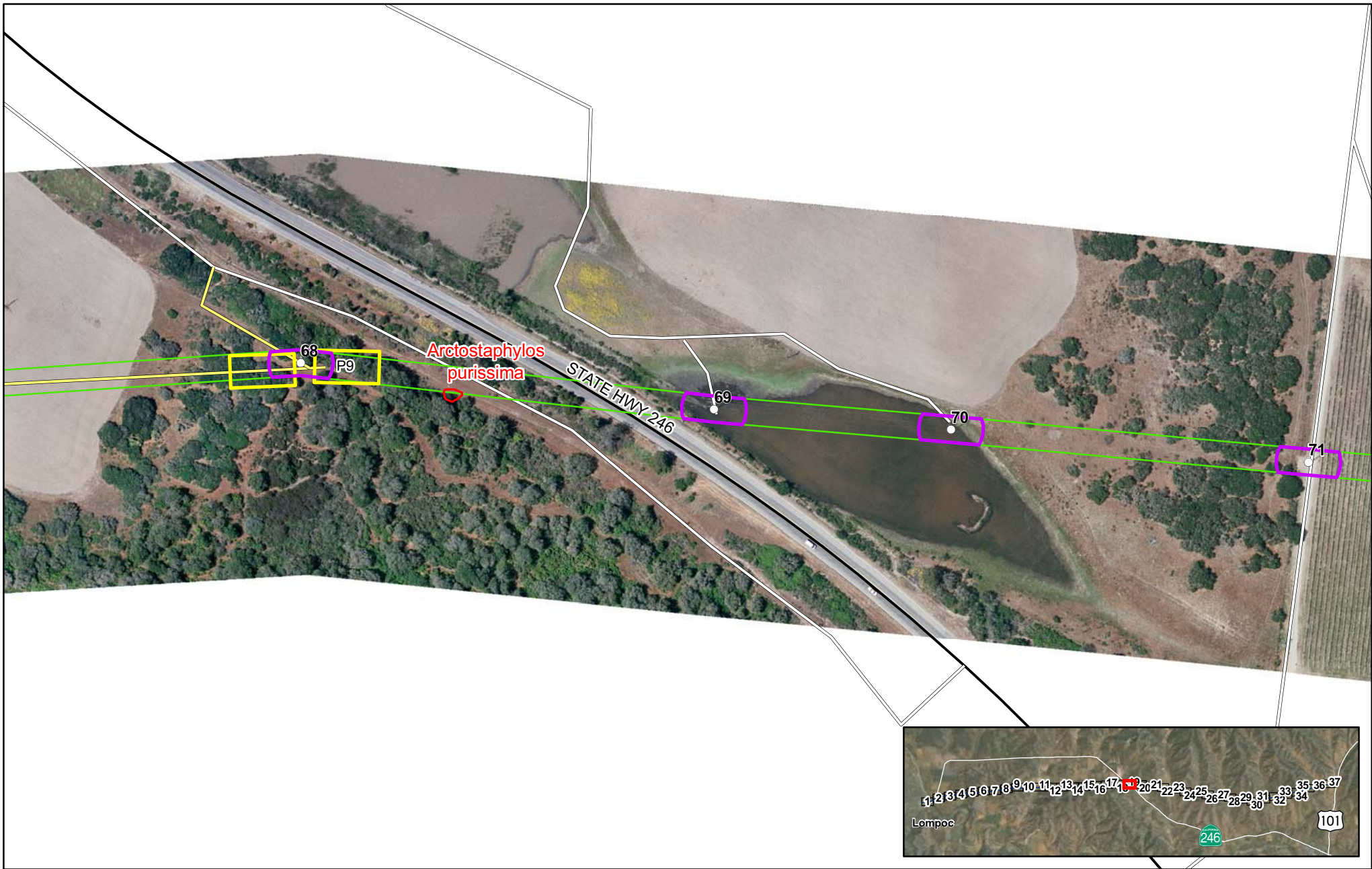
- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status
Plant Locations **Map 18**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 19**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 20**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200 Feet
 Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 21**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200 Feet
 Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences

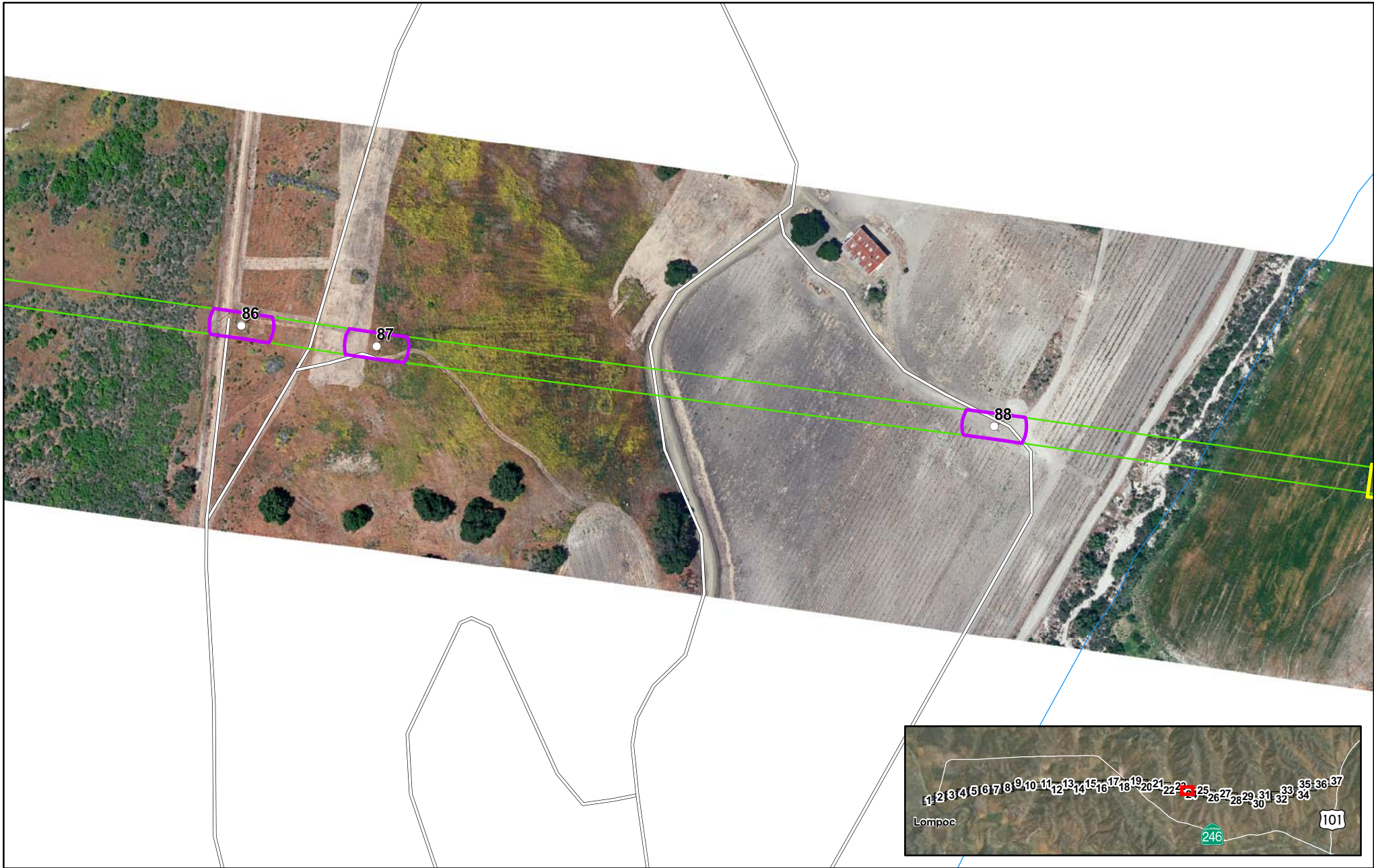


Survey Area and Special-status Plant Locations **Map 23**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 24**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

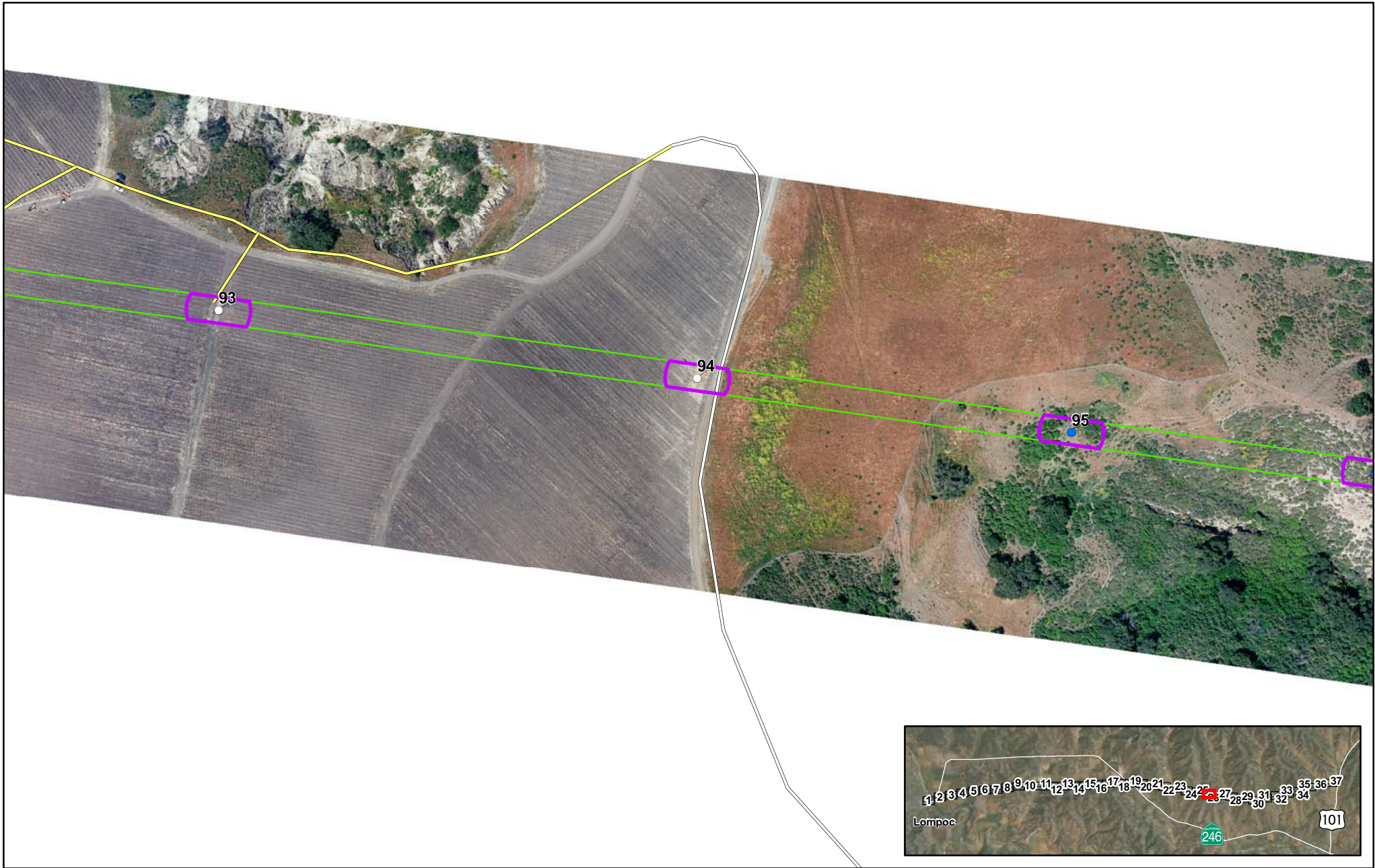
- ~ Rivers/Creeks
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 25**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 26**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences

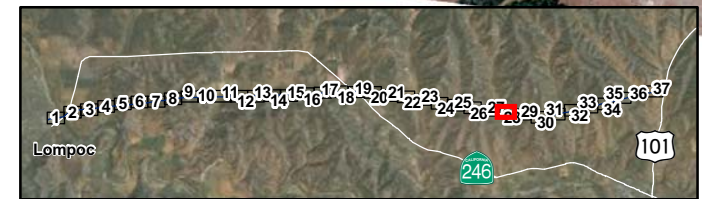
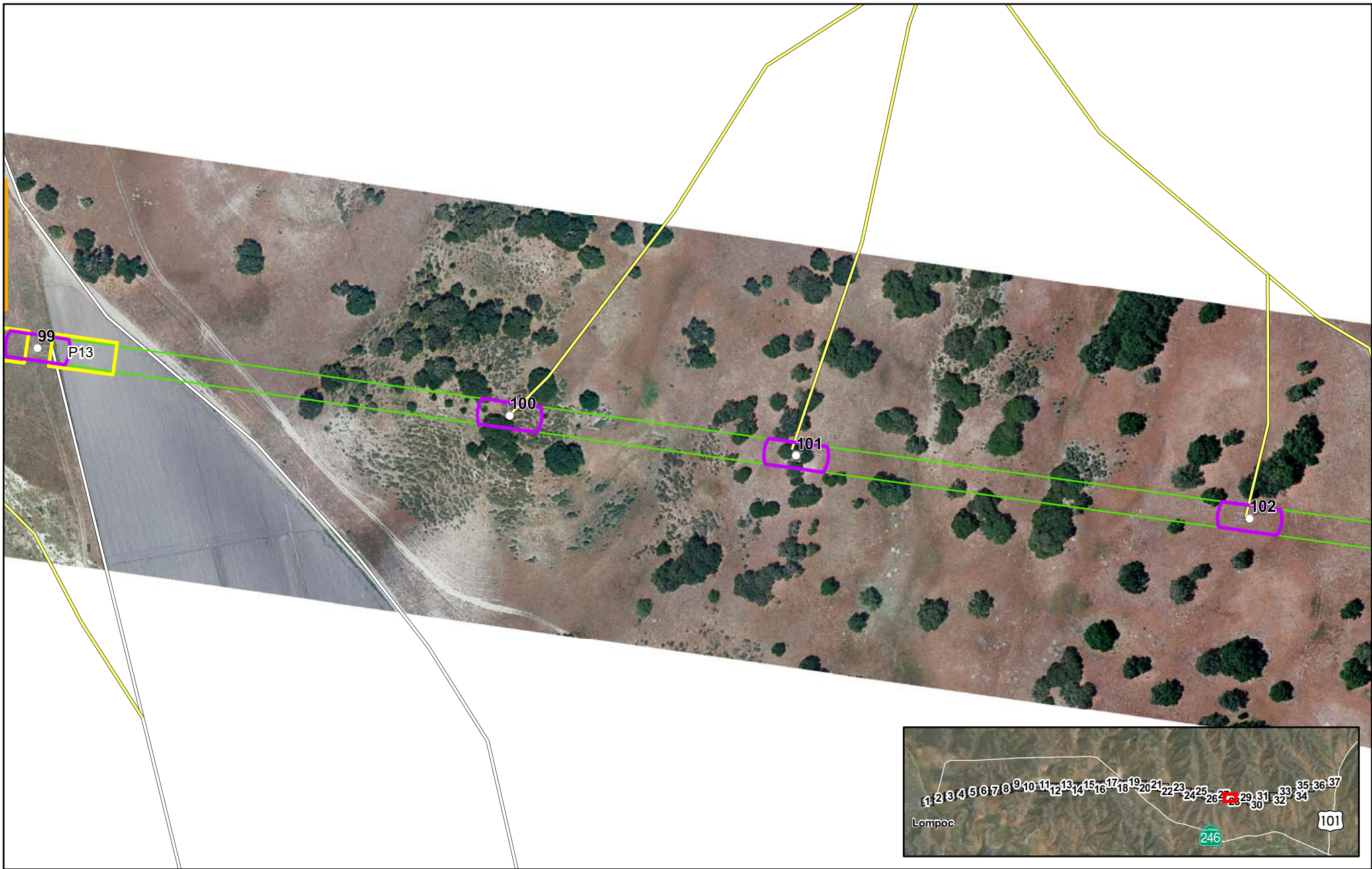


Survey Area and Special-status Plant Locations **Map 27**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



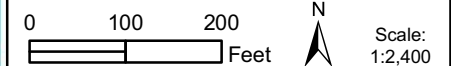
- | | |
|--|--------------------------------------|
| ○ Power Poles to be Replaced | H Laydown Area for Helicopter |
| ● Power Poles Replaced by Helicopter | □ Potential Lay Down Area |
| ● Existing Power Poles | □ Potential Pull and Tension Site |
| ● Power Pole Sites with Expected Tree Management | □ Potential Staging Area |
| □ Power Line ROW (40') | □ Impact Areas |

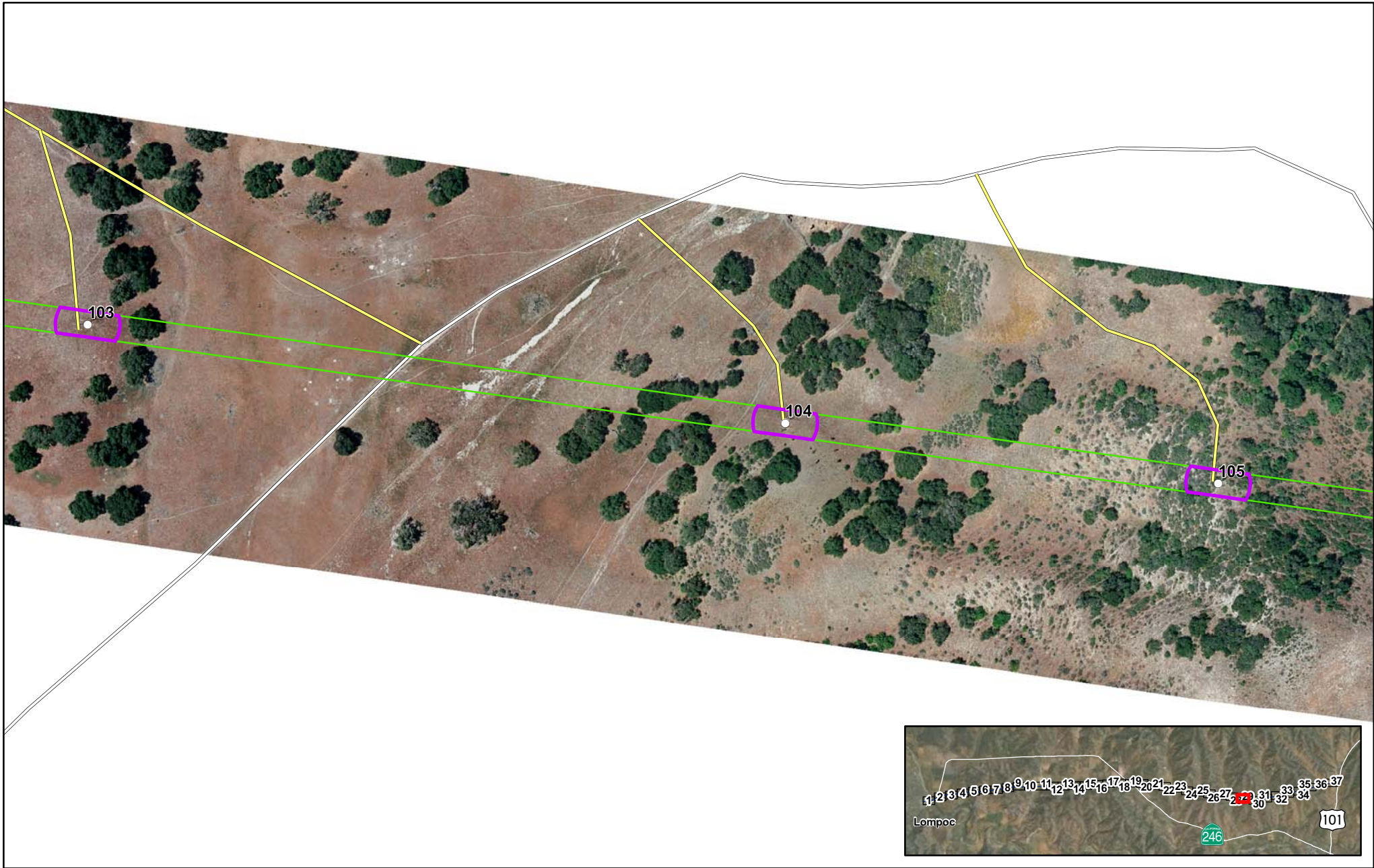
- | |
|---|
| ~ Rivers/Creeks |
| ≡ County Roads |
| ≡ Existing Access Road |
| ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal |
| ≡ Overland Access Route |

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 28**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 29**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

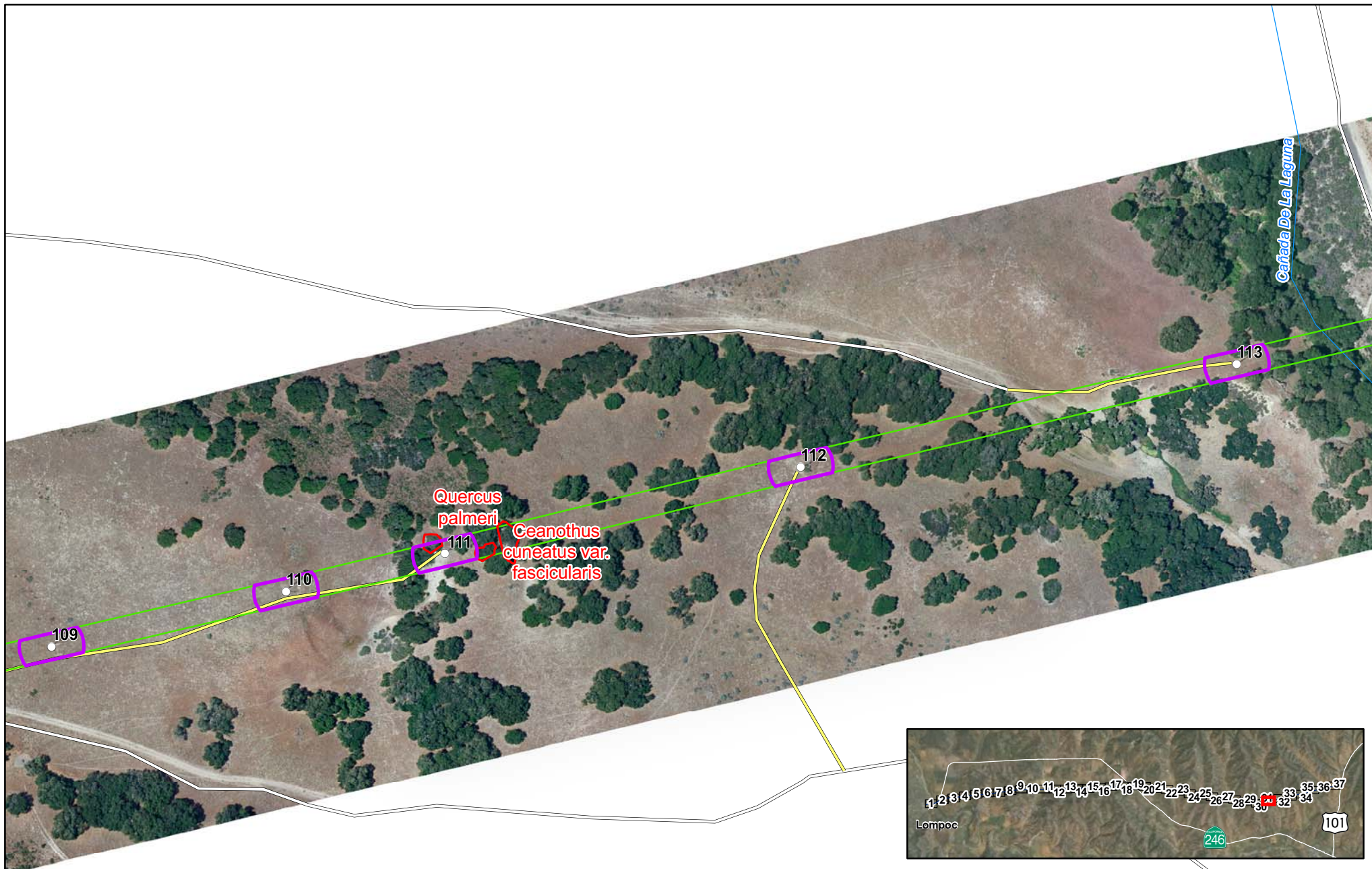
- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 30**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 31**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200
Feet



Scale:
1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ≡ County Roads
- ≡ Existing Access Road
- ≡ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ≡ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 32**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200
 Feet



Scale:
 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 33**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

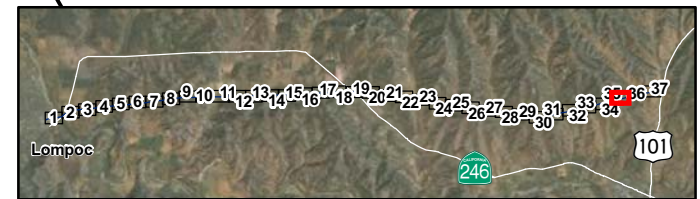
- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 34**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400



○ Power Poles to be Replaced ● Power Poles Replaced by Helicopter ● Existing Power Poles ● Power Pole Sites with Expected Tree Management □ Power Line ROW (40')	H Laydown Area for Helicopter □ Potential Lay Down Area □ Potential Pull and Tension Site □ Potential Staging Area □ Impact Areas	~ Rivers/Creeks — County Roads — Existing Access Road — Existing Access Road Reestablished Through Grading and Vegetation Removal — Overland Access Route	Rare Plant Occurrences ▲	Survey Area and Special-status Plant Locations Map 35 <i>Cabrillo - Santa Ynez</i> 115kV Reconductoring Project 0 100 200 Feet Scale: 1:2,400 PG&E
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- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 36**
 Cabrillo - Santa Ynez
 115kV Reconductoring Project

0 100 200 Feet
 Scale: 1:2,400



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line ROW (40')

- H** Laydown Area for Helicopter
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Impact Areas

- ~ Rivers/Creeks
- ~ County Roads
- ~ Existing Access Road
- ~ Existing Access Road Reestablished Through Grading and Vegetation Removal
- ~ Overland Access Route

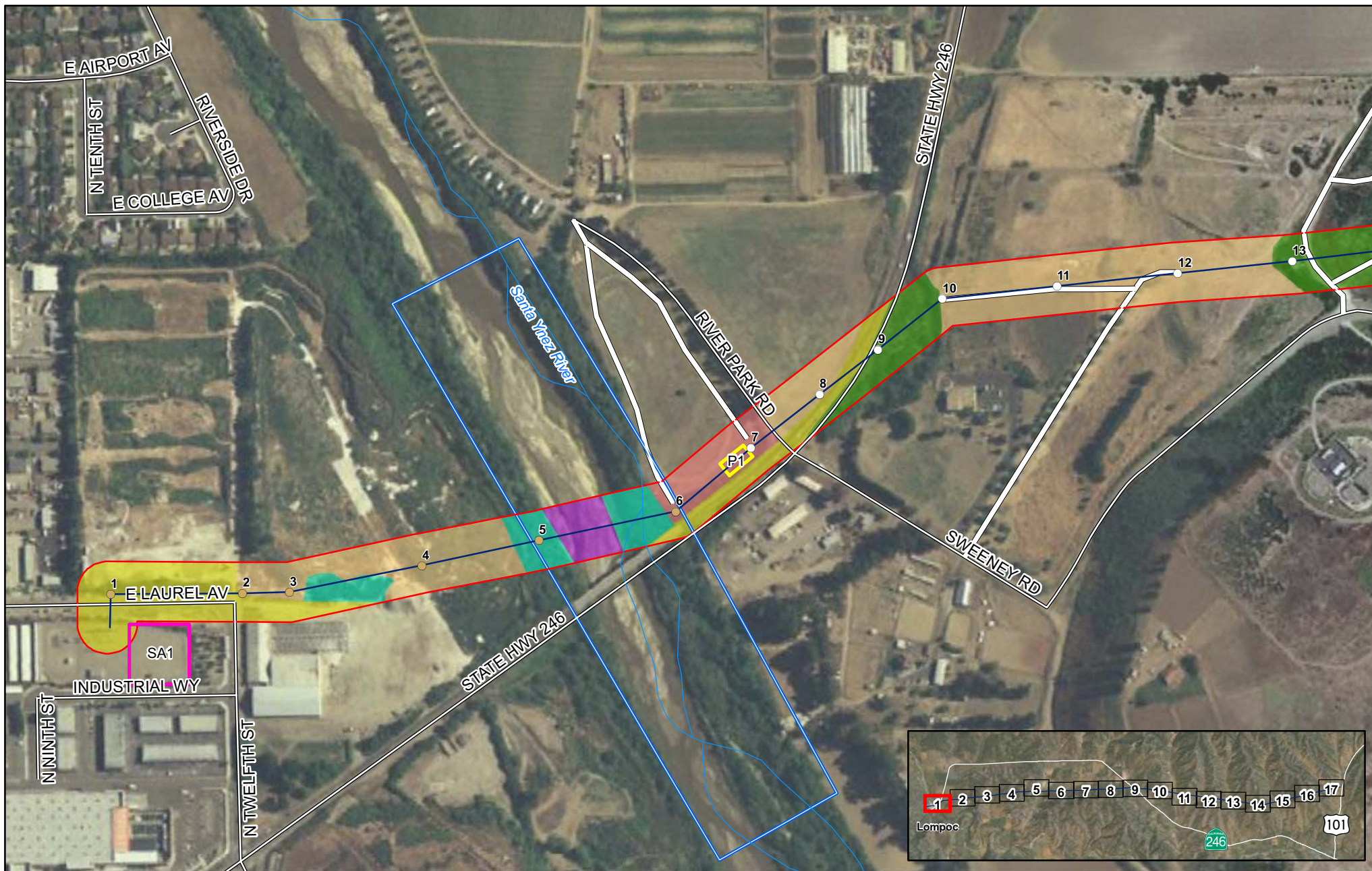
Rare Plant Occurrences



Survey Area and Special-status Plant Locations **Map 37**
Cabrillo - Santa Ynez
115kV Reconductoring Project

0 100 200 Feet
Scale: 1:2,400

Appendix B:
Vegetation and Land Cover Types



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

Natural Vegetation

- California Annual Grassland
- Central Coast (Lucian) Scrub
- Chamise Chapparral

Other Vegetation

- Coast Live Oak Woodland
- Freshwater Pond
- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

- County Roads
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 1



0 300 600 Feet

Scale:
1:5,200



- Power Poles to be Replaced
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Natural Vegetation

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- Chamise Chaparral

Other Vegetation

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- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 2



0 300 600
Feet

Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

Natural Vegetation

- California Annual Grassland
- Central Coast (Lucian) Scrub
- Chamise Chaparral

Other Vegetation

- Coast Live Oak Woodland
- Freshwater Pond
- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

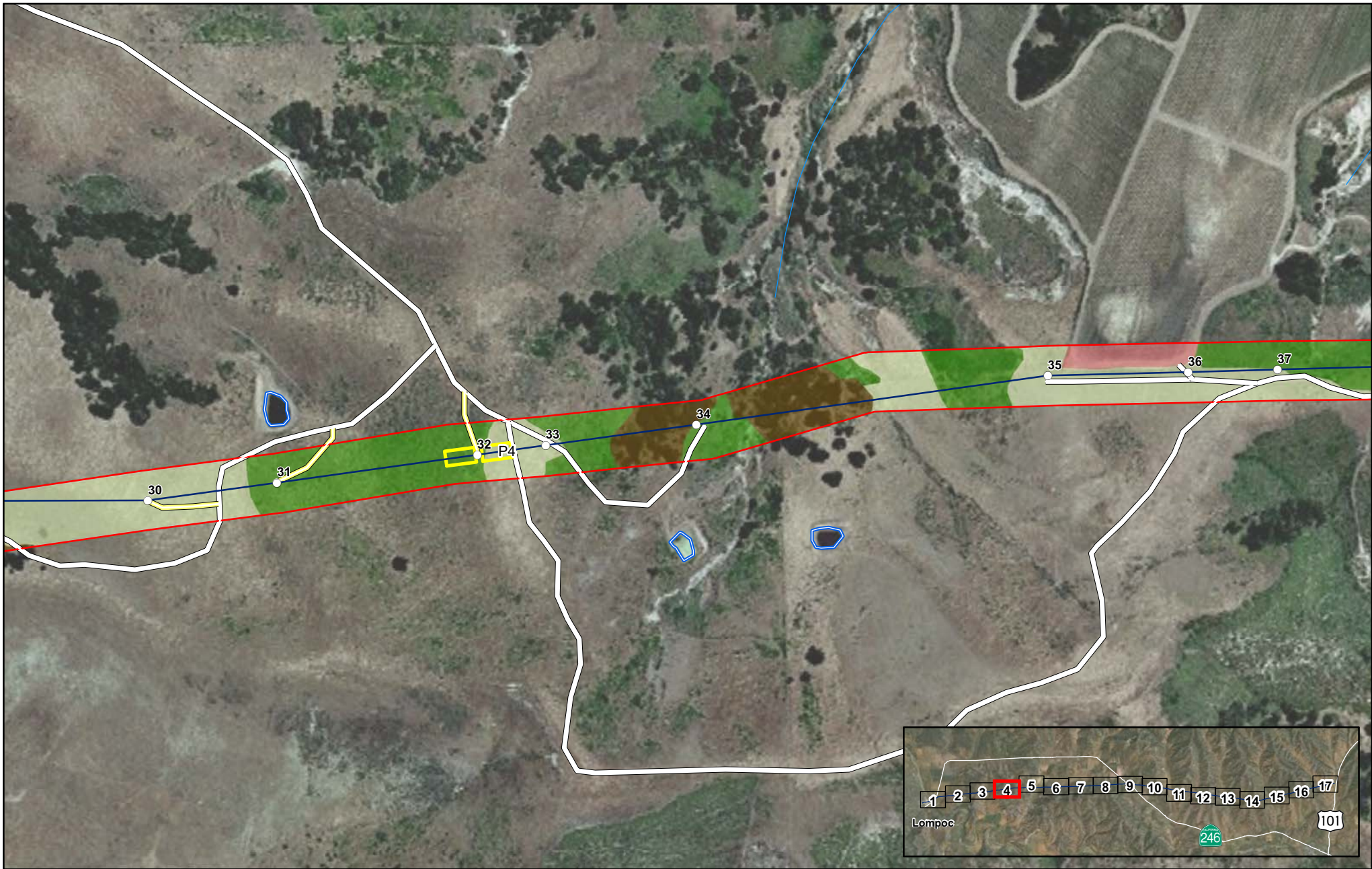
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 3

0 300 600 Feet
Scale: 1:5,200





- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

Natural Vegetation

- California Annual Grassland
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- Chamise Chapparral

Other Vegetation

- Coast Live Oak Woodland
- Freshwater Pond
- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

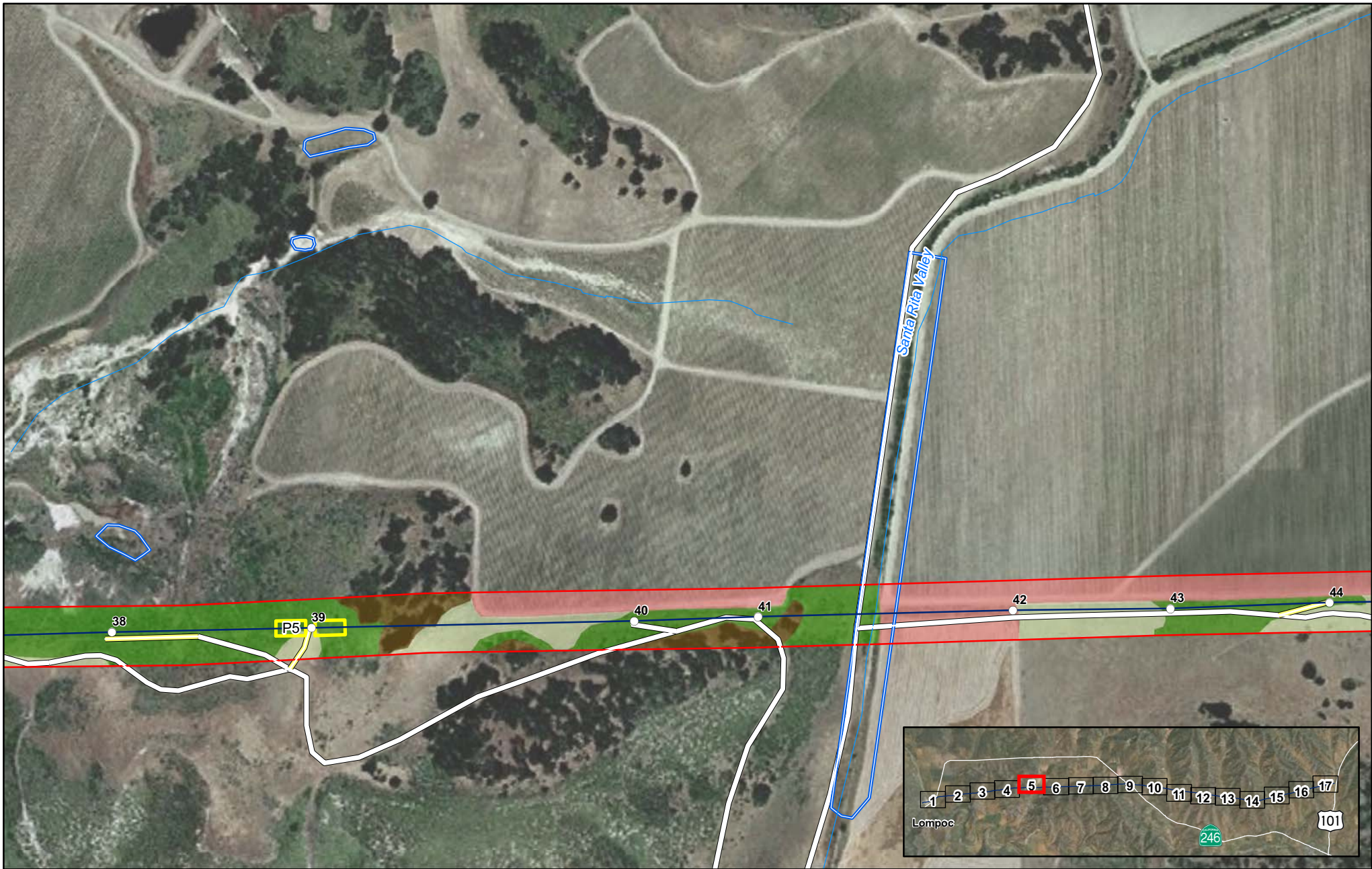


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 4



0 300 600
Feet

Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

Natural Vegetation

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- Chamise Chapparal

Other Vegetation

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- Freshwater Pond
- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 5

0 300 600
Feet



Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

Natural Vegetation

- California Annual Grassland
- Central Coast (Lucian) Scrub
- Chamise Chapparal

Other Vegetation

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- Freshwater Pond
- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 6



0 300 600 Feet

Scale: 1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
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- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
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Natural Vegetation

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Other Vegetation

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- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

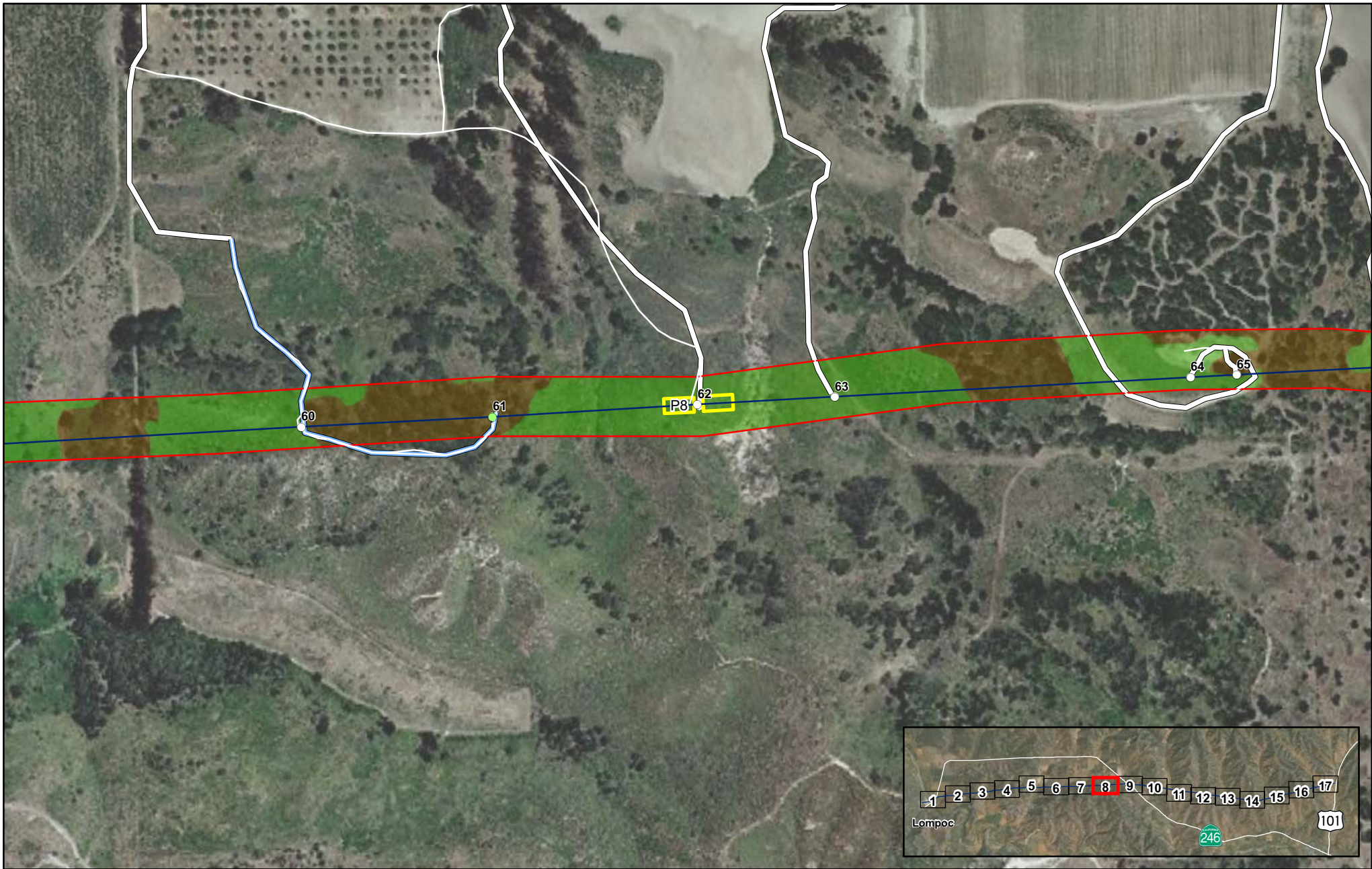


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 7



0 300 600 Feet

Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
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Natural Vegetation

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- Chamise Chapparral

Other Vegetation

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- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

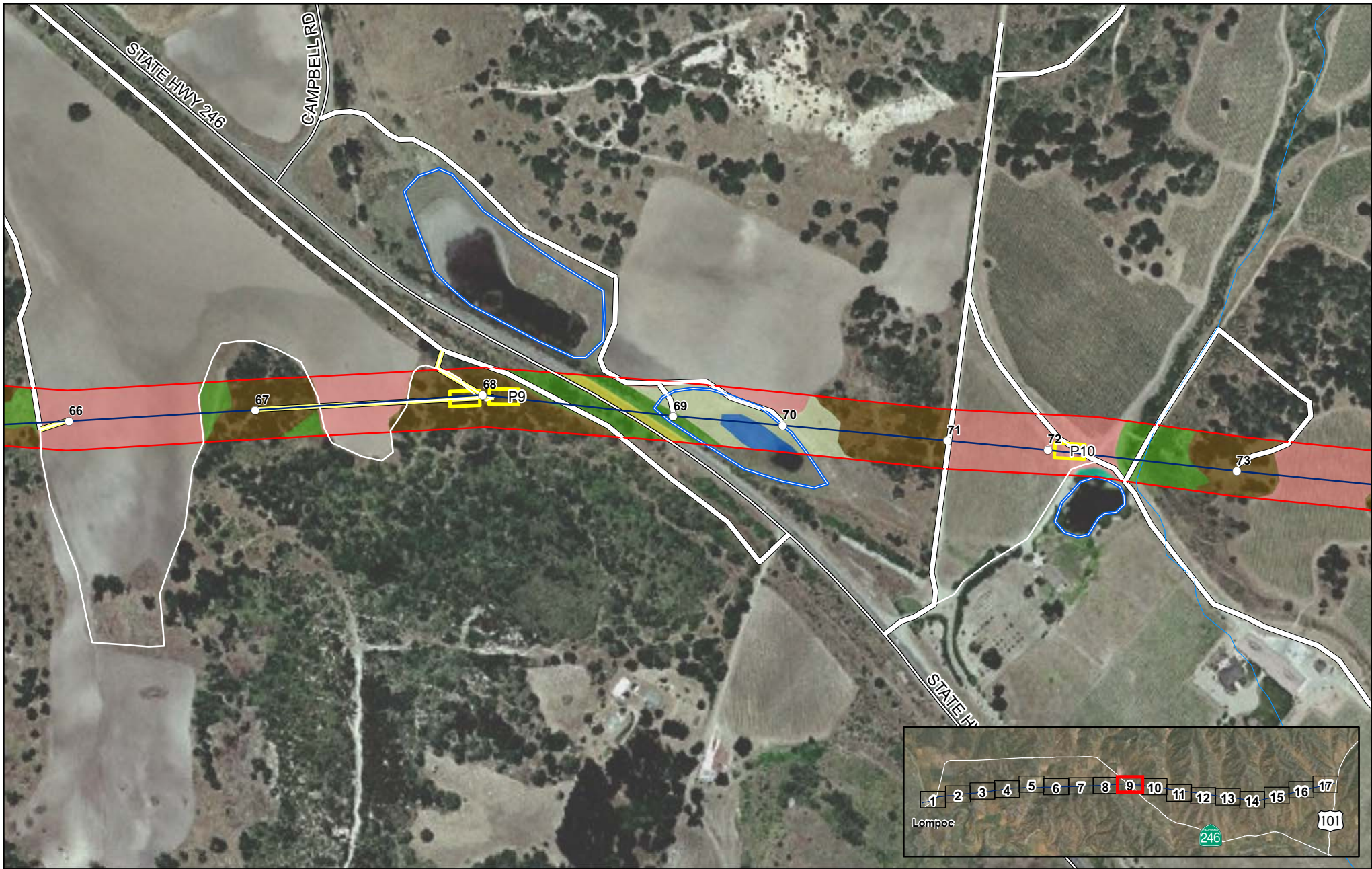


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 8

0 300 600
Feet



Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
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- Potential Staging Area
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Other Vegetation

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- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

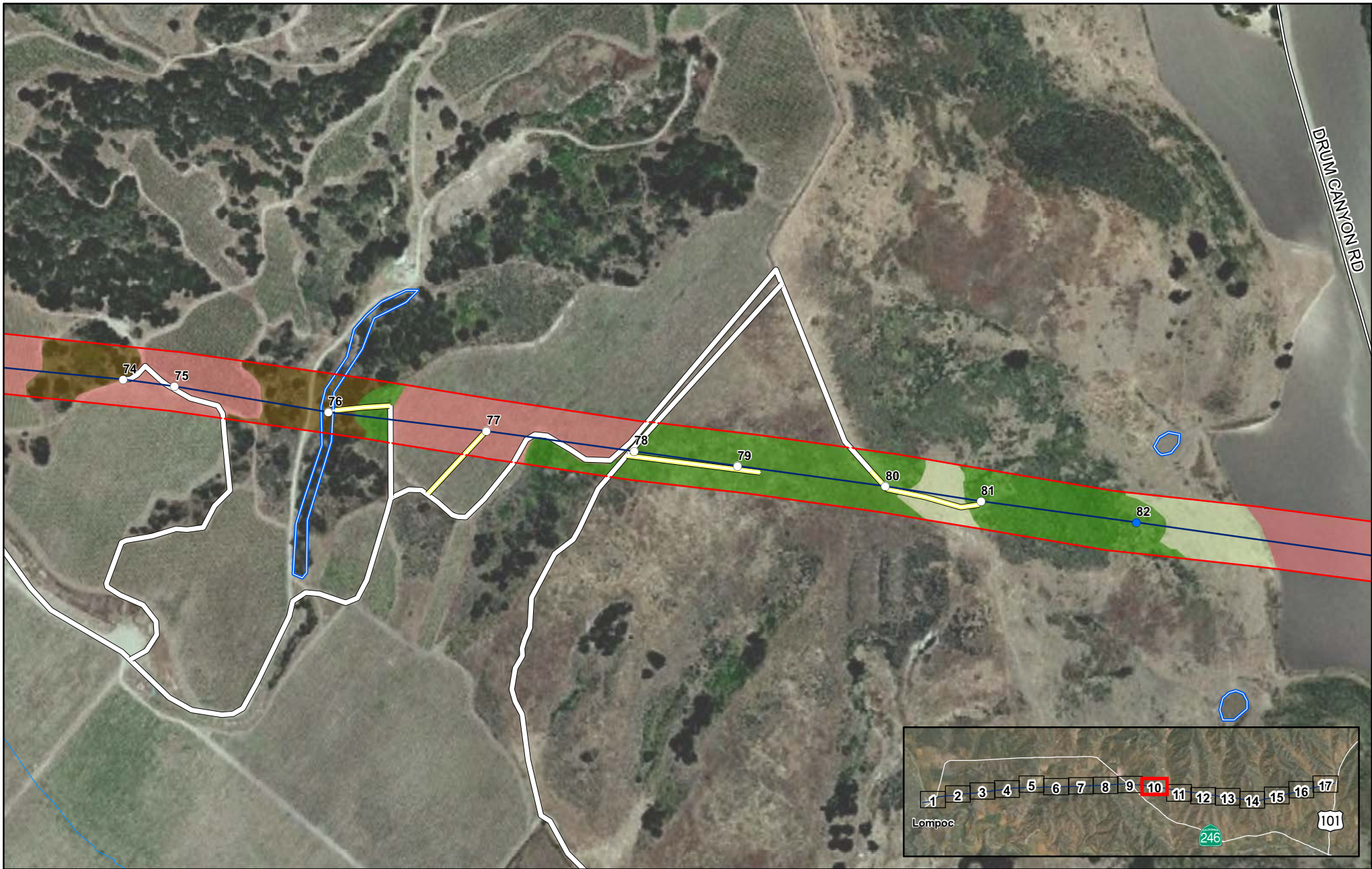


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 9



0 300 600
Feet

Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
- Power Pole Sites with Expected Tree Management
- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
- Potential Pull and Tension Site
- Potential Staging Area
- Ponds, Creeks, and Drainages

Natural Vegetation

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Other Vegetation

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- Freshwater Pond
- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

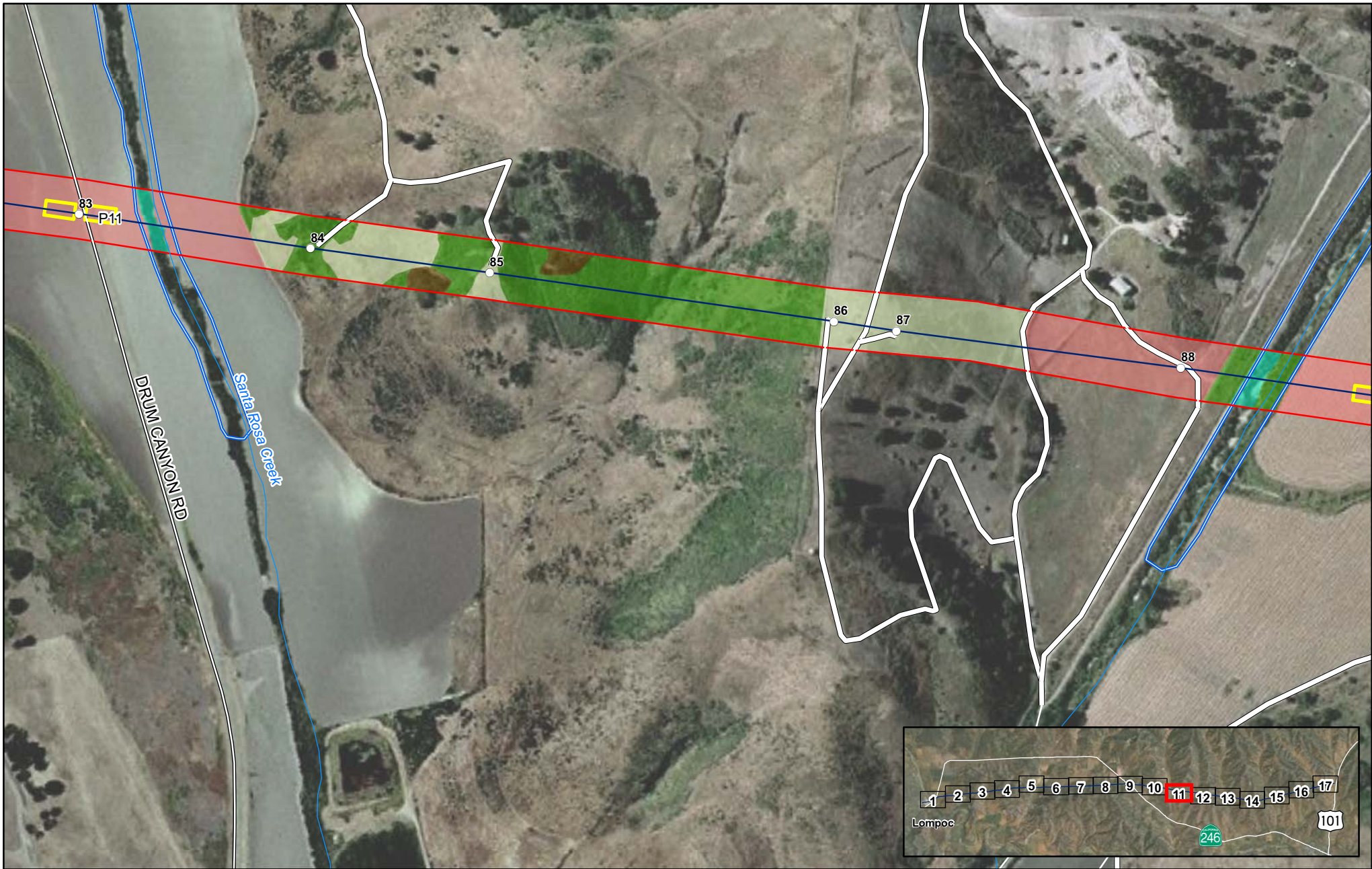


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 10



0 300 600
Feet

Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
- Existing Power Poles
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- Power Line

- 200' Habitat Classification Area
- Potential Lay Down Area
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- Potential Staging Area
- Ponds, Creeks, and Drainages

Natural Vegetation

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- Chamise Chaparral

Other Vegetation

- Coast Live Oak Woodland
- Freshwater Pond
- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

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- Developed
- Ruderal

County Roads

- Existing Access Road
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- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 11



0 300 600 Feet
Scale: 1:5,200



- Power Poles to be Replaced
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- Mule Fat Scrub
- Riparian Scrub

Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 12



0 300 600
Feet

Scale:
1:5,200



- Power Poles to be Replaced
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Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

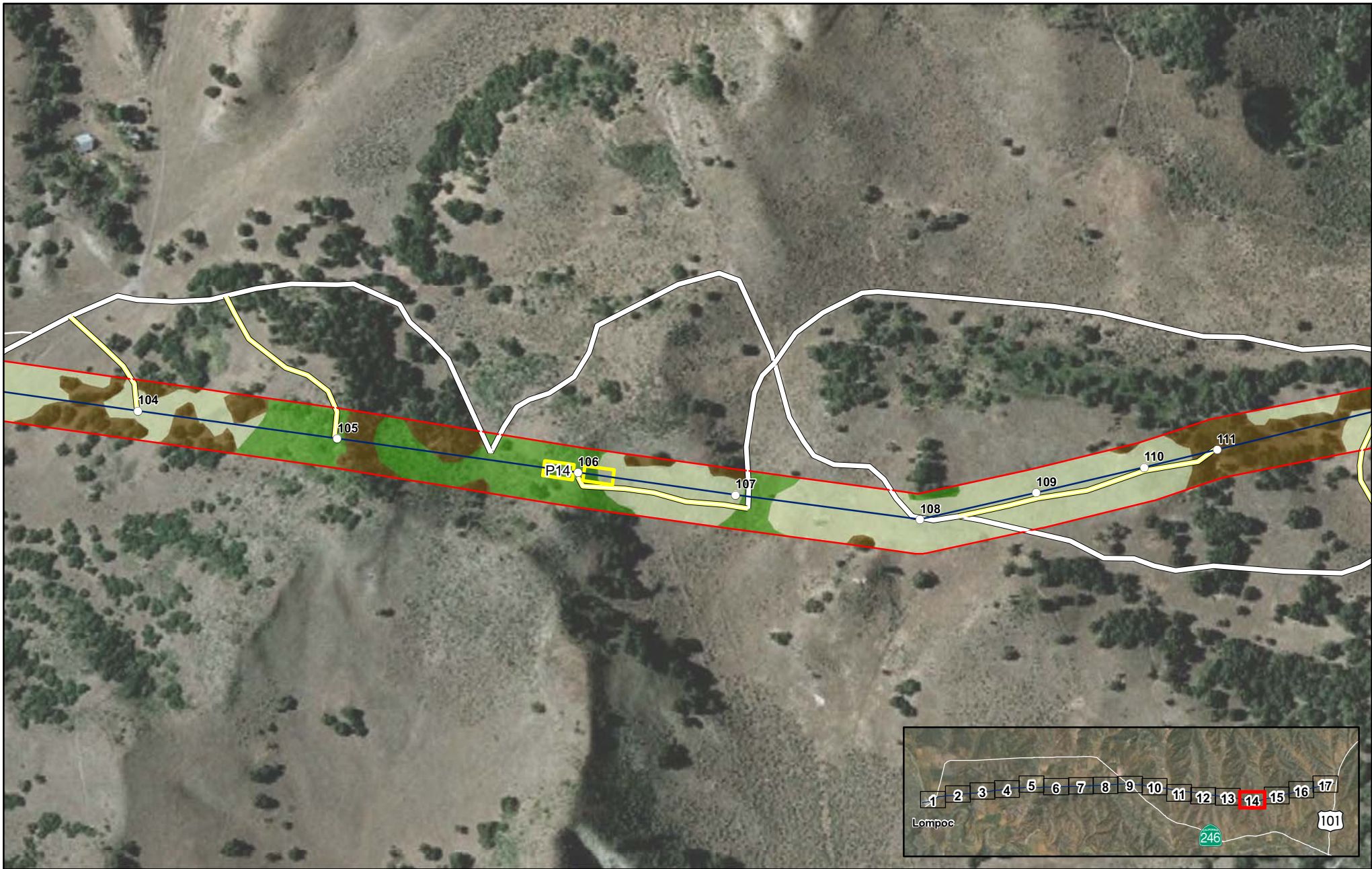


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 13



0 300 600 Feet

Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
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Other Vegetation

- Agriculture
- Developed
- Ruderal

County Roads

- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

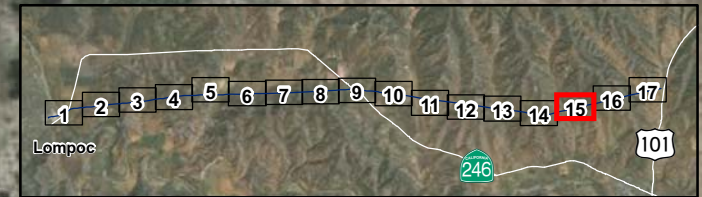
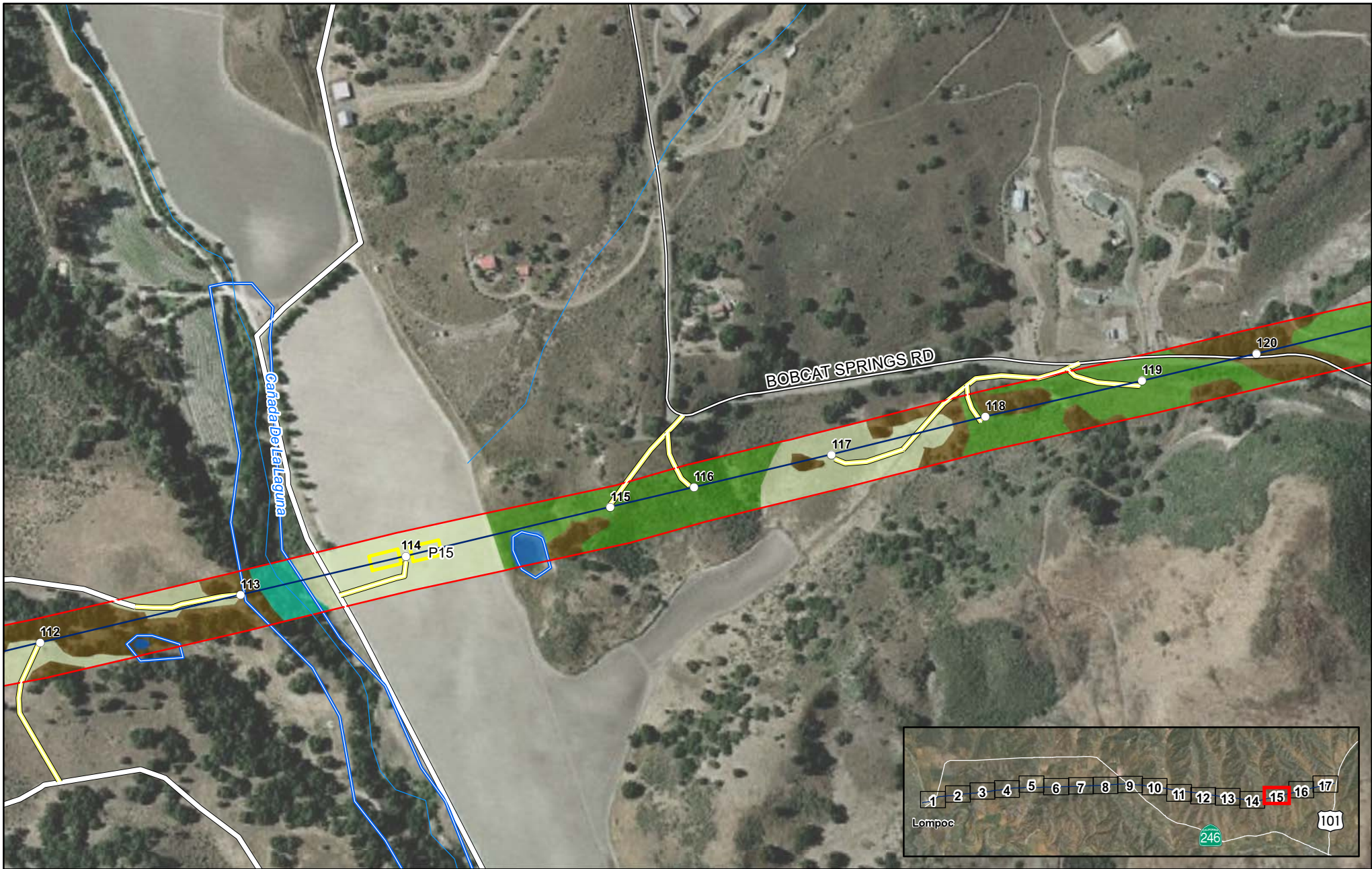


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 14



0 300 600
Feet

Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
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- Riparian Scrub

Other Vegetation

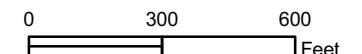
- Agriculture
- Developed
- Ruderal

County Roads

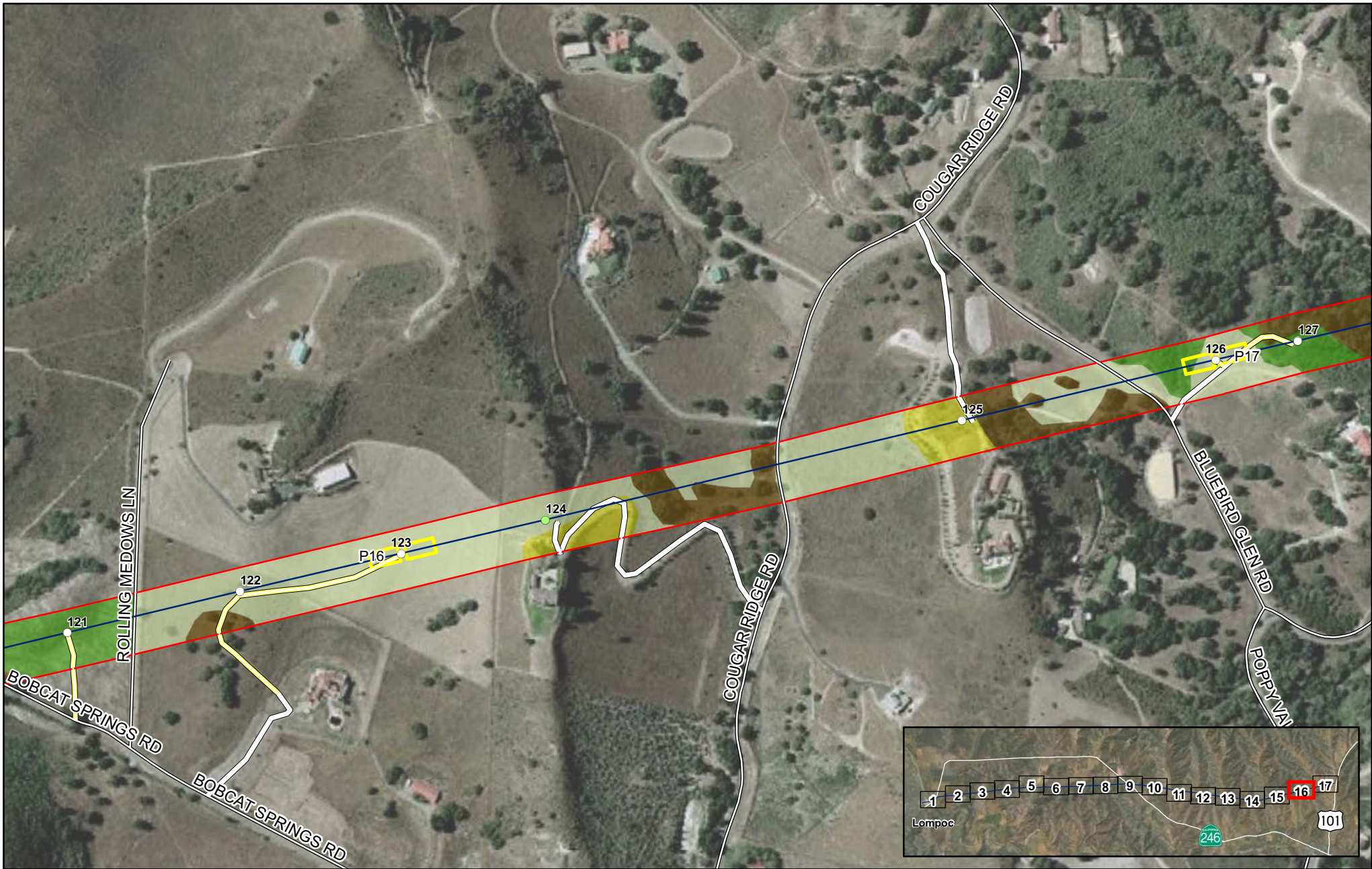
- Existing Access Road
- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route



Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 15



Scale:
1:5,200



- Power Poles to be Replaced
- Power Poles Replaced by Helicopter
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- Power Line

- 200' Habitat Classification Area
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Other Vegetation

- Agriculture
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- Ruderal

County Roads

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- Existing Access Road Reestablished Through Grading and Vegetation Removal
- Overland Access Route

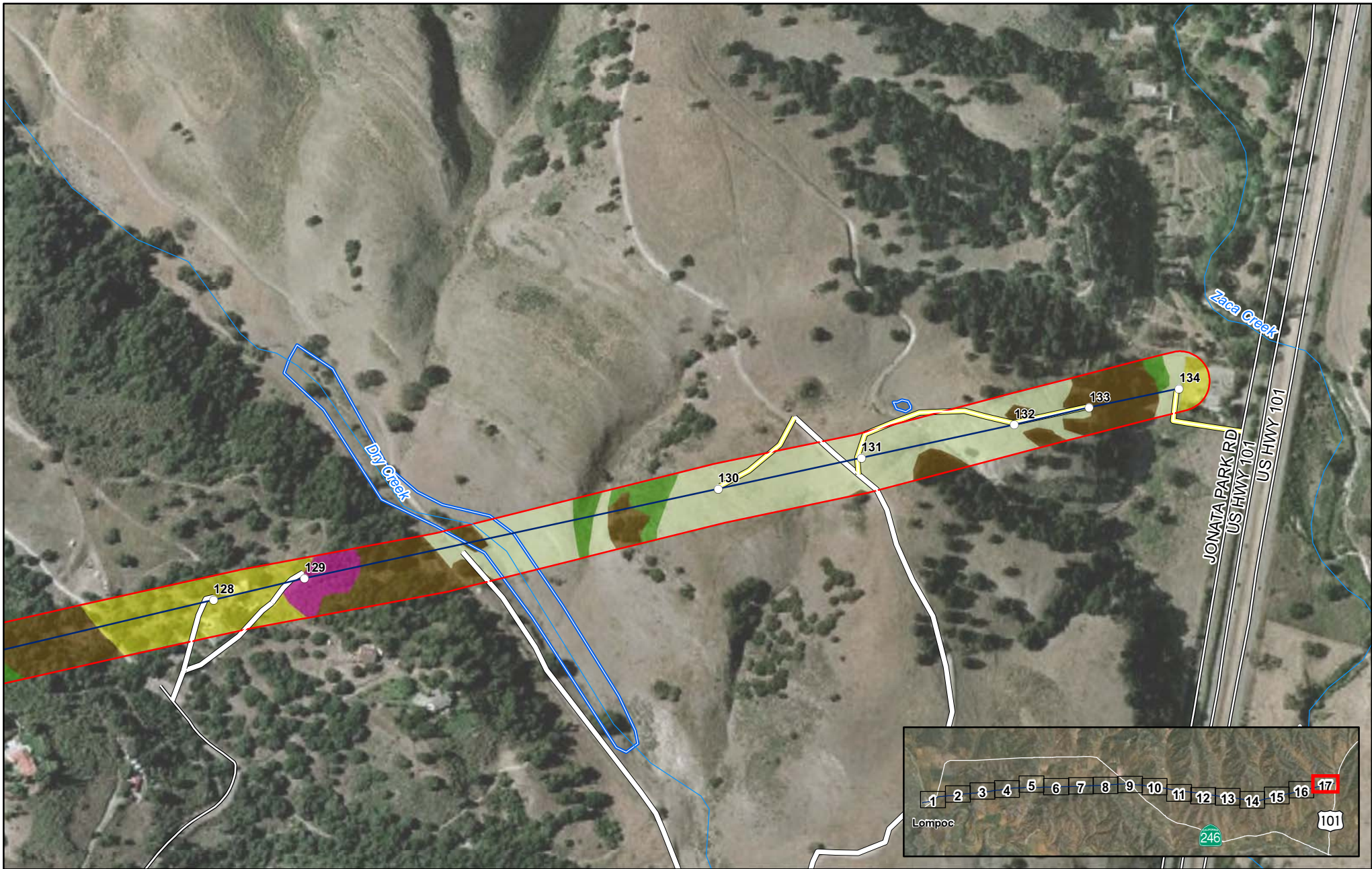


Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 16



0 300 600
Feet

Scale:
1:5,200



- Power Poles to be Replaced
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Vegetation and Landcover Types Cabrillo - Santa Ynez 115kV Reconductoring Project Map 17

0 300 600 Feet
Scale: 1:5,200



Appendix C:

Vascular Plants Observed in the Cabrillo-Santa Ynez Reconductoring Project Survey Area

Vascular Plants Observed in the Cabrillo-Santa Ynez Reconductoring Project Survey Area

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
FERNS AND FERN ALLIES			
DENNSTAEDTIACEAE	BRACKEN FERN FAMILY		
<i>Pteridium aquilinum</i>	western bracken fern	CAG, CCS	
DRYOPTERIDACEAE	WOOD FERN FAMILY		
<i>Dryopteris arguta</i>	coastal wood fern	CCS	
POLYPODIACEAE	POLYPODY FAMILY		
<i>Polypodium californicum</i>	California polypody	CLO	
PTERIDACEAE	MAIDENHAIR FERN FAMILY		
<i>Adiantum jordanii</i>	California maidenhair	CCS	
<i>Pellaea andromedifolia</i>	coffee cliffbrake	CCS	
<i>Pentagramma triangularis</i>	goldback fern	CCS	
GYMNOSPERMS - CONIFERS			
CUPRESSACEAE	CYPRESS FAMILY		
<i>Cupressus macrocarpa</i>	Monterey cypress	DEV	
PINACEAE	PINE FAMILY		
<i>Pinus attenuata</i>	knobcone pine	DEV	
FLOWERING PLANTS - DICOTS			
ACERACEAE	MAPLE FAMILY		
<i>Acer negundo</i> var. <i>californicum</i>	boxelder	RS	
AIZOACEAE	FIG-MARIGOLD FAMILY		
<i>Carpobrotus edulis</i> *	hottentot fig	DEV, RUD	Cal-IPC
ANACARDIACEAE	SUMAC FAMILY		
<i>Toxicodendron diversilobum</i>	poison oak	CCS	
APIACEAE	CARROT FAMILY		
<i>Bowlesia incana</i>	hoary bowlesia	CLO	
<i>Conium maculatum</i> *	poison hemlock	CCS	Cal-IPC
<i>Foeniculum vulgare</i> *	sweet fennel	CCS	Cal-IPC
<i>Lomatium utriculatum</i>	common lomatium	CAG, CCS	
<i>Sanicula arguta</i>	sharp-tooth sanicle	CCS	
<i>Sanicula bipinnatifida</i>	purple sanicle	CAG, CCS	
<i>Sanicula crassicaulis</i>	Pacific sanicle	CCS	
<i>Scandix pecten-veneris</i> *	shepherds needle	CAG, CCS	
<i>Yabea microcarpa</i>	false carrot		
APOCYNACEAE	DOGBANE FAMILY		
<i>Nerium oleander</i> *	oleander	CAG	
ASCLEPIADACEAE	MILKWEED FAMILY		
<i>Asclepias eriocarpa</i>	woollypod milkweed	CAG	
ASTERACEAE	ASTER FAMILY		
<i>Achillea millefolium</i>	yarrow	CAG, CCS	

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
<i>Achyrachaena mollis</i>	blow wives	CAG	
<i>Acourtia microcephala</i>	sacapellote	CAG, CCS	
<i>Ambrosia psilostachya</i>	western ragweed	CAG, CCS	
<i>Anaphalis margaritacea</i>	western pearly everlasting	CCS	
<i>Artemisia californica</i>	coastal sagebrush	CAG, CCS	
<i>Artemisia douglasiana</i>	mugwort	RS, RUD	
<i>Artemisia dracunculus</i>	wild tarragon	CAG	
<i>Aster chilensis</i>	Pacific aster	CCS, RS	
<i>Baccharis pilularis</i>	coyote brush	CAG, CCS	
<i>Baccharis salicifolia</i>	mulefat	MFS	
<i>Carduus pycnocephalus</i> *	Italian thistle	CCS	Cal-IPC
<i>Centaurea melitensis</i> *	Maltese star thistle	CAG, CCS	Cal-IPC
<i>Chaenactis glabriuscula</i>	yellow pincushion	CAG	
<i>Chamomilla suaveolens</i> *	pinapple weed	RUD	
<i>Cirsium occidentale</i>	cobwebby thistle	CCS	
<i>Cirsium vulgare</i> *	bull thistle	CAG	Cal-IPC
<i>Cnicus benedictus</i> *	blessed thistle	CAG	Cal-IPC
<i>Conyza canadensis</i>	horseweed	CAG, FPS, RUD	
<i>Encelia californica</i>	California brittlebush	CCS	
<i>Erechtites glomerata</i> *	cutleaf burnweed	RUD	Cal-IPC
<i>Ericameria ericoides</i>	California goldenbush	CAG, CCS	
<i>Erigeron foliosus</i> var. <i>foliosus</i>	leafy fleabane	CLO	
<i>Eriophyllum confertiflorum</i>	golden yarrow	CCS, CLO	
<i>Filago californica</i>	California filago	CCS	
<i>Filago gallica</i> *	filago	CCS, CLO	
<i>Gnaphalium californicum</i>	California cudweed	CCS	
<i>Gnaphalium canescens</i> ssp. <i>beneolens</i>	Wright's cudweed	CCS	
<i>Gnaphalium luteo-album</i> *	common cudweed	CAG	
<i>Gnaphalium purpureum</i>	purple cudweed	CCS	
<i>Gnaphalium ramosissimum</i>	pink cudweed	CCS, CLO	
<i>Gnaphalium stramineum</i>	cotton batting plant	CCS	
<i>Grindelia camporum</i> var. <i>camporum</i>	Great Valley gumweed	CAG	
<i>Hazardia squarrosa</i>	sawtooth goldenbush	CAG, CCS	
<i>Hemizonia increscens</i> ssp. <i>increscens</i>	grassland tarweed	CAG, CCS	
<i>Heterotheca grandiflora</i>	telegraph weed	RUD	
<i>Heterotheca sessiliflora</i> ssp. <i>echioides</i>	sessileflower false goldenaster	CAG	
<i>Hypochaeris glabra</i> *	smooth cat's ear	CAG, CCS	Cal-IPC
<i>Isocoma menziesii</i>	Menzies' goldenbush	CAG, CCS	
<i>Lactuca serriola</i> *	prickly lettuce	RUD	
<i>Lasthenia californica</i>	California goldfields	CAG	
<i>Layia glandulosa</i>	whitedaisy tidytops	CAG	
<i>Lessingia filaginifolia</i>	California aster	CCS	
<i>Madia sativa</i>	coast tarweed	CAG, CCS, RUD	
<i>Malacothrix californica</i>	California desert dandelion	CAG	
<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>	cliff desert dandelion	CCS, CLO, RS, RUD	
<i>Micropus californicus</i>	slender cottonweed	CAG, CCS, CLO	
<i>Microseris douglasii</i>	Douglas' silverpuffs	CAG	

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
<i>Picris echioides</i> *	bristly oxtongue	CCS	Cal-IPC
<i>Psilocarphus</i> sp.	woollyheads	FPS	
<i>Senecio flaccidus</i> var. <i>douglasii</i>	Douglas' ragwort	CCS	
<i>Senecio vulgaris</i> *	old-man-in-the-Spring	CAG, CCS	
<i>Silybum marianum</i> *	milk thistle	RUD	Cal-IPC
<i>Solidago californica</i>	California goldenrod	CLO	
<i>Sonchus asper</i> *	spiny sowthistle	RUD	
<i>Sonchus oleraceus</i> *	common sowthistle	CAG, CCS	
<i>Taraxacum officinale</i>	dandelion	MFS, RUD	
<i>Uropappus lindleyi</i>	Lindley's silverpuffs	CAG	
<i>Xanthium spinosum</i> *	spiny cocklebur	MFS, FPS	
BORAGINACEAE	BORAGE FAMILY		
<i>Amsinckia spectabilis</i>	woolly breeches	CAG, CCS	
<i>Cryptantha</i> spp.	cryptantha	CAG, CCS	
<i>Heliotropium curassavicum</i>	seaside heliotrope	FPS	
<i>Plagiobothrys nothofulvus</i>	rusty popcornflower	CAG	
BRASSICACEAE	MUSTARD FAMILY		
<i>Arabis glabra</i>	tower rockcress	CCS	
<i>Brassica nigra</i> *	black mustard		Cal-IPC
<i>Brassica rapa</i> *	field mustard	RUD	Cal-IPC
<i>Cardamine oligosperma</i>	little western bittercress	CCS, RS	
<i>Descurainia pinnata</i>	western tansymustard	FPS	
<i>Erysimum capitatum</i> var. <i>lompocense</i>	San Luis Obispo wallflower	CCS	CNPS 4
<i>Hirschfeldia incana</i> *	shortpod mustard	CAG, FPS, MFS, RUD	Cal-IPC
<i>Lepidium nitidum</i>	shining pepperweed	CAG	
<i>Raphanus sativus</i> *	cultivated radish	RUD	Cal-IPC
<i>Rorippa nasturtium-aquaticum</i>	watercress	FPS	
<i>Sisymbrium officinale</i> *	hedge mustard	CLO, RUD	
<i>Thysanocarpus curvipes</i>	sand fringe pod	CAG	
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY		
<i>Lonicera subspicata</i> var. <i>denudata</i>	Santa Barbara honeysuckle	CCS	
<i>Sambucus mexicana</i>	Mexican elderberry	CAG, RS	
<i>Symphoricarpos albus</i>	common snowberry	CLO	
CARYOPHYLLACEAE	PINK FAMILY		
<i>Cardionema ramosissimum</i>	sand carpet	CCS	
<i>Cerastium glomeratum</i> *	sticky chickweed	CCS, CLO	
<i>Silene gallica</i> *	common catchfly	CAG, CLO	
<i>Silene laciniata</i>	cardinal catchfly	CCS	
<i>Spergula arvensis</i> *	corn spurry	FPS	
<i>Spergularia bocconii</i> *	Boccone's sandspurry	CCS	
<i>Stellaria media</i> *	common chickweed	CCS, CLO	
CHENOPODIACEAE	GOOSEFOOT FAMILY		
<i>Atriplex semibaccata</i> *	Australian saltbush	CAG, CCS	Cal-IPC
<i>Chenopodium album</i> *	lamb's quarters	RUD	
<i>Chenopodium ambrosioides</i> *	Mexican tea	CCS	
<i>Salsola tragus</i> *	prickly Russian thistle	RUD	Cal-IPC
CISTACEAE	ROCK-ROSE FAMILY		

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
<i>Helianthemum scoparium</i>	Bisbee Peak rushrose	CCS	
CONVOLVULACEAE	MORNING-GLORY FAMILY		
<i>Calystegia macrostegia</i> ssp. <i>cyclostegia</i>	island false bindweed	CCS	
<i>Convolvulus arvensis</i> *	field bindweed	CAG, RUD	
<i>Cressa truxillensis</i>	spreading alkaliweed	FPS	
CRASSULACEAE	STONECROP FAMILY		
<i>Crassula connata</i>	sand pygmyweed	CAG, CCS	
<i>Dudleya lanceolata</i>	lanceleaf liveforever	CCS	
CUCURBITACEAE	CUCUMBER FAMILY		
<i>Cucurbita foetidissima</i>	Missouri gourd	CAG	
<i>Marah fabaceus</i>	California manroot	CC, CCS, CLO	
<i>Marah macrocarpus</i>	Cucamonga manroot	CCS	
CUSCUTACEAE	DODDER FAMILY		
<i>Cuscuta</i> sp.	dodder	CCS	
ERICACEAE	HEATH FAMILY		
<i>Arctostaphylos purissima</i>	La Purissima manzanita	CLO	CNPS 1B
<i>Vaccinium ovatum</i>	California huckleberry	CLO	
EUPHORBIACEAE	SPURGE FAMILY		
<i>Croton californicus</i>	California croton	CAG, CCS	
<i>Eremocarpus setigerus</i>	turkey mullein	CAG	
FABACEAE	PEA FAMILY		
<i>Astragalus pomonensis</i>	Pomona milkvetch	CAG	
<i>Lathyrus vestitus</i>	Pacific pea	CLO	
<i>Lotus junceus</i>	rush broom	CCS	
<i>Lotus purshianus</i>	Spanish clover	CAG	
<i>Lotus scoparius</i>	common deerweed	CCS	
<i>Lotus wrangelianus</i>	Chilean bird's-foot trefoil	CAG	
<i>Lupinus arboreus</i>	yellow bush lupine	CCS, CLO	
<i>Lupinus bicolor</i>	miniature lupine	CAG, CCS	
<i>Lupinus chamissonis</i>	dune lupine	CCS	
<i>Lupinus nanus</i>	sky lupine	CAG	
<i>Lupinus succulentus</i>	arroyo lupine	MFS	
<i>Medicago polymorpha</i> *	burclover	CAG, RUD	Cal-IPC
<i>Melilotus albus</i> *	white sweetclover	MFS, RS, RUD	
<i>Melilotus indicus</i> *	annual yellow sweetclover	RUD	
<i>Trifolium ciliolatum</i>	foothill clover	CAG	
<i>Trifolium gracilentum</i> var. <i>gracilentum</i>	pinpoint clover	CAG	
<i>Trifolium hirtum</i> *	rose clover	CAG, RUD	Cal-IPC
<i>Trifolium microcephalum</i>	smallhead clover	CAG	
<i>Trifolium willdenovii</i>	tomcat clover	CAG	
<i>Vicia villosa</i> ssp. <i>varia</i> *	winter vetch	CAG, RUD	
FAGACEAE	BEECH FAMILY		
<i>Quercus agrifolia</i>	California live oak	CAG, CLO	
<i>Quercus palmeri</i>	Palmer oak	CAG, CLO	Locally rare, SB Co.
<i>Quercus wislizeni</i> var. <i>frutescens</i>	interior live oak	CLO	

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
GERANIACEAE	GERANIUM FAMILY		
<i>Erodium botrys</i> *	longbeak stork's bill	CAG, CCS	
<i>Erodium cicutarium</i> *	redstem stork's bill	CAG, FPS	Cal-IPC
<i>Geranium dissectum</i> *	cutleaf geranium	CAG	Cal-IPC
GROSSULARIACEAE	CURRENT FAMILY		
<i>Ribes divaricatum</i> var. <i>pubiflorum</i>	straggly gooseberry	RS	
<i>Ribes speciosum</i>	fuchsiaflower gooseberry	CCS	
HYDROPHYLLACEAE	WATERLEAF FAMILY		
<i>Eucrypta chrysanthemifolia</i>	spotted hideseed	CCS, CLO	
<i>Phacelia californica</i>	California phacelia	CCS	
<i>Phacelia douglasii</i>	Douglas' phacelia	CCS	
<i>Phacelia ramosissima</i>	branching phacelia	CCS	
<i>Phacelia tanacetifolia</i>	lacy phacelia	CAG, CCS	
<i>Pholistoma auritum</i>	blue fiestaflower	CLO, RUD	
LAMIACEAE	MINT FAMILY		
<i>Lamium amplexicaule</i> *	henbit deadnettle	RUD	
<i>Marrubium vulgare</i> *	horehound	CCS, RUD	Cal-IPC
<i>Monardella undulata</i>	curlyleaf monardella	CCS	CNPS 4
<i>Salvia carduacea</i>	thistle sage	CAG	
<i>Salvia mellifera</i>	black sage	CC, CCS	
<i>Salvia spathacea</i>	hummingbird sage	CC, CLO	
<i>Stachys ajugoides</i>	hedge nettle	CCS, CLO	
LYTHRACEAE			
<i>Lythrum hyssopifolia</i> *	hyssop loosestrife	FPS	Cal-IPC
MALVACEAE	MALLOW FAMILY		
<i>Malvella leprosa</i>	alkali mallow	FPS	
<i>Sidalcea malviflora</i>	dwarf checkerbloom	CAG, CCS	
MYRTACEAE	MYRTLE FAMILY		
<i>Eucalyptus globulus</i> *	Tasmanian bluegum	DEV	Cal-IPC
ONAGRACEAE	EVENING PRIMROSE FAMILY		
<i>Camissonia</i> sp.	suncup	CAG, CCS	
<i>Camissonia campestris</i>	Mojave suncup	CAG, CCS	
<i>Camissonia micrantha</i>	miniature suncup	CAG, CCS	
<i>Clarkia bota</i>	Botta's clarkia	CLO	
<i>Clarkia epilobioides</i>	canyon clarkia	CLO	
<i>Clarkia purpurea</i>	winecup clarkia	CAG, CLO	
<i>Clarkia unguiculata</i>	elegant clarkia	CCS	
<i>Epilobium brachycarpum</i>	tall annual willowherb	FPS, RUD	
<i>Epilobium canum</i>	hummingbird trumpet	CCS	
OXALIDACEAE	WOOD-SORREL FAMILY		
<i>Oxalis pes-caprae</i> *	Bermuda buttercup	CLO	Cal-IPC
PAEONIACEAE	PEONY FAMILY		
<i>Paeonia californica</i>	California peony	CCS	
PAPAVERACEAE	POPPY FAMILY		
<i>Eschscholzia californica</i>	California poppy	CAG, CCS	

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
<i>Platystemon californicus</i>	creamcups	CAG	
PLANTAGINACEAE	PLANTAIN FAMILY		
<i>Plantago coronopus</i> *	buckhorn plantain	CAG, FPS	
<i>Plantago erecta</i>	dotseed plantain	CAG, CCS	
POLEMONIACEAE	PHLOX FAMILY		
<i>Gilia achilleifolia</i>	California gilia	CAG	
<i>Gilia capitata</i>	blue field gilia	CAG	
<i>Gilia</i> cf. <i>austro-occidentalis</i>	southwestern gilia	CAG	
<i>Leptodactylon californicum</i>	California prickly phlox	CCS	
<i>Navarretia atractyloides</i>	hollyleaf pincushionplant	CAG, CCS, RUD	
POLYGONACEAE	BUCKWHEAT FAMILY		
<i>Chorizanthe obovata</i>	spoonsepal spineflower	CAG, CCS	
<i>Eriogonum elongatum</i>	longstem buckwheat	CCS	
<i>Eriogonum fasciculatum</i>	eastern Mojave buckwheat	CCS	
<i>Lastarriaea coriacea</i>	leather spineflower	CAG, CCS	
<i>Mucronea californica</i>	California spineflower	CAG, CCS	CNPS 4
<i>Polygonum arenastrum</i> *	oval-leaf knotweed	CAG, RUD	
<i>Rumex acetosella</i> *	common sheep sorrel	CAG	Cal-IPC
<i>Rumex crispus</i> *	curly dock	CAG, FPS, RUD	Cal-IPC
PORTULACACEAE	PURSLANE FAMILY		
<i>Calandrinia ciliata</i>	fringed redmaids	CAG	
<i>Claytonia perfoliata</i>	miner's lettuce	CAG, CCS	
PRIMULACEAE	PRIMROSE FAMILY		
<i>Anagallis arvensis</i> *	scarlet pimpernel	CCS	
RANUNCULACEAE	BUTTERCUP FAMILY		
<i>Clematis ligusticifolia</i>	western white clematis	RS	
<i>Ranunculus californicus</i>	California buttercup	CAG, CCS	
RHAMNACEAE	BUCKTHORN FAMILY		
<i>Ceanothus cuneatus</i> var. <i>fascicularis</i>	sand buck brush	CAG, CC, CLO	CNPS 4
<i>Rhamnus crocea</i>	redberry buckthorn	CCS	
ROSACEAE	ROSE FAMILY		
<i>Adenostoma fasciculatum</i>	chamise	CC, CCS	
<i>Aphanes occidentalis</i>	western Lady's Mantle	CAG, CLO	
<i>Cercocarpus betuloides</i>	mountain mahogany	CCS	
<i>Heteromeles arbutifolia</i>	toyon	CCS	
<i>Horkelia cuneata</i> ssp. <i>cuneata</i>	wedgeleaf horkelia	CAG, CCS	
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	wedgeleaf horkelia	CAG	CNPS 1B
<i>Rosa californica</i>	California wildrose	CLO	
<i>Rubus ursinus</i>	California blackberry	CLO, RS	
RUBIACEAE	MADDER FAMILY		
<i>Galium aparine</i>	stickywilly	CCS, CLO	
<i>Galium porrigens</i>	graceful bedstraw	CCS	
SALICACEAE	WILLOW FAMILY		
<i>Populus</i> sp.	cottonwood	MFS	
<i>Salix exigua</i>	narrowleaf willow	MFS, RS	
<i>Salix lasiolepis</i>	arroyo willow	RS	

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
SAXIFRAGACEAE	SAXIFRAGE FAMILY		
<i>Lithophragma cymbalaria</i>	mission woodland-star	CLO	
<i>Saxifraga californica</i>	California saxifrage	CCS	
SCROPHULARIACEAE	FIGWORT FAMILY		
<i>Castilleja affinis</i>	coast Indian paintbrush	CCS	
<i>Castilleja exserta</i>	exserted Indian paintbrush	CAG, CCS	
<i>Collinsia heterophylla</i>	purple Chinese houses	CAG, CCS, CLO	
<i>Keckiella cordifolia</i>	heartleaf keckiella	CLO	
<i>Linaria canadensis</i>	blue toad flax	CAG	
<i>Mimulus aurantiacus</i>	sticky monkeyflower	CC, CCS, CLO	
<i>Scrophularia californica</i>	California figwort	CCS, CLO	
<i>Triphysaria eriantha</i> ssp. <i>rosea</i>	johnny-tuck	CAG	
SOLANACEAE	POTATO FAMILY		
<i>Nicotiana glauca</i> *	tree tobacco	RUD	Cal-IPC
<i>Solanum douglasii</i>	greenspot nightshade	RS, CLO	
<i>Solanum umbelliferum</i>	bluewitch nightshade	CCS	
TAMARICACEAE	TAMARISK FAMILY		
<i>Tamarix ramosissima</i> *	tamarisk	MFS	Cal-IPC
URTICACEAE	NETTLE FAMILY		
<i>Hesperocnide tenella</i>	western stingingnettle	CCS	
<i>Urtica dioica</i>	stinging nettle	CLO, RS, RUD	
<i>Urtica urens</i> *	dwarf nettle	CLO	
VERBENACEAE	VERBENA FAMILY		
<i>Verbena lasiostachys</i>	western vervain	CCS	
<i>Phyla nodiflora</i>	lippia	FPS	
VIOLACEAE	VIOLET FAMILY		
<i>Viola pedunculata</i>	Johnny-jump-up	CAG, CCS	
VISCACEAE	MISTLETOE FAMILY		
<i>Phoradendron</i> sp.	mistletoe	CLO	
FLOWERING PLANTS - MONOCOTS			
CYPERACEAE	SEDGE FAMILY		
<i>Cyperus eragrostis</i>	tall flatsedge	FPS	
<i>Eleocharis macrostachya</i>	pale spikerush	FPS	
<i>Scirpus acutus</i> var. <i>occidentalis</i>	tule	FPS	
<i>Scirpus</i> sp.	bullrush	MFS	
IRIDACEAE	IRIS FAMILY		
<i>Sisyrinchium bellum</i>	western blue-eyed grass	CAG	
JUNCACEAE	RUSH FAMILY		
<i>Juncus bufonius</i>	toad rush	FPS	
<i>Juncus occidentalis</i>	western rush	CAG	
<i>Juncus patens</i>	spreading rush	CAG, FPS, RS	
<i>Juncus phaeocephalus</i>	brown headed rush	CAG, FPS	
LILIACEAE	LILY FAMILY		
<i>Bloomeria crocea</i>	common goldenstar	CAG	
<i>Brodiaea jolonensis</i>	chaparral brodiaea	CAG	

SCIENTIFIC NAME ¹	COMMON NAME ¹	HABITAT ²	COMMENTS ³
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	wavyleaf soap plant	CCS	
<i>Dichelostemma capitatum</i>	bluedicks	CAG, CCS	
<i>Fritillaria biflora</i>	chocolate lily	CAG, CLO	
POACEAE	GRASS FAMILY		
<i>Agrostis pallens</i>	seashore bentgrass	CCS	
<i>Aira caryophyllea</i> *	silver hairgrass	CCS	
<i>Avena barbata</i> *	slender oat	CAG, CCS, RUD	Cal-IPC
<i>Avena fatua</i> *	wild oat	CAG, CCS, RUD	Cal-IPC
<i>Briza minor</i> *	little quaking grass	CLO	
<i>Bromus carinatus</i>	California brome	CLO	
<i>Bromus diandrus</i> *	ripgut brome	CAG, CCS, CLO, RUD	Cal-IPC
<i>Bromus hordeaceus</i> *	soft chess	CAG, CCS, CLO, RUD	Cal-IPC
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	red brome	CAG, RUD	Cal-IPC
<i>Cortaderia jubata</i> *	purple pampas grass	RUD	Cal-IPC
<i>Distichlis spicata</i>	saltgrass	CAG	
<i>Ehrharta calycina</i> *	perennial veldtgrass	CAG, CCS	Cal-IPC
<i>Elymus glaucus</i>	blue wildrye	CAG, CCS, CLO	
<i>Gastridium nitidum</i> *	nit grass	CCS	
<i>Hordeum brachyantherum</i>	meadow barley	CAG, RUD	
<i>Hordeum murinum</i> ssp. <i>leporinum</i> *	hare barley	CAG	Cal-IPC
<i>Koeleria macrantha</i>	junegrass	CAG	
<i>Lamarckia aurea</i> *	goldentop grass	CAG	
<i>Leymus condensatus</i>	giant wildrye	CCS	
<i>Leymus triticoides</i>	beardless wildrye	CAG, CCS	
<i>Lolium multiflorum</i> *	Italian ryegrass	CAG, CCS, CLO, RUD	Cal-IPC
<i>Melica imperfecta</i>	California melic	CCS	
<i>Muhlenbergia rigens</i>	deergrass	CLO	
<i>Nassella lepida</i>	foothill needlegrass	CCS	
<i>Nassella pulchra</i>	purple needlegrass	CAG, CCS	
<i>Phalaris</i> cf. <i>caroliniana</i>	Carolina canrygrass	FPS	
<i>Piptatherum miliaceum</i> *	smilgrass	RUD	Cal-IPC
<i>Poa annua</i> *	annual bluegrass	FPS	
<i>Poa secunda</i>	Sandberg bluegrass	CAG, CCS, CLO	
<i>Polypogon monspeliensis</i> *	rabbits-foot grass	FPS	Cal-IPC
<i>Triticum aestivum</i> *	common wheat	RUD	
<i>Vulpia bromoides</i> *	brome fescue	CAG, CCS	
<i>Vulpia myuros</i> *	rat-tail fescue	CAG, CCS, RUD	Cal-IPC

Notes:

1. Scientific names from *The Jepson Manual* (Hickman 1993). Common names from the PLANTS online database (USDA, NRCS 2009) available at: <http://plants.usda.gov/>, and Calflora (2009).

* = non-native species

2. Habitat, vegetation types based on Holland (1986). CAG = California Annual Grassland, CCS = Central Coastal Scrub, CLO = Coast Live Oak Woodland, DEV = Developed/Landscaped, FPS = Freshwater Ponds and Seeps, MFS = Mulefat Scrub, RS = Riparian Scrub, RUD = Ruderal.

3. Cal-IPC = Listed by the California Invasive Plant Council as an invasive species causing serious problems in native ecosystems

(Cal-IPC 2006, California Invasive Plant Inventory. Available at: <http://www.cal-ipc.org/ip/inventory/index.php>).

CNPS 1B = Rare, threatened or endangered in California and elsewhere

CNPS 4 = Plants of limited distribution - a watch list.

Appendix D:

California Natural Diversity Database Field Survey Forms

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 04/24/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Ceanothus cuneatus* var. *fascicularis*

Common Name: Sand buck brush

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 2 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 50% vegetative 50% flowering _____% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Along PG&E power line, ~ 2.6 miles NW of Buellton

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Zaca Creek Elevation: ~ 640 ft

T_{07N} R_{32W} Sec 35, SE 1/4 of NW 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 753950 E
3836662 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Associated with Quercus agrifolia and non-native annual grass species.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 04/24/2009

Reset

California Native Species Field Survey Form

Send Form

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Common Name: Sand buck brush

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 2 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

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Animal Information

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☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

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Along PG&E power line, ~ 2.4 miles NW of Buellton

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Zaca Creek Elevation: _____

T_{07N} R_{32W} Sec 35, SE 1/4 of NW 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 754734 E
3836905 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

Associated with Quercus agrifolia and non-native annual grass species.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

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Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Ceanothus cuneatus* var. *fascicularis*

Common Name: Sand buck brush

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 12 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 50% vegetative 50% flowering _____% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

0.6 miles west of Why 101, 2.2 miles north of Buellton along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Zaca Creek Elevation: _____

T 07N R 32W Sec 36, NE 1/4 of NE 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 3 _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 757128 E
3837439 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In chamise chaparral.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/07/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Erysimum capitatum* var. *lompocense*

Common Name: San Luis Obispo wallflower

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 3 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk. Yes, Occ. # _____

Collection? If yes: _____ Number _____ Museum / Herbarium _____

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 25% vegetative 50% flowering 25% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

4.2 miles WNW of Buellton, 1.6 miles N of Hwy 246, along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Zaca Creek Elevation: _____

T 07N R 32W Sec 33, SW 1/4 of NW 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 751379 E
3836895 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In central (Lucian) coastal scrub.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☒ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats: Power line maintenance.

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 04/24/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Erysimum capitatum* var. *lompocense*

Common Name: San Luis Obispo wallflower

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 1 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 25% vegetative 50% flowering 25% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

7 miles W of Lompoc, 1 mile S of Hwy 246, along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Los Alamos Elevation: _____

T 07N R 33W Sec NE, NE 1/4 of 1/4, Meridian: H ☐ M ☒ S ☐ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, 1/4 of 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 744368 E
3837458 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In central (Lucian) coastal scrub.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☒ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 04/24/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Erysimum capitatum* var. *lompocense*

Common Name: San Luis Obispo wallflower

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 20 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 25% vegetative 50% flowering 25% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

7 miles W of Lompoc, 1 mile S of Hwy 246, along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Lompoc Elevation: _____

T 07N R 33W Sec 27, NE 1/4 of NE 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 738654 E
3837147 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In central (Lucian) coastal scrub.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☒ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 04/25/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Horkelia cuneata ssp. puberula*

Common Name: Mesa horkelia

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 20 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 75% vegetative 25% flowering _____% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

7.4 miles E of Lompoc, 0.6 mile S of Hwy 246/Campbell Road intersection (west), along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Los Alamos Elevation: _____

T_{07N} R_{33W} Sec 26, SE 1/4 of SW 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 745043 E
3837495 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In sandy annual grassland.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/07/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Monardella undulata*

Common Name: Curlyleaf monardella

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 200 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 25% vegetative 75% flowering _____% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

~ 6.8 miles E of Lompoc, 1.1 mile SW of the intersection of Hwy 246 and Campbell Road (west), along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Los Alamos Elevation: _____

T 07N R 33W Sec 34, NW 1/4 of NE 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 743949 E
3837375 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In sandy service road through central (Lucian) coastal scrub.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/07/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Monardella undulata*

Common Name: Curlyleaf monardella

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 20 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: 25% vegetative 75% flowering _____% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Santa Rita Hills, 3.3 miles E of Lompoc, 1.1 mile S of Why 246, along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Lompoc Elevation: _____

T 07N R 33W Sec 31, NW 1/4 of NW 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 738343 E
3837108 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In sandy gaps in central (Lucian) coastal scrub.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/07/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Mucronea californica*

Common Name: California spineflower

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 300 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: _____% vegetative 50% flowering 50% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

1.5 miles W of Hwy 101, 2.2 miles N of Buellton, along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Zaca Creek Elevation: _____

T_{07N} R_{33W} Sec 35, SE 1/4 of NE 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 755515 E
3837006 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In California annual grassland in sandy soils with *Bromus diandrus*, *Croton californicus*, and *Lastarriaea coriacea*.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/07/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Mucronea californica*

Common Name: California spineflower

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 100 Subsequent Visit? ☐ yes ☒ no

Is this an existing NDDDB occurrence? ☐ no ☒ unk.
Yes, Occ. # _____

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Eric Wrubel

Address: _____

E-mail Address: ewrubel@garciaandassociates.com

Phone: (510) 292-7792

Plant Information

Phenology: _____% vegetative 50% flowering 50% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

1.5 miles W of Hwy 101, 2.2 miles N of Buellton, along PG&E power line.

County: Santa Barbara Landowner / Mgr.: Private

Quad Name: Lompoc Elevation: _____

T 07N R 33W Sec 35, SE 1/4 of NE 1/4, Meridian: H ☐ M ☐ S ☒ Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model Trimble GeoExplorer

DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐ Horizontal Accuracy 10 ft _____ meters/feet

Coordinate System: UTM Zone 10 ☒ UTM Zone 11 ☐ OR Geographic (Latitude & Longitude) ☐

Coordinates: 738368 E
3837108 N

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

In in central coastal scrub, scattered in sandy gaps between *Salvia mellifera* shrubs.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances:

Threats: Power line maintenance

Comments:

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Jepson Manual
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

APPENDIX D:

SOILS UNIT LIST

Soil Units in the Project Area Cabrillo - Santa Ynez 115 kV Reconductoring Project

Map Unit	Map Unit Name	Map Unit	Map Unit Name
ArD	Arnold sand, 5 to 15 percent slopes	LsF	Los Osos-San Benito clay loams, 30 to 45 percent slopes
ArF	Arnold sand, 15 to 45 percent slopes	MaC	Marina sand, 2 to 9 percent slopes
ArF3	Arnold sand, 9 to 45 percent slopes, severely eroded	MaE	Marina sand, 9 to 30 percent slopes
BaC	Ballard fine sandy loam, 2 to 9 percent slopes	MaE3	Marina sand, 9 to 30 percent slopes, severely eroded
BaD	Ballard fine sandy loam, 9 to 15 percent slopes	MnA	Metz loamy sand, 0 to 2 percent slopes
BbA	Ballard gravelly fine sandy loam, 0 to 2 percent	MnC	Metz loamy sand, 2 to 9 percent slopes
BbC	Ballard gravelly fine sandy loam, 2 to 9 percent slopes	MoA	Metz loamy sand, overflow, 0 to 2 percent slopes
BtA	Botella clay loam, 0 to 2 percent slopes	MpG	Mine pits and dumps
BtA2	Botella clay loam, 0 to 2 percent slopes, eroded	Mr	Mocho sandy loam, overflow
BtC	Botella clay loam, 2 to 9 percent slopes	Mu	Mocho fine sandy loam
BtD2	Botella clay loam, 2 to 15 percent slopes, eroded	Mv	Mocho loam
Ca	Camarillo sandy loam	Mw	Mocho loam, overflow
Cc	Camarillo very fine sandy loam	Mx	Mocho silty clay loam
CeE2	Chamise sandy loam, 5 to 30 percent slopes, eroded	NvC	Narlon sand, hardpan variant, 2 to 9 percent slopes
ChF	Chamise shaly loam, 15 to 45 percent slopes	PtC	Positas fine sandy loam, 2 to 9 percent slopes
ChG2	Chamise shaly loam, 30 to 75 percent slopes, eroded	PtE	Positas fine sandy loam, 15 to 30 percent slopes
CkF	Chamise clay loam, 30 to 45 percent slopes	Rs	Riverwash
CtA	Corralitos sand, 0 to 2 percent slopes	RuG	Rough broken land
CtD	Corralitos sand, 2 to 15 percent slopes	SdA	Salinas silty clay loam, 0 to 2 percent slopes
CtD2	Corralitos sand, 2 to 15 percent slopes, eroded	SdC	Salinas silty clay loam, 2 to 9 percent slopes
CuA	Corralitos loamy sand, 0 to 2 percent slopes	SfD	San Andreas-Tierra complex, 5 to 15 percent slopes

Soil Units in the Project Area Cabrillo - Santa Ynez 115 kV Reconductoring Project

Map Unit	Map Unit Name	Map Unit	Map Unit Name
CuC	Corralitos loamy sand, 2 to 9 percent slopes	SfE	San Andreas-Tierra complex, 15 to 30 percent slopes
CuD	Corralitos loamy sand, 9 to 15 percent slopes	SfF3	San Andreas-Tierra complex, 9 to 45 percent slopes, severely eroded
CwF	Crow Hill loam, 30 to 45 percent slopes		
CwG	Crow Hill loam, 45 to 75 percent slopes	SfG	San Andreas-Tierra complex, 30 to 75 percent slopes
DaE	Diablo silty clay, 15 to 30 percent slopes	Sh	Sandy alluvial land
DaD	Diablo silty clay, 9 to 15 percent slopes	SmF	Santa Lucia shaly clay loam, 30 to 45 percent
EdA	Elder sandy loam, 0 to 2 percent slopes	SmF2	Santa Lucia shaly clay loam, 15-45 percent slopes eroded
EdA2	Elder sandy loam, 0 to 2 percent slopes, eroded	SmG	Santa Lucia shaly clay loam, 45 to 75 percent slopes
EdC2	Elder sandy loam, 2 to 9 percent slopes, eroded	SnC	Santa Ynez gravelly fine sandy loam, 2 to 9 percent slopes
EdD2	Elder sandy loam, 9 to 15 percent slopes, eroded	SnD	Santa Ynez gravelly fine sandy loam, 9 to 15 percent slopes
EmA	Elder loam, 0 to 2 percent slopes	SoC	Santa Ynez clay loam, 2 to 9 percent slopes
EmC	Elder loam, 2 to 9 percent slopes	SpG	Sedimentary rock land
EnA2	Elder shaly loam, 0 to 2 percent slopes, eroded	SrE	Shedd silty clay loam, 15 to 30 percent slopes
EnC2	Elder shaly loam, 2 to 9 percent slopes, eroded	SsE	Shedd silty clay loam, diatomaceous variant, 15 to 30 percent slopes
EnD2	Elder shaly loam, 9 to 15 percent slopes, eroded		
GmE	Gaviota sandy loam, 15 to 30 percent slopes	SsF	Shedd silty clay loam, diatomaceous variant, 30 to 45% slopes
GsD	Gazos clay loam, 9 to 15 percent slopes	StC	Sorrento sandy loam, 2 to 9 percent slopes
GsE	Gazos clay loam, 15 to 30 percent slopes	SvC	Sorrento loam, 2 to 9 percent slopes
GsF	Gazos clay loam, 30 to 45 percent slopes	TdF	Terrace escarpments, loamy

Soil Units in the Project Area Cabrillo - Santa Ynez 115 kV Reconductoring Project

Map Unit	Map Unit Name	Map Unit	Map Unit Name
GuE	Gullied land	TnC	Tierra sandy loam, 2 to 9 percent slopes
LaF	Landslides	TnD2	Tierra sandy loam, 9 to 15 percent slopes, eroded
LcD	Linne clay loam, 9 to 15 percent slopes	TnE2	Tierra sandy loam, 15 to 30 percent slopes, eroded
LcE	Linne clay loam, 15 to 30 percent slopes	TrC	Tierra loam, 2 to 9 percent slopes
LcF	Linne clay loam, 30 to 45 percent slopes	TrD	Tierra loam, 9 to 15 percent slopes
LcG	Linne clay loam, 45 to 75 percent slopes	TrE2	Tierra loam, 15 to 30 percent slopes, eroded
LdG	Lodo loam, 30 to 75 percent slopes	TrE3	Tierra loam, 5 to 30 percent slopes, severely eroded
LmG	Lopez shaly clay loam, 15 to 75 percent slopes	TsF	Tierra clay loam, 15 to 45 percent slopes
LsE	Los Osos-San Benito clay loams, 15 to 30 percent slopes	W	Water