BIOLOGICAL RESOURCES SURVEY REPORT - NATURAL GAS IMPORT PIPELINE

EAST CAT CANYON OIL FIELD REDEVELOPMENT PROJECT SANTA BARBARA COUNTY, CALIFORNIA

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Project No. 1002-0457

Authenticity and Signature Page

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Padre Associates, Inc. hereby certifies that all statements furnished in the following Biological Resources Survey Report and all supporting information required for this biological evaluation are true and correct to the best of our knowledge and belief. Further, we certify that all field surveys associated with this report were performed by Padre using standards accepted by Santa Barbara County and accurately represent all information retained from field visits to the Project Site in Santa Barbara County, California.

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EXECUTIVE SUMMARY

The following Biological Resources Survey Report (Report) has been prepared by Padre Associates, Inc. (Padre) documenting the results of a biological survey conducted for Aera Energy LLC (Aera) for the construction of a natural gas pipeline. It is intended to deliver natural gas from the SoCalGas terminal near the town of Orcutt (7002 Graciosa Road) to the Aera-owned properties within the eastern portion of the Cat Canyon Oil Field located at 6516 Cat Canyon Road, in northern Santa Barbara County, California (Project Site). The pipeline would supply natural gas for operations at the proposed East Cat Canyon Oil Field Redevelopment Project (Project). The pipeline will be constructed below public roads, within public road rights-of-way, for nearly all of its proposed length.

The desktop analysis and field surveys concluded that suitable habitat for several special-status plants and animals exist within the regions surrounding the proposed pipeline alignment, specifically within the biological survey area (BSA) (within the roadways and rights-of-way, plus 200-foot buffer areas on either side, extending from the right-of-way boundary). Special-status plant species that have a potential for occurrence within the BSA include: Hoover's bent grass, Miles' milk-vetch, dwarf calycadenia, La Graciosa thistle, Gaviota tarplant, dune larkspur, Blochman's leafy daisy, mesa horkelia, pale-yellow layia, Gambel's water cress, and black-flowered figwort. No special-status species were observed during October and June field surveys, however, results may be confounded by seasonal fluctuations, survey timing, and access constraints. Special-status wildlife species that have the potential for occurrence within the BSA include: monarch butterfly, vernal pool fairy shrimp, coast horned lizard, coast patch-nosed snake, silvery legless lizard, southwestern pond turtle, California red-legged frog, California tiger salamander, western spadefoot, burrowing owl, California horned lark, golden eagle, least Bell's vireo, loggerhead shrike, oak titmouse, purple martin, southern California rufous-crowned sparrow, tricolored blackbird, yellow warbler, pallid bat, western red bat, hoary bat, Townsend's big-eared bat, Yuma myotis, and American badger. During the field surveys, American badger and oak titmouse were observed within the BSA.

Suitable habitat for these potentially occurring special-status species was observed outside the road and road shoulders (public right-of-way) within of the BSA. The pipeline is proposed for construction under roads where suitable habitat for these species does not occur and no grading or other vegetation removal activities will be incorporated into the Project. Additionally, the proposed pipeline construction has been designed to limit activities as much as possible to avoid stream channels, agricultural drainages, wetlands, and associated riparian habitats, to the greatest extent feasible. The construction of the pipeline would therefore not directly impact suitable habitat to potentially occurring special-status species. Local wildlife populations, including special-status species, may potentially be adversely affected by the temporary disruption of foraging, burrowing, and nesting activities due to an increase of human activity, use of heavy equipment, and noise associated with the initial road excavation, pipeline installation, and road repair activities. Impacts to biological resources are expected to be temporary and implementation of recommended avoidance and minimization measures outlined in this Report would reduce impacts to less than significant. These measures include the following:

1. The use of heavy equipment and vehicles will avoid impacts to native vegetation to the greatest extent feasible;
2. Work areas, including equipment lay-down areas, will be pre-designated on plans prior to the start of work;
3. A Drilling Fluid Release Contingency Plan will be prepared for all horizontal directional drilling (HDD) operations and will be prepared with special emphasis on stream crossings. This plan will include appropriate measures for containment of spills, agency notifications, clean-up protocols, and procedures for restoring lay down areas and other impacted areas to pre-disturbance conditions. Spill containment equipment will be available on-site during all Project drilling and fuel handling activities. A qualified Biologist knowledgeable in HDD operations will be onsite during HDD operations along actively flowing streams or ponded water to document any spill or drilling fluid release and provide additional guidance to protect biological resources in the event of a spill or drilling fluid release. In the event that a spill or drilling fluid release occurs within a stream corridor, all work will be halted and the spill will be contained using the procedures outlined in the Project-specific Drilling Fluid Release Contingency Plan;
4. In the event Project activities are scheduled during the nesting bird season, between March 15 and September 1, a nesting bird survey will be completed by a qualified Biologist with experience in bird identification and nest searching. No active nests of native bird species protected by the Migratory Bird Treaty Act will be removed by Project activities and appropriate buffers will be incorporated into the Project plan to ensure the protection of the nest. Buffers will be established and delineated by a qualified Biologist based on an appropriate distance to minimize disturbance to the active nest;
5. Project activities will be completed during the daylight hours, to the greatest extent possible. Project activities will avoid rainy nights, when California tiger salamanders (CTS) are most active. A qualified Biologist will complete a pre-activity survey prior to work that follows a rainy night, to ensure no CTS are present within the work areas. Training will be provided to the crew and crew supervisors to recognize, report, and avoid CTS. In the event a CTS is observed in the work area, the work in the immediate area of the CTS will temporarily cease until agency notification is complete;
6. A qualified Biologist with experience identifying American badger and their potential dens will conduct a pre-activity survey prior to initial work activities. All potentially active badger dens that would be directly impacted by construction activities will be inspected by a qualified Biologist using an optic scope or monitored using tracking medium/remote sensor cameras (3-days) to ensure the den is vacant. After verification that the den is unoccupied it will be immediately excavated and backfilled. If badger activity is detected at a den, the entrance to the den will blocked with soil, sticks, or debris for three to five days to discourage the use of the dens prior to Project disturbance activities. After the biologist determines that the badger has stopped using an active den, the den will be hand-excavated with a shovel to prevent re-use during Project construction;

7. A qualified Biologist with experience identifying special-status plants and associated habitats will conduct a pre-activity survey of all work areas, including staging and laydown areas, prior to any ground disturbing activities. Any special-status plant populations encountered will be flagged and avoided to the greatest extent possible. These areas will be avoided for staging or stockpiling of material or soil when feasible. La Graciosa thistle, Gaviota tarplant, and Lompoc yerba santa observations will be reported to the USFWS;
8. All food-related items and trash will be removed from the site daily or contained within a closed container;
9. An Environmental Sensitivity Orientation will be presented to all on-site personnel at the beginning of the initial work activities. The orientation will discuss sensitive species with potential to occur in the work areas, with emphasis on special-status wildlife and plant species. The orientation will explain the importance of minimizing disturbance, adhering to all permit conditions, and proper reporting of observations or incidents. The orientation will be repeated if additional personnel are added to the Project;
10. At no time will oak trees be removed as part of Project activities. A certified arborist will oversee trimming of oak tree limbs that have the potential to be impacted as a result of vehicle or equipment usage associated with Project activities; and
11. As necessary, erosion control measures will be implemented to prevent runoff into nearby drainages. Straw waddles, in conjunction with other methods, will be temporarily installed to prevent erosion of soils disturbed by the Project and to avoid and/or minimize disturbed sediments from entering adjacent waterways. Silt fencing will be avoided adjacent to water resources, to the greatest extent feasible, to minimize potential barriers to migrating amphibians and other wildlife.

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A Site Photographs
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LIST OF ACRONYMS

ACOE	U.S. Army Corps of Engineers
BCC	Birds of Conservation Concern
BMPs	Best Management Practices
BSA	Biological Survey Area
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRLF	California Red-Legged Frog
CSC	Species of Special Concern
CTS	California Tiger Salamander
CWA	Clean Water Act
DEM	Digital Elevation Model
DPS	Distinct Population Segment
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESHA	Environmentally Sensitive Habitat Areas
ESU	Evolutionary Significant Unit
FESA	Federal Endangered Species Act
GIS	Geographic Information Systems
HDD	Horizontal Directional Drilling
LSAA	Lake or Streambed Alteration Agreement
MBTA	Federal Migratory Bird Treaty Act
MOU	Memorandum of Understanding
NMFS	National Marine Fisheries Service
NWI	National Wetland Inventory
ODPP	Oil and Gas Drilling/Production Plan
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SBCPDD	Santa Barbara County Planning and Development Department
SoCalGas	Southern California Gas Company
SWRCB	State Water Resources Control Board
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VPFS	Vernal Pool Fairy Shrimp
WoUS	Waters of the United States

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1.0 INTRODUCTION

The following Biological Resources Report (Report) has been prepared by Padre Associates, Inc. (Padre) documenting the results of a biological survey conducted for Aera Energy LLC (Aera) for the construction of a natural gas pipeline. The pipeline is intended to deliver natural gas from the Southern California Gas Company (SoCalGas) terminal near the town of Orcutt (7002 Graciosa Road) to the Aera-owned properties within the eastern portion of the Cat Canyon Oil Field located in northern Santa Barbara County, California (Project Site). It will supply natural gas for operations at the proposed East Cat Canyon Oil Field Redevelopment Project (Project). The pipeline would be constructed beneath public road rights-of-way for nearly all of its proposed length, except for portions of SoCalGas and Aera property.

The primary objectives of this biological survey were to: 1) determine the type and extent of vegetation types and wildlife habitats present along the pipeline route (roadways and rights-of-way) and within 200-foot buffer areas on either side, extending from the right-of-way boundary; 2) identify special-status plant and wildlife species, or known habitat of special-status species, occurring within the region (within five-miles of the pipeline); and, 3) recommend avoidance and minimization measures for proposed pipeline installation activities to provide protection of potentially occurring special-status species and associated habitats. The information provided in this Report is intended to support Project permitting with the appropriate regulatory agencies.

1.1 PROJECT DESCRIPTION

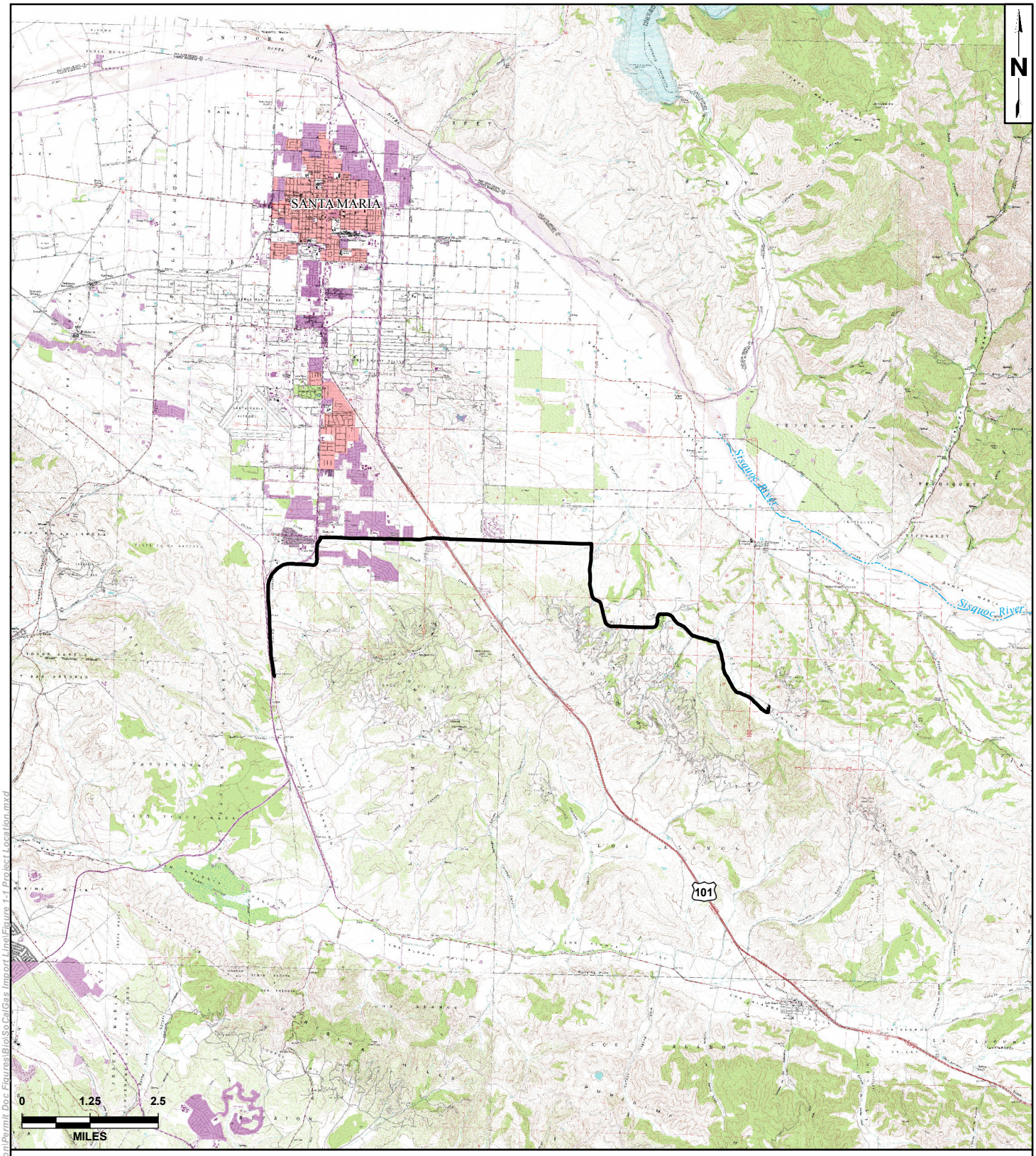
The proposed pipeline alignment begins at the SoCal Gas terminal along Graciosa Road near Orcutt, CA, and lies under established roads within public rights-of-way for all but 0.1 mile of its (approximately) 14 mile length. The pipeline begins at SoCalGas' existing Divide Station and traverses north within Graciosa Road for approximately 2.65 miles, where Graciosa Road turns into Orcutt Road. The pipeline route continues northward within Orcutt Road for approximately 0.57 mile, then turns east on Clark Avenue and continues along Clark Avenue for approximately 5.02 miles until Clark Road ends at Dominion Road. The pipeline route continues southeast within Dominion Road as the road approaches Palmer Road, approximately 3.5 miles from the intersection of Clark Avenue and Dominion Road. At this point, the pipeline route travels east within Palmer Road and Cat Canyon Road for approximately 2.18 miles before leaving the roadway and traveling across Cat Canyon Creek for approximately 0.1 mile to the terminus at the Project Site (Figure 1-1 - Project Location).

Aera is requesting approval from the Santa Barbara County Planning and Development Department (SBCPDD) of an Oil and Gas Drilling/Production Plan (ODPP) to redevelop and re-establish oil production within the Brooks formation of the East Area of the state-designated Cat Canyon Oil Field. Implementation of the ODPP will involve the re-establishment of oil production in an existing oil field by drilling and operating oil/gas production wells, steam injection wells, observation wells, brackish source water production wells, injection wells, disposal wells, and freshwater wells. In addition, there will be a steam generation operation, a central processing plant, gathering and distribution pipelines, and related ancillary equipment. The proposed natural

gas pipeline will supply gas to the oil field redevelopment project, and therefore the pipeline construction is being included in the oilfield redevelopment project studies.

This biological survey focuses entirely on potential impacts to sensitive resources resulting from the installation of the proposed natural gas pipeline. Other supporting infrastructure for the oilfield, such as production facilities and wells, production gathering pipelines, and electrical transmission lines, are not discussed as part of this report and will be included in a separate report.

The pipeline installation is expected to utilize a combination of open trenching, jack-and-bore, slick bore, and horizontal directional drilling (HDD) techniques. Approximately 13.9 miles of the expected 14 mile pipeline is expected to be underground, below paved roads or otherwise within public rights-of-way. Trenching will be used to install the natural gas pipeline under existing roads, and/or within the public road rights-of-way and Aera-owned properties. An HDD method will be used at stream/drainage crossings (at top of bank) to avoid impacts to waterways and under significant roads of high traffic, including U.S. Highway 101. Exact staging areas for equipment, jack and bore, and HDD operations have not been finalized; however, recommendations have been made (refer to Section 6.0) that staging areas will not include any significant vegetation removal and will include the installation of appropriate best management practices (BMPs) to properly manage storm water runoff and any potential fluid spills as a result of equipment fueling or drilling fluid release.



LEGEND:

Proposed Gas Pipeline Route

Source: USGS Topo Quad, DPSI 2013 Survey, Santa Barbara County, TIGER
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposed only

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:			
EAST CAT CANYON SANTA BARBARA COUNTY, CA		PROJECT LOCATION	FIGURE 1-1
PROJECT NUMBER: 1002-0457	DATE: October 2014		

Z:\Kristin\GIS Maps\Map Project\East Cat Canyon\Permit Doc Figures\BioSoCalGas Import Line\Figure 1-1 Project Location.mxd

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2.0 REGIONAL SETTING

The regional topography is generally comprised of steeply to moderately incised canyons and drainages, moderate to steep hills, and valleys primarily utilized for oil extraction, rotational row-crop agriculture and vineyards, city development, and large residential lots grazed by livestock. Drainages found throughout the pipeline alignment are ephemeral and consist of dry, loose sand and rock with moderate to dense scrub and scattered oak woodland habitat. There are also a number or agricultural drainages that are regularly cleared of vegetation and the presence of water is irregular and dependent on crop irrigation cycles.

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3.0 REGULATORY SETTING

This section identifies and discusses the regulations and policies administered by resource agencies pertaining to those biological resources that are known to exist and/or have the potential to occur within the Project Site and surrounding region.

3.1 FEDERAL REGULATIONS

Endangered Species Act. The Federal Endangered Species Act (FESA), administered by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), provides protection to species listed as Threatened or Endangered, and Critical Habitat designated for the protection of such species. The FESA prohibits "take" of Threatened and Endangered species except under certain circumstances and only with authorization from the USFWS through a permit under sections 4(d), 7, or 10(a) of the FESA. Under the FESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Critical Habitat is defined in Section 3(5)(A) of the FESA as: (1) specific areas within the geographical area occupied by the species at the time of listing, on which are found those physical or biological features that are essential to the conservation of the listed species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time of listing that are essential for the conservation of a listed species.

The FESA also provides protection to those species proposed to be listed under FESA and maintains lists of species that are neither formally listed nor proposed, but could potentially be listed in the future. These federal candidate species include taxa for which substantial information on biological vulnerability and potential threats exist, and are maintained in order to support the appropriateness of proposing to list the taxa as an Endangered or Threatened species. The USFWS also manages Birds of Conservation Concern (BCC), which include bird species of highest conservation priorities in effort to draw attention to species in need of conservation action.

Migratory Bird Treaty Act. The USFWS also administers the Federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The MBTA establishes Federal responsibilities for the protection of nearly all species of birds, their eggs, and their nests. The MBTA of 1918 implemented the 1916 Convention between the United States and Great Britain for the protection of birds migrating between the United States and Canada; implemented the 1936 Convention for the Protection of Migratory Birds and Animals between the United States and Mexico; and similar conventions between the United States and Japan (1972) and the Union of Soviet Socialist Republics (1976). Under the MBTA, it is unlawful to kill, collect, take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR 10, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 CFR 21). Certain game bird species are allowed to be hunted for specific periods determined by federal and state governments.

Clean Water Act. The Clean Water Act (CWA), formally entitled the Federal Water Pollution Control Act of 1972, is comprehensive legislation enacted to protect the nation's waters. The Act generally includes reference to its substantial supplementation by the CWA of 1977. Both Acts were subsequently amended in 1981, 1987, and 1993. Overall, the CWA seeks to protect the nation's water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the United States (WoUS). These water quality standards are enforced by the U.S. Environmental Protection Agency (EPA).

The U.S. Army Corps of Engineers (ACOE) is responsible for the issuance of permits for the placement of dredged or fill material into WoUS pursuant to Section 404 of the Clean Water Act (33 USC 1344). As defined by the ACOE in 33 CFR 328.3(a)(3), WoUS are those waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; tributaries and impoundments to such waters; all interstate waters including interstate wetlands; and territorial seas. In addition, federal guidance has been developed that requires careful examination and documentation of the physical location(s) and hydrologic connections among waters/wetlands. To determine federal jurisdiction, particular focus is given to (1) surface hydrologic connections between a wetland and "navigable waters in fact," (2) "adjacency" of a wetland to traditionally navigable waters, and thus (3) a "significant nexus" to interstate commerce. WoUS/wetlands features can also be determined to be under federal jurisdiction by the ACOE or EPA if a "significant nexus" can be shown between the wetland feature in question and its contribution to the maintenance or restoration of the physical, chemical, or biological integrity of downstream waters that are traditionally navigable.

In non-tidal waters, the lateral extent of ACOE jurisdiction is determined by the ordinary high water mark (OHWM), which is defined as the: "*…line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas*" (33 CFR 328[e]).

3.2 STATE REGULATIONS

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (CA Water Code §§ 13000-13999.10) mandates that waters of the state shall be protected, such that activities that may affect waters of the state shall be regulated to attain the highest quality. This Act establishes the State Water Resources Control Board (SWRCB) as the principal state agency for controlling water quality in California. The SWRCB provides regulations that mandate a "non-degradation policy" for state waters, especially those of high quality. The SWRCB is divided into local Regional Water Quality Control Boards (RWQCB).

Pursuant to Section 401 of the CWA, the ACOE cannot issue a federal permit until the State of California first issues a water quality certification to ensure that a project will comply with state water quality standards. The authority to issue water quality certifications for the following Project is vested with the Central Coast RWQCB.

California Fish and Game Code. The California Department of Fish and Wildlife (CDFW), formerly the California Department of Fish and Game (CDFG), administers a number of laws and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act of 1984 (CESA) Fish and Game Code Section 2050 that regulates the listing and take of state Endangered and Threatened species. CDFW also maintains lists of Candidate-Endangered species and Candidate-Threatened species. California candidate species are afforded the same level of protection as listed species. CDFW also designates Species of Special Concern (CSC) that are of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists in the future.

The CDFW also manage a Watch List that includes "Taxa to Watch" (Shuford and Gardali, 2008), which includes: 1) species not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) species that were previously state or federally listed and now are on neither list; or 3) species are on the list of Fully Protected species.

CDFW administers other state laws designed to protect wildlife and plants. Section 3511 of the California Fish and Game Code designates species that are afforded Fully Protected status. Fish and Game Code Sections 4700 and 5515 assign the same status to specified mammals and fish. These statutes generally provide that specifically identified birds, mammals, and fish "or parts thereof may not be taken or possessed at any time and no provision of [the Fish and Game] code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected [bird, mammal, or fish] and no permits or licenses heretofore issued shall have any force or effect" for any such purpose. For fully protected fish and mammals, the only exception to the take prohibition is that the Fish and Game Commission may authorize the collecting of such species "for necessary scientific research" (Fish and Game Code, Sections 4700, 5515). With a proper permit, Fully Protected birds may also be captured live and relocated "for the protection of livestock" (Section 3511). Section 3503.5 protects birds-of-prey (Falconiformes and Strigiformes), their eggs, and their nests.

CDFW manages the California Native Plant Protection Act of 1977 (Fish and Game Code Section 1900, *et seq*.), which was enacted to identify, designate and, protect rare plants. The California Native Plant Society (CNPS) operates under a Memorandum of Understanding (MOU) with the CDFW and outlines broad cooperation in rare plant assessment and protection, and formalizes cooperative ventures such as data sharing and production of complementary information sources for rare plants.

Pursuant to Section 1602 of the California Fish and Game Code, CDFW requires a Lake or Streambed Alteration Agreement (LSAA) between CDFW and any state or local governmental agency, public utility, or private party before the initiation of any construction project that will: 1) substantially divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; 2) substantially change or use materials from a streambed; or 3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. Therefore, the CDFW claims

jurisdiction over the bed, bank, and channel of the drainage that may be impacted by project activities.

California Environmental Quality Act. Project-related adverse impacts on special-status species are considered significant for California Environmental Quality Act (CEQA) purposes. Section 15065 of CEQA states that a Lead Agency shall find that a project may have a significant effect on the environment and thereby require an Environmental Impact Report (EIR) to be prepared for the project where the project has 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, or reduce the number or restrict the range of a rare or endangered plant or animal.

Further, CEQA Appendix G states that a project will normally have a significant effect on the environment if it will:

> "(a) Conflict with adopted environmental plans and goals of the community where it is located;
>
> (c) Substantially affect a rare or endangered species of animal, plant or the habitat of the species;
>
> (d) Interfere substantially with the movement of any resident or migratory fish or wildlife species; and
>
> (e) Substantially diminish habitat for fish, wildlife or plants."

3.3 SANTA BARBARA COUNTY REGULATIONS

Requirements for the protection of biological resources in the unincorporated area of Santa Barbara County are provided within the Comprehensive Plan Conservation Element, Environmental Resource Management Element, Land Use Element, Community Plans, and the Coastal Land Use Plan. These documents identify sensitive habitats and species, and provide measures to direct project design and policies to protect biological resources. These Plans/Elements provide a framework of policies designed to protect special-status species and environmentally sensitive habitat areas (ESHA). Environmental Thresholds and Guidelines Manual, published in October of 2008 by the County, is used to assist in determining levels of impacts to sensitive areas and appropriate methods for avoidance, minimization, and/or mitigation.

Factors that are used in assessing the significance of project impacts on biological resources includes size of project; the relative disturbance to habitat occurring in Project region and immediate vicinity; type of impact; and, timing relative to the occurrence of sensitive resources that project may impact.

Santa Barbara County (2008) determines that disturbance impacts may be *Significant* based on substantial evidence in the record, if a project substantially impacts sensitive resources in the following ways:

1. Substantially reduce or eliminate species diversity or abundance;

2. Substantially reduce or eliminate quantity or quality of nesting areas;
3. Substantially limit reproductive capacity through losses of individuals or habitat;
4. Substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources;
5. Substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes; and
6. Substantially interfere with natural processes, such as fire or flooding, upon which the habitat depends.

Disturbance impacts may be *Less Than Significant* if the project occurs in an area "where there is little or no importance to a given habitat and it is presumed that disruption would not create a significant impact" (County of Santa Barbara, 2008).

Examples of areas where impacts to habitat are presumed to be *Insignificant* include: "small acreages of non-native grassland if wildlife values are low; individuals or stands of non-native trees if not used by important animal species such as raptors or monarch butterflies; areas of historical disturbance such as intensive agriculture; small pockets of habitats already significantly fragmented or isolated, and degraded or disturbed; and, areas of primarily ruderal species resulting from pre-existing man-made disturbance" (County of Santa Barbara, 2008).

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4.0 METHODS

This Report includes a desktop review of the Project region (within five-miles from the pipeline alignment) and field surveys to document resources within the Biological Survey Area (BSA), which included the area of the proposed natural gas pipeline alignment (roadways and rights-of-way) and 200-foot buffer areas on either side of this area, extending from the right-of-way boundary. Field surveys were limited to the public rights-of-way, which included the roadways and road shoulders within the BSA; however, aerial field maps were utilized during field surveys to further analyze vegetation types within the remaining areas of the BSA. Detailed information on resources utilized for the desktop analysis and field survey methodologies are provided below.

4.1 DESKTOP REVIEW

The desktop review included an assessment of the surrounding region of the BSA. The review included a query of the CDFW California Natural Diversity Database (CNDDB) to identify reported occurrences of special-status plant and wildlife species and sensitive habitats within the regional area surrounding and including the BSA. The CNDDB query included Twitchell Dam, Tepusquet Canyon, Sisquoc, Orcutt, Lompoc, Los Alamos, Zaca Creek, Foxen Canyon, and Santa Maria U. S. Geological Survey (USGS) quadrangles (CDFW, 2014). The CNDDB is a statewide database of the status and documented locations of rare, threatened, endangered, and special-status species and natural communities in California. All wildlife taxa listed in the CNDDB are considered "Special Animals," which the CDFW is interested in tracking, regardless of their legal protection status. The USFWS Critical Habitat Portal (2013) was also used to determine location of Critical Habitat for sensitive species that may potentially occur in the region.

The desktop review examined multiple sources of information including the following:

- *Initial Field Assessment for California Tiger Salamander for the Aera East Cat Canyon Oil and Gas Field*. January 22, 2007. Prepared by Mr. Vince Semonsen of VJS Biological Consulting. (Semonsen, 2007);
- *Habitat Assessment for California Tiger Salamander for the Aera Two-dimensional Seismic Survey Test Plan*. September 8, 2011. Prepared by Storrer Environmental. (Storrer, 2011);
- *Biological Resources Report for the Aera Energy LLC Two-dimensional Seismic Survey Project*. May 2011. Prepared by Padre Associates, Inc. (Padre, 2011a);
- *Biological Resources Survey Report for the Aera Exploratory Drilling Project, East Cat Canyon Oil Field*. May 2011. Prepared by Padre Associates, Inc. (Padre, 2011b);
- *ERG Operating Company, LLC. Los Alamos Fee "Pond E" California Red-legged Frog (Rana draytonii) Survey Results.* July 30, 2012. Letter to ERG Operating Company, LLC. Prepared by Sage Institute, Inc. (Sage, 2012); and
- *Results of Drift Net and Aquatic Surveys for California Tiger Salamanders (Ambystoma californiense) and Other Special-Status Amphibians at Five Wetlands on the ERG West Cat Canyon Lease in Northern Santa Barbara County, California.* June

14, 2012. Prepared by Paul W. Collins, Peter Gaede, and Vince Semonsen. (Collins, 2012).

An aerial imagery review of the region was conducted to identify potential sensitive resources and further analyze the surrounding habitats and potential migratory routes. This review included the incorporation of Geographic Information Systems (GIS) layers, including topographic contours and aquatic resources documented with the National Wetland Inventory (NWI) (USFWS, 2012). This review also incorporated GIS shapefiles for California tiger salamander (CTS) ponds provided by the USFWS (last updated in July 2010). These files were released by the USFWS for purposes of planning and do not constitute a comprehensive list of all the ponds that have the potential to be CTS breeding ponds in Santa Barbara County; however, the information in the shapefiles has provided information on nearby aquatic habitats.

Aerial photographs of the region were provided by Cannon Associates. Specifically, the aerial photographs consisted of 12 digital ortho-photographs using USGS digital elevation model (DEM) data for rectification. These images were reviewed and used in the field to further assist in defining and mapping existing vegetative communities, potential sensitive plant locations/habitat, and wildlife habitats.

A review of the SBCPDD GIS data for ESHAs and other planning documents was also included in this review.

In addition, a review of site records from other environmental documents and range maps including Zeiner et al., (1998, 1990a, 1990b) and Sibley (2003) were utilized to determine what species have the potential to occur in the vicinity of the BSA.

4.2 FIELD SURVEYS

Following the initial desktop review, field surveys were completed within the public rights-of-way within the BSA to identify the existing botanical and wildlife resources. The surveys were conducted on June 18, 2013, by Padre Biologists Christina Santala and Amy Golub, and by Jessica Adinolfi, Botanist with Terra Verde Environmental Consulting, LLC (Terra Verde). An additional survey was completed by Padre Biologists Thea Benson and Christina Santala on October 1, 2013, and Christina Santala on January 30, 2014.

During the field surveys, Biologists drove the public rights-of-way and walked sections along the roadside within the BSA documenting all plants and wildlife species. Only the public rights-of-way, where the pipeline activities will take place, were accessed during field surveys; therefore, many portions of the BSA were analyzed using aerial imagery, binoculars, and vantage points to observe the existing peripheral conditions within the 200-foot buffer areas. Direct visual observations, indirect sign (e.g., tracks, scat, skeletal remains, and burrows), and auditory cues (i.e., calls and songs) were documented. Biologists focused on the identification of special-status species, existing vegetation communities, and suitable habitat for plant and wildlife species that have the potential to occur within the BSA.

All identifiable plant species were recorded and presence of suitable habitat for potentially occurring special-status plants was noted. Plant specimens that were not positively identified in the field were further examined using a dissecting microscope and appropriate botanical keys,

including *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al., 2012) and the *Jepson Herbarium Online Interchange California Floristics* (University of California, 2012). Vegetation/habitat types recorded during the surveys were classified based on the California Native Plant Society (CNPS) *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009) (MCVII) and *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986), as appropriate.

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5.0 FINDINGS

The following discussion of biological resources includes those that were observed within the BSA, those identified in the desktop review within the region, and resources that are expected to occur and/or frequent a particular area based on the presence of suitable habitat.

5.1 REGIONALLY OCCURRING SENSTIVE HABITATS

Based on information retained from the desktop review, several protected habitats that support special-status plants and wildlife occur within the Project region and are listed as one or more of the following:

- "Critical Habitat", as defined by the FESA and afforded protection by the USFWS and/or NMFS;
- "Sensitive habitats", as defined by the CESA and afforded protection by the CDFW and/or local agencies; or
- "Rare habitats" as defined by the County of Santa Barbara, professional organizations, and/or the scientific community.

Sensitive habitats occurring within the Project region are illustrated in Figure 5-1 - Documented Sensitive Resources and USFWS Critical Habitat areas are illustrated in further detail in Figures 5-2, 5-2A and 5-2B).

State and County Sensitive Habitats. The CNDDB has documented Southern Vernal Pool within the Project region (Figure 5-1 - Documented Sensitive Resources). Southern Vernal Pools are considered Natural Communities of Special Concern showing a decline in California and, as such, have a designated imperilment status ranking of S1, S2, or S3 (i.e., critically imperiled, imperiled, or vulnerable, respectively) as designated by CDFW (CDFW, 2014). The CDFW also considers valley needlegrass grassland to be a sensitive plant community based on the species composition at the Alliance and provisional Alliance level including purple needlegrass (*Stipa* [*Nasella] pulchra*), foothill needlegrass (*Stipa* [*Nasella] lepida*), and nodding needlegrass (*Stipa* [*Nasella] cernua*). Areas consisting of ten percent cover or greater of needlegrass are considered an ESHA and are protected by the County. Other ESHA's provided protection by the County include maritime chaparral and Burton Mesa. Many of these communities are not typically documented by resource professionals, which make historical documentation difficult to track. None of these sensitive habitats were observed within the BSA during field surveys.

Southern Steelhead Critical Habitat. Critical Habitat designated for southern steelhead (*Oncorhynchus mykiss*) is defined under Section 3 of the FESA as: (1) specific areas within the geographical area occupied by the species at the time of listing, on which are found those physical or biological features that are essential to the conservation of the listed species and that may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by the species at the time of listing that are essential for the conservation of a listed species (NOAA, 2005). NMFS is responsible for designating Critical Habitat for this species. The Sisquoc River is designated as an evolutionary significant unit (ESU) for Southern Steelhead. This river does not intersect the proposed natural gas pipeline alignment;

however, Cat Canyon Creek and few of its tributaries, and Orcutt Creek are tributaries within this system in which the alignment does intersect. Additional information on suitable steelhead habitat occurring within the BSA is further discussed in the sections below.

California Red-Legged Frog Critical Habitat. CRLF Critical Habitat contains the primary elements: upland and aquatic habitat features essential for the movement and breeding activities for the species, and locations in which CRLF have been documented. Critical Habitat may include an area that is not currently occupied by the species, but is important for its recovery. Further, CRLF are ultimately protected if occurring outside designated Critical Habitat areas. CRLF Critical Habitat occurs within the BSA along Graciosa Road, near the western terminus of the proposed pipeline corridor (Figure 5-2A - USFWS Critical Habitat Areas). The pipeline is proposed for construction under the paved roadway, outside the designated Critical Habitat area for CRLF.

California Tiger Salamander Critical Habitat. The BSA is located within the Santa Barbara County Distinct Population Segment (DPS) for CTS. The Santa Barbara County DPS Critical Habitat areas are separated by six metapopulation units designated by the USFWS: West Santa Maria/Orcutt, East Santa Maria, West Los Alamos/Careaga, East Los Alamos, Purisima Hills, and Santa Rita Valley. The East Santa Maria, West Los Alamos/Careaga, and East Los Alamos metapopulations occur within a five-mile radius of the BSA. Critical Habitat areas include upland and aquatic habitat features essential for movement and breeding activities and may include an area that is not currently occupied by the species, but that is important for its recovery. Further, species with designated Critical Habitat are ultimately protected if occurring outside designated Critical Habitat areas. Critical Habitat for CTS occurs within the BSA along East Clark Avenue and the intersection of Dominion Road (Figure 5-2B - USFWS Critical Habitat Areas). The pipeline is proposed for construction under the paved roadway, outside the designated Critical Habitat area for CTS.

Arroyo Toad Critical Habitat. Arroyo toad (*Bufo californicus*) Critical Habitat contains the primary constituent elements needed for the species' survival, including: rivers or streams for all the life stages of the toads; riparian and adjacent upland areas for foraging and breeding; accessible areas between occupied habitat so that the toads can disperse; areas that flood periodically, leaving behind pools where toads breed; and, terrace habitats that provide for their life functions. Critical Habitat areas may include an area that is not currently occupied by the species but that is important for its recovery. Additionally, arroyo toad remain protected if occurring outside designated Critical Habitat areas. Arroyo toad Critical Habitat does not occur within the BSA; however, it does occur to the east within five-miles of the BSA in the upstream reaches of the Sisquoc River.

LEGEND:

- Proposed Gas Pipeline Route
- 5-mile Buffer of Project Area
- La Graciosa thistle Critical Habitat
- Lompoc yerba santa Critical Habitat
- CRLF Critical Habitat
- CTS Critical Habitat
- Arroyo toad Critical Habitat
- Southern California Steelhead Critical Habitat

CNDDB Occurence

- Community
- Plant
- Animal

Source: CNDDB 1/2014, USFWS Critical Habitat, ESRI Online Basemap
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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MILES

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PROJECT NUMBER: 1002-0457
DATE: October 2014

DOCUMENTED SENSITIVE RESOURCES

FIGURE 5-1

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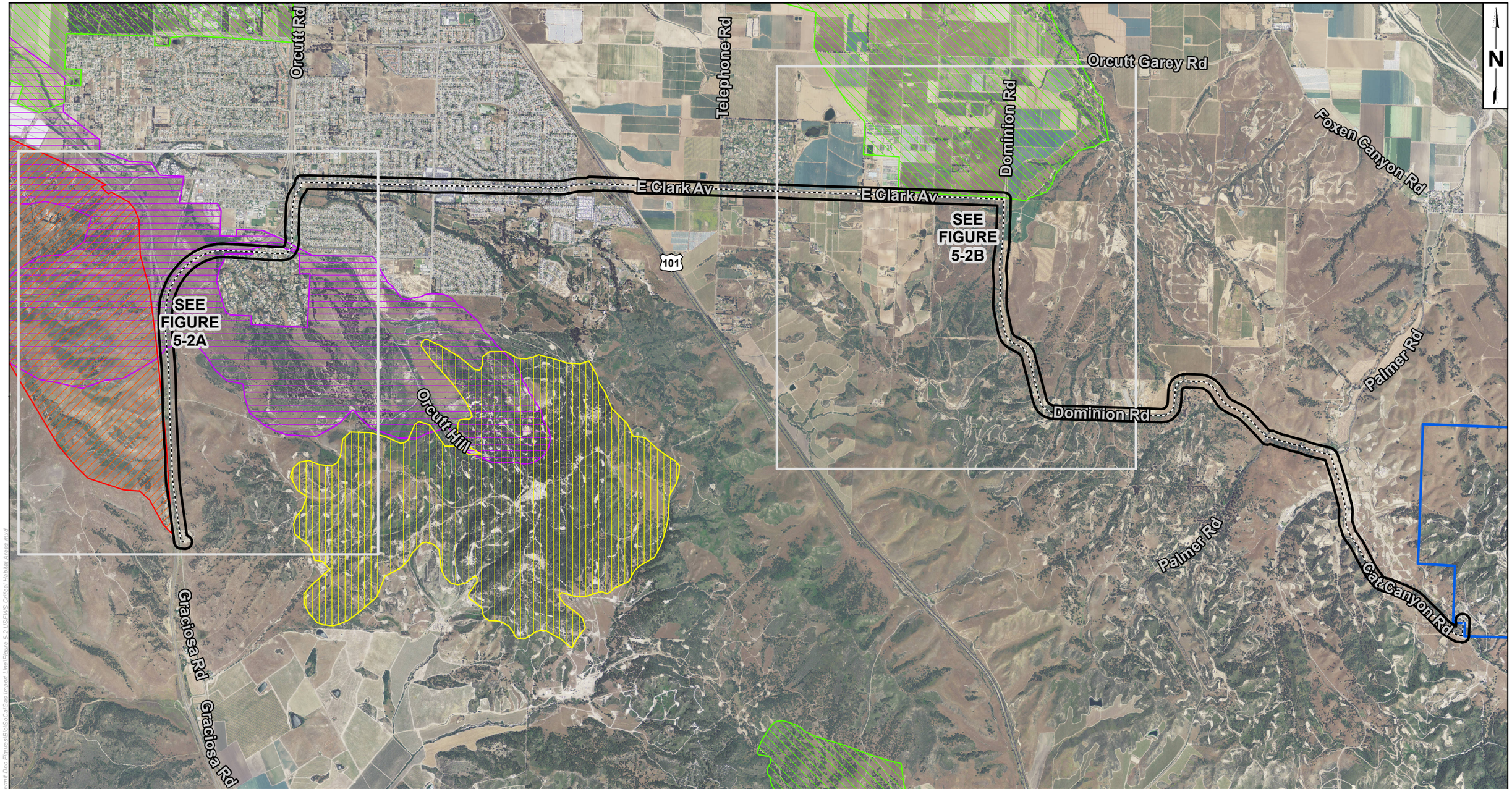

LEGEND:

- Proposed Common Carrier Natural Gas Pipeline Route
- BSA Area - 250ft Buffer of Proposed Pipeline Route
- Aera Energy LLC Property Boundary
- California red-legged frog Critical Habitat
- California tiger Salamander Critical Habitat
- La Graciosa thistle Critical Habitat
- Lompoc yerba santa Critical Habitat

Source: Southern California Gas 8/2013 CAD &1/2014 PDF, Santa Barbara County Assessor, DPSI 2013 Survey, NAIP 2012, USFW Critical Habitat
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only.

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SANTA BARBARA COUNTY, CA

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DATE: October 2014

USFWS CRITICAL HABITAT AREAS

FIGURE 5-2

Z:\Kristin\GIS Maps\Map Projects\East Cat Canyon\Permit Doc Figures\Bio\SoCalOps Impact Line\Figure 5-2 USFWS Critical Hab\Hab Areas.mxd

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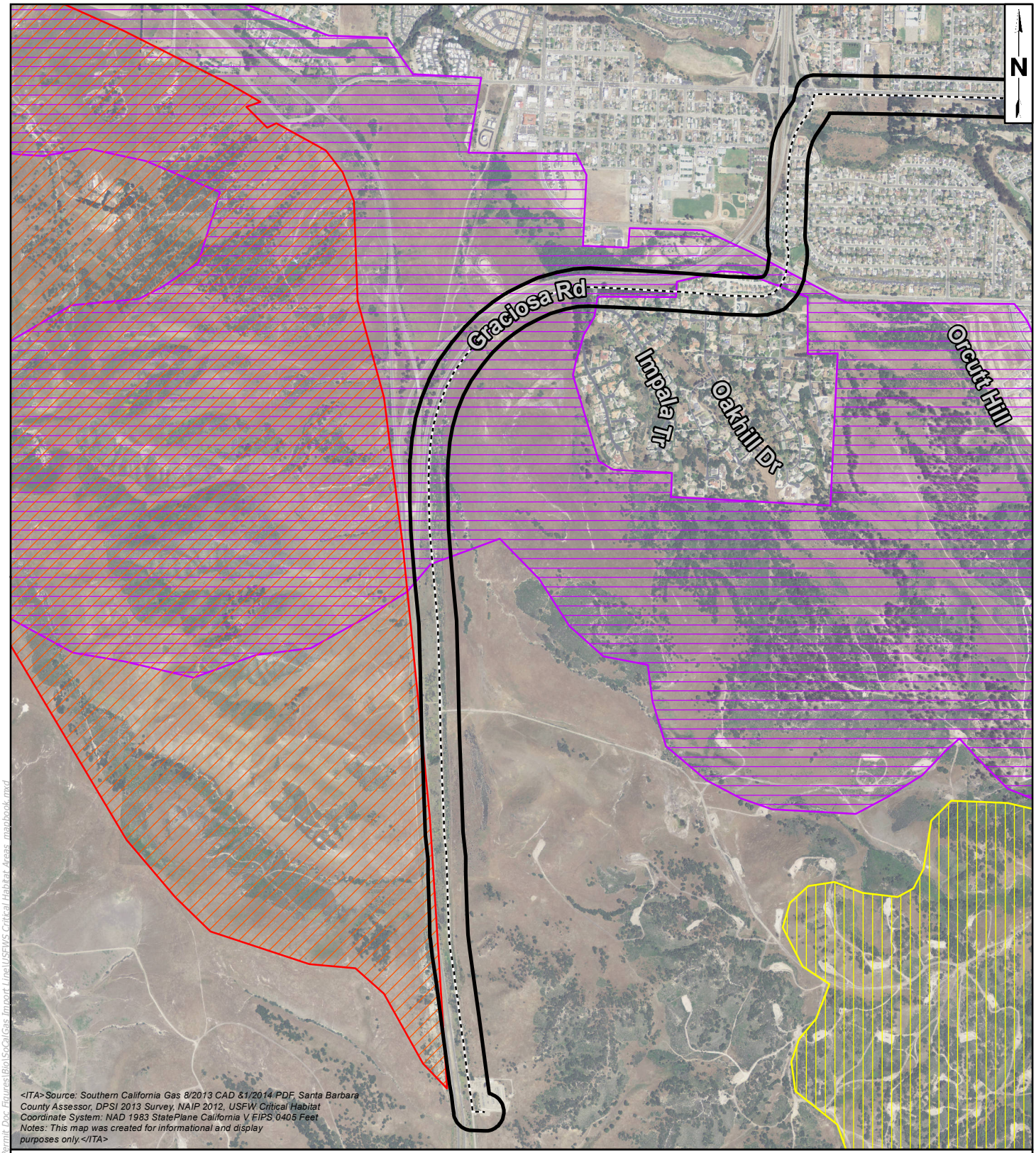

<ITA>Source: Southern California Gas 8/2013 CAD &1/2014 PDF, Santa Barbara County Assessor, DPSI 2013 Survey, NAIP 2012, USFW Critical Habitat
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only.</ITA>

LEGEND:

- Proposed Common Carrier Natural Gas Pipeline Route
- BSA Area - 250ft Buffer of Proposed Pipeline Route
- California red-legged frog Critical Habitat
- La Graciosa thistle Critical Habitat
- Lompoc yerba santa Critical Habitat

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DATE: October 2014

USFWS CRITICAL HABITAT AREAS

FIGURE 5-2A

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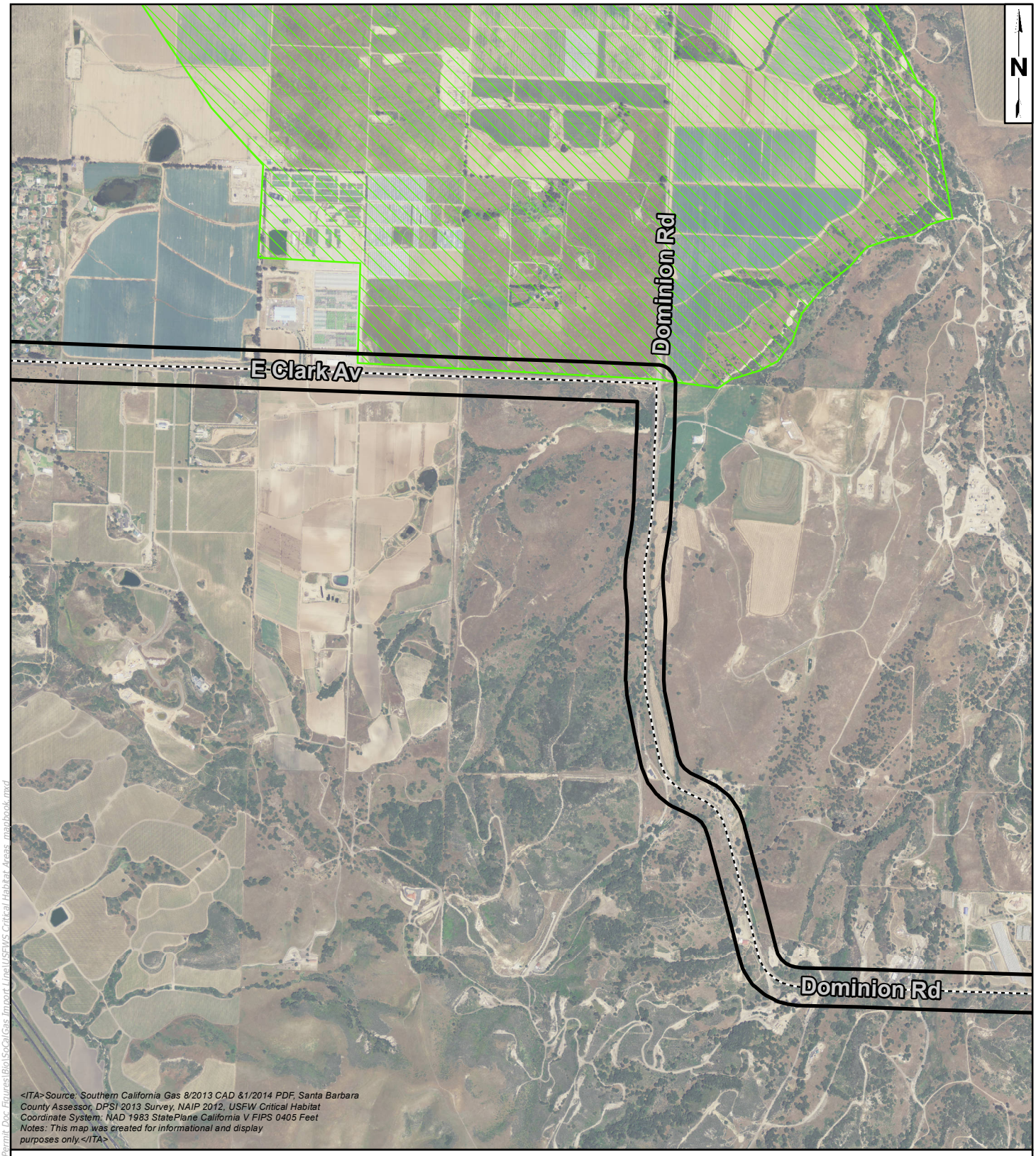

<ITA>Source: Southern California Gas 8/2013 CAD &1/2014 PDF, Santa Barbara County Assessor, DPSI 2013 Survey, NAIP 2012, USFW Critical Habitat
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only.</ITA>

LEGEND:

- Proposed Common Carrier Natural Gas Pipeline Route
- BSA Area - 250ft Buffer of Proposed Pipeline Route
- California tiger Salamander Critical Habitat

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USFWS CRITICAL HABITAT AREAS

FIGURE 5-2B

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La Graciosa Thistle Critical Habitat. La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*) Critical Habitat includes mesic areas associated with wetlands of the Santa Maria Valley and Santa Ynez Valley dune complexes; margins of dynamic riparian systems of the Santa Maria and Santa Ynez rivers and Orcutt and San Antonio creeks; and, freshwater wetlands found in grasslands, meadows, coastal scrub, chaparral, and oak woodland. Critical Habitat for La Graciosa thistle includes central dune scrub, coastal dune, coastal scrub, freshwater seep, coastal and valley freshwater marsh and fen, riparian scrub, oak woodland, and other wetland communities. La Graciosa thistle Critical Habitat elements also include soils with a sandy component, and features that allow dispersal and connectivity between populations, particularly in natural riparian drainages, and natural Aeolian geomorphology (USFWS, 2009a). The Santa Maria River-Orcutt Creek Critical Habitat Unit (No. 2) includes a stretch of Graciosa Road in the western portion of the BSA (Figure 5-2A - USFWS Critical Habitat Areas). Additionally, the Cañada de Las Flores Critical Habitat Unit (No. 3) occurs within five-miles to the south of the BSA (Figure 5-2 - USFWS Critical Habitat Areas). The pipeline is proposed for construction under the roadway, however, the pipeline alignment does overlap designated La Graciosa Thistle Critical Habitat areas (Figure 5-2A - USFWS Critical Habitat Areas).

Lompoc Yerba Santa Critical Habitat. Lompoc yerba santa (*Eriodictyon capitatum*) Critical Habitat includes: soils with a large component of sand and that tend to be acidic; and plant communities that support associated species, including maritime chaparral and southern bishop pine forests that intergrade with chaparral (USFWS, 2002). Critical Habitat for Lompoc yerba santa occurs in two units in western Santa Barbara County: Santa Ynez Mountains Unit and Solomon Hills Unit. No Lompoc yerba santa Critical Habitat occurs within the BSA; however, the Solomon Hills Critical Habitat Unit occurs approximately 0.8 mile east of the western terminus of the BSA near Graciosa Road (Figure 5-2 - USFWS Critical Habitat Areas).

5.2 AQUATIC FEATURES

Streams. The BSA intersects and/or runs parallel to several ephemeral drainages, including the following blue line streams, and their tributaries: Cat Canyon Creek, Bradley Canyon Creek, Orcutt Creek, and Graciosa Canyon Creek. These streams are ephemeral and remain dry for the majority of the year except during and immediately following rainfall. These streams do not provide a perennial water source for aquatic wildlife, including fish, that rely on a continual water source for survival and/or breeding. After seasonal rains, the streams may hold water long enough to provide suitable breeding habitat for some amphibious species or aquatic invertebrates that rely on ephemeral water sources that do not support fish or other larger predators to complete their lifecycles. Both Cat Canyon Creek and Orcutt Creek drain into the nearby ephemeral Sisquoc River, which is an important migratory corridor for a wide range of wildlife.

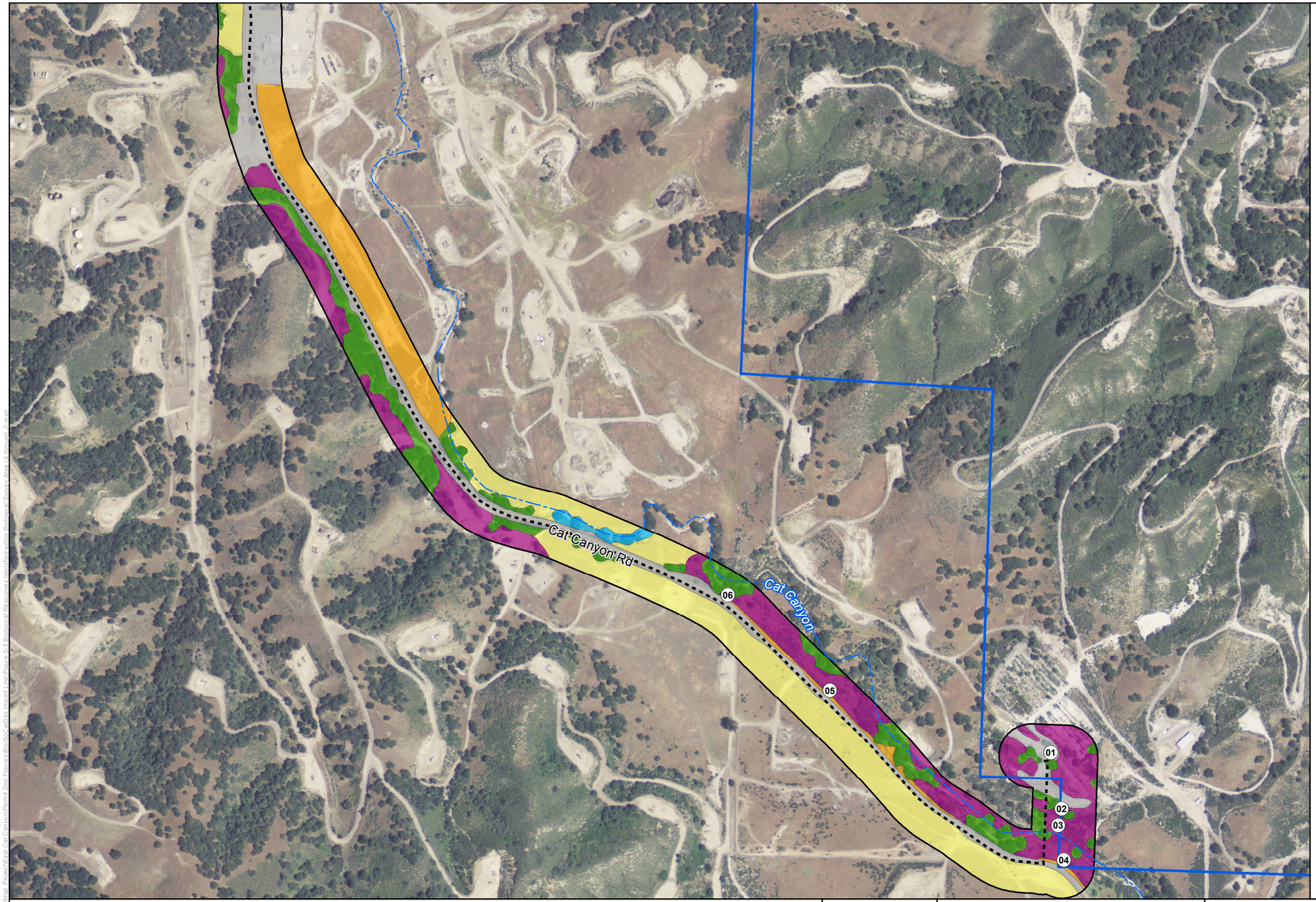
Ephemeral Wetland Depressions and Swales. Ephemeral wetland depressions and swales are isolated wetland features created in shallow depressions with a substrate of hardpan, clay, or basalt near the surface that restricts percolation of water. These depressions are inundated following rainfall and may remain inundated until spring or early summer, sometimes filling and emptying numerous times during the wet season. These wetted features often support endemic plant and wildlife species that rely on short duration inundation and specific soil elements.

During the field survey, a few ephemeral wetland features were identified within the westernmost stretch of the BSA, specifically within a spring that provides water to a roadside ditch (Appendix A). Vegetation identified at this location during field surveys primarily consisted of watercress (*Nasturtium officinale*), cattail (*Typha* sp.), tall flatsedge (*Cyperus eragrostis*), and annual rabbitsfoot grass (*Polypogon monspeliensis*). Water in this area is supplied by an upgradient spring that likely provides enough water to saturate the soil year round. During field surveys, this area appears to have been previously disturbed by culvert installation activities and other road maintenance activities. This wetland feature may provide suitable foraging and nesting/breeding habitat for birds and amphibians.

Agricultural Ditches. The BSA intersects several rotational row-crop agricultural fields, in which soils are regularly disked and the crops rotated seasonally. Vineyards are also present, but these fields are not rotated. Runoff from these fields is directed to agricultural ditches, which are frequently cleared of vegetation to maintain flows (Appendix A). Some of these agricultural ditches connect to larger agricultural drainages that terminate at catchment basins and store the water until percolating into the ground. In the Santa Maria Valley, these ditches and catchment basins are known to support amphibian movements and breeding activities. No agricultural ponds were observed within the BSA; however, agricultural ditches were observed along the roadside within the BSA and likely drain into ponds located outside of the BSA.

5.3 VEGETATION TYPES OCCURRING WITHIN THE BSA

Based on species composition, life form, and community membership rules, the vegetation identified within the BSA can be classified into distinct vegetation types (i.e., alliances, associations) as described in *A Manual of California Vegetation, Second Edition* (MCVII) (Sawyer, *et al.,* 2009). Further, the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW, 2009), in conjunction with *The Natural Communities List* (CDFW, 2010), was utilized to determine presence/absence of special-status natural communities. These vegetation communities are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects (CDFW, 2009). These vegetation communities may or may not contain special-status species. Padre utilized aerial imagery in conjunction with field surveys to identify and classify the plant communities and wildlife habitats within disturbed areas within the BSA. Refer to Appendix A for photographs taken along the proposed pipeline route and Appendix B for a comprehensive list of plants observed within the BSA during field surveys. Vegetation types identified within the BSA are illustrated in Figure 5-3 - Biological Resources Identified within Biological Survey Area (A through J) and described in detail below.



LEGEND:

- Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

5-3H | 5-3G | 5-3F | 5-3E | 5-3D | 5-3C | 5-3B | 5-3A | 5-3I | 5-3J

FIGURE INDEX

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Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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PROJECT NAME: AERA - EAST CAT CANYON
SANTA BARBARA COUNTY, CA

PROJECT NUMBER: 1002-0457

DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE 5-3A

Z:\Kristin\GIS Maps\Map Projects\East Cat Canyon\Rpt4 Doc Figures\Bio\SoCal\Cat Impact Line\Figure 5-3 Biological Resources Identified within Biological Survey Area.mxd

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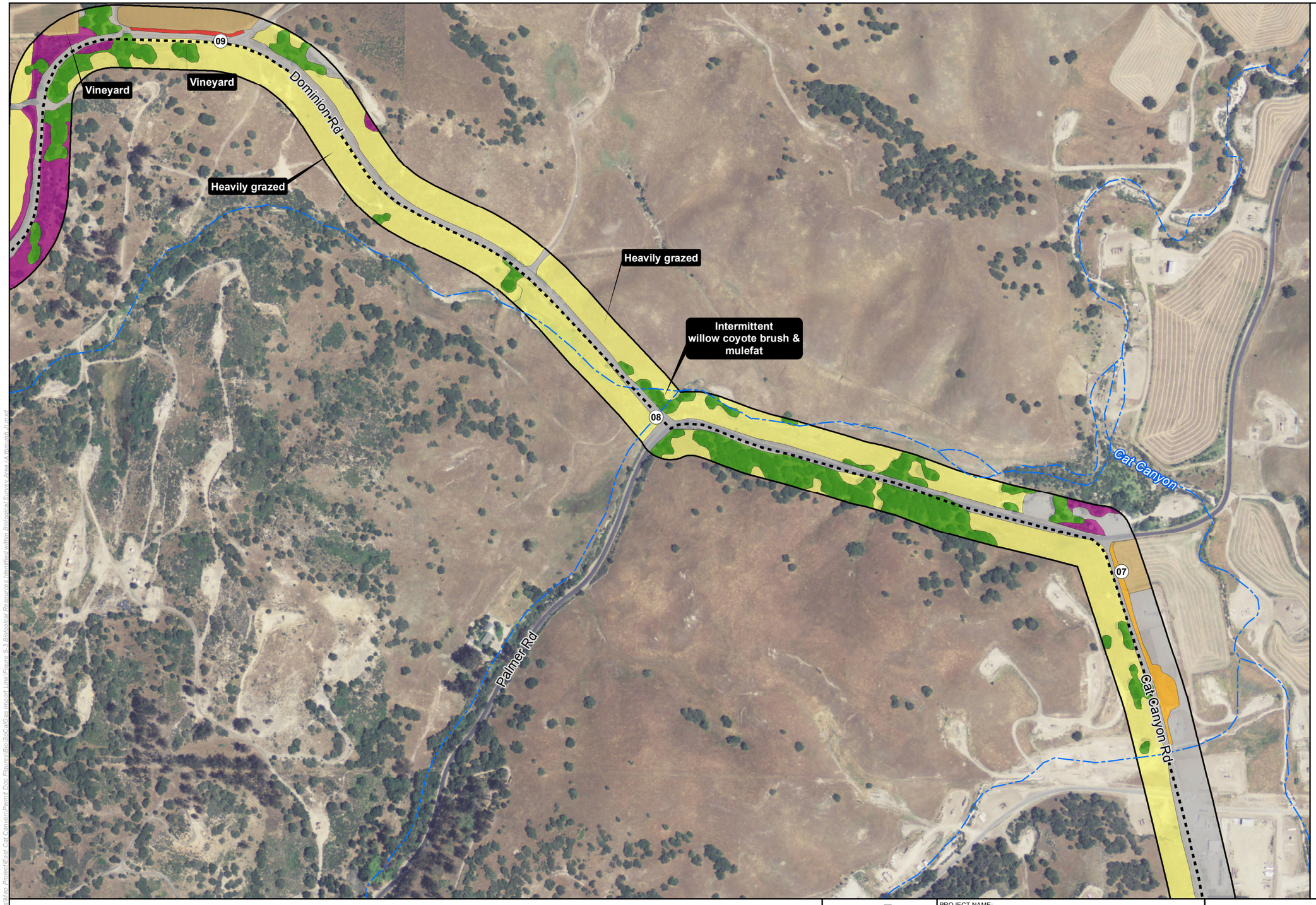

LEGEND:

- Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

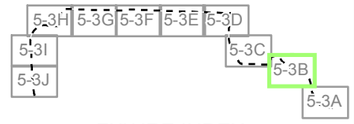

FIGURE INDEX

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Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE 5-3B

Z:\Kristin\GIS Maps\Map Projects\East Cat Canyon\Permit Doc Figures\Bio\SoCalGas Import Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (Alternate 1).mxd

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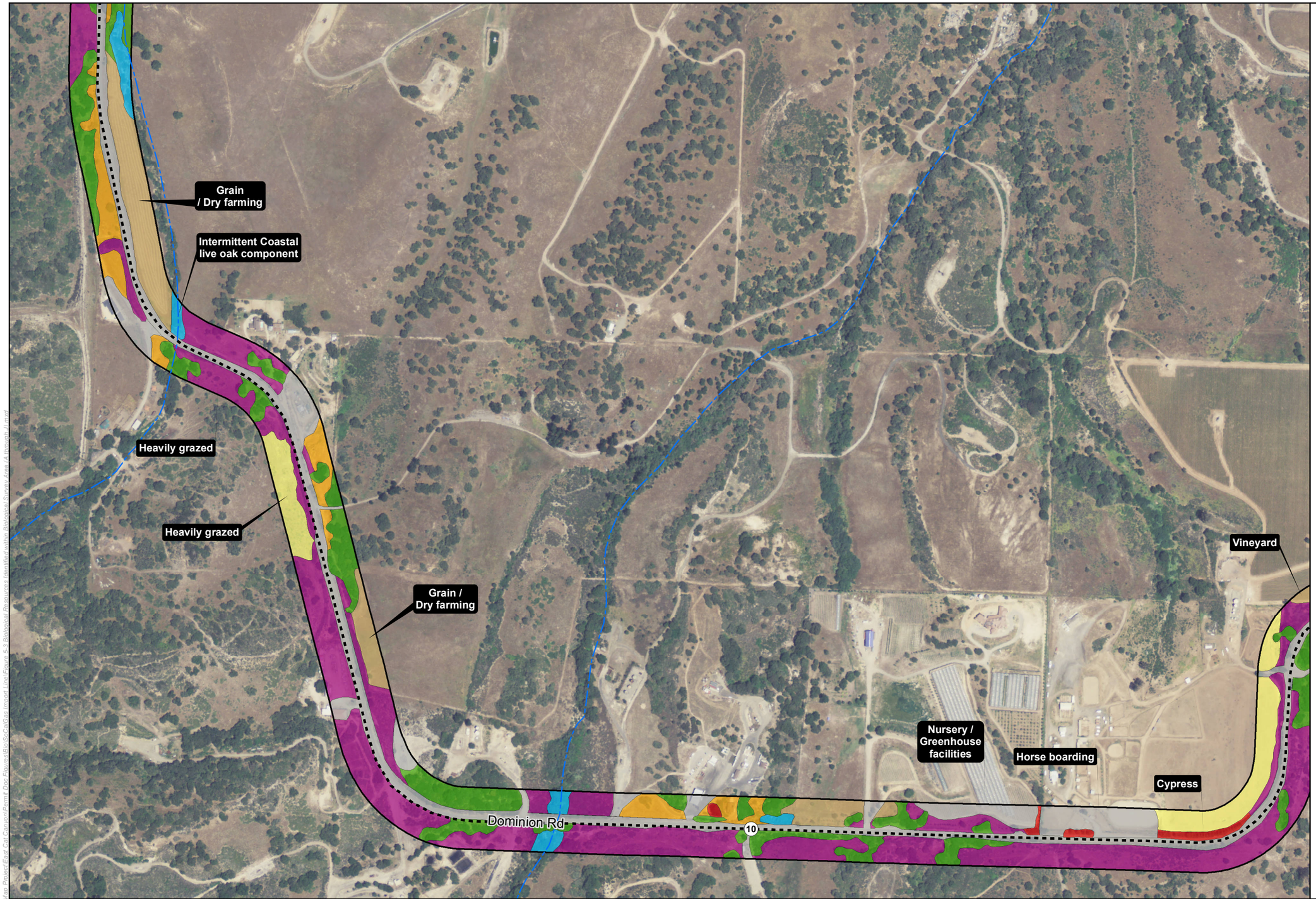

LEGEND:

- # Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

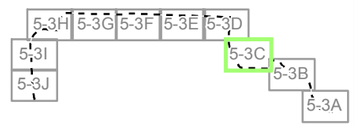

FIGURE INDEX

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Notes: This map was created for informational and display purposes only

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PROJECT NAME: AERA - EAST CAT CANYON SANTA BARBARA COUNTY, CA
PROJECT NUMBER: 1002-0457
DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE 5-3C

Z:\Kristin\GIS_Maps_Project\East Cat Canyon\Permit Doc Figures\Bio\SoCalGas Import Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (Although I).mxd

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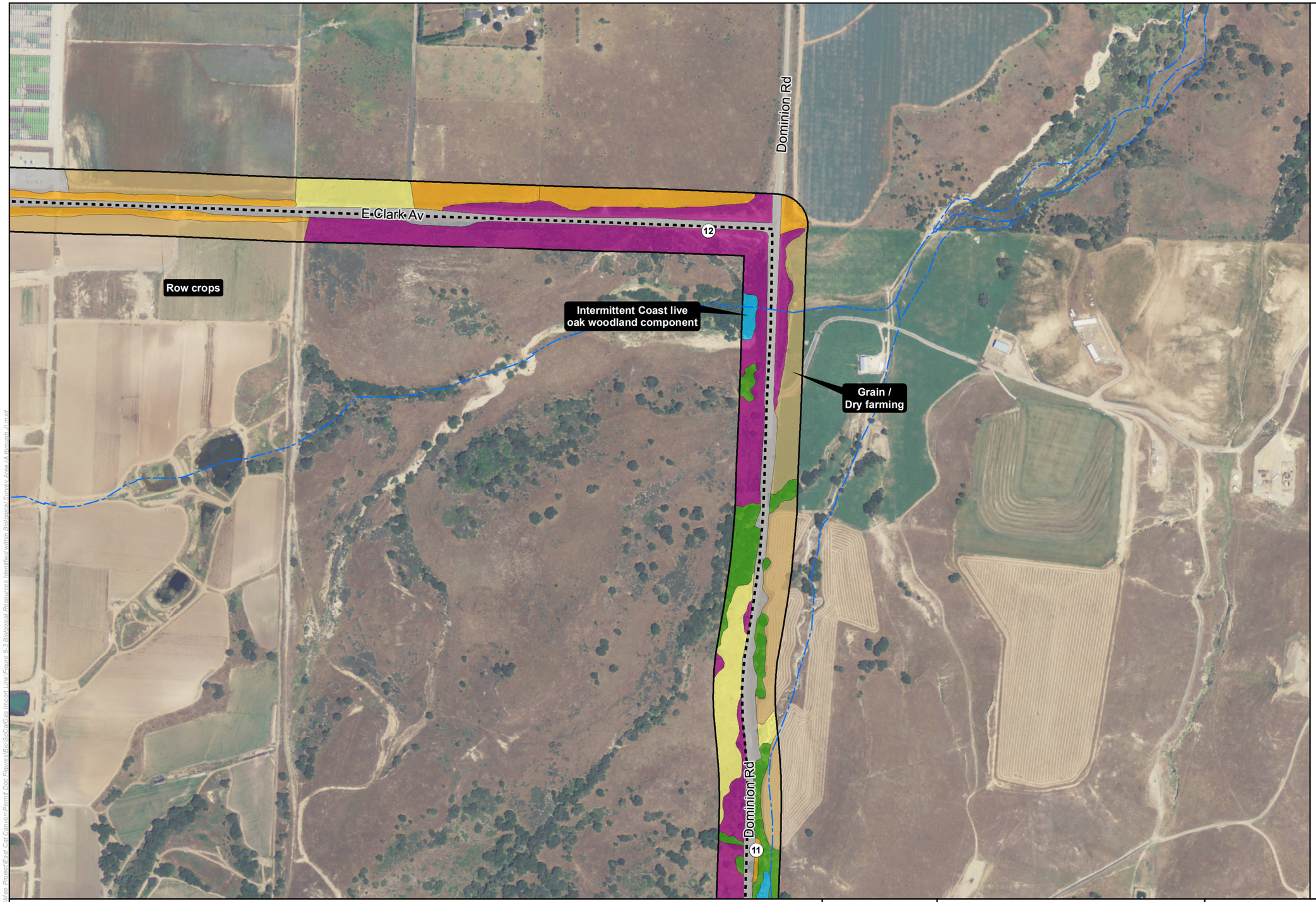

LEGEND:

- Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

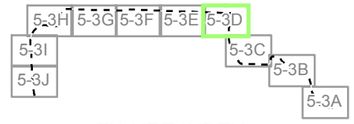

FIGURE INDEX

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Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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PROJECT NAME:
AERA - EAST CAT CANYON
SANTA BARBARA COUNTY, CA

PROJECT NUMBER: 1002-0457

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BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE
5-3D

Z:\Kristin\GIS Maps\Map Projects\East Cat Canyon\Permit Doc Figures\BioSrvCa\Cat Import Live\Figure 5-3 Biological Resources Identified within Biological Survey Area.mxd

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LEGEND:

- Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

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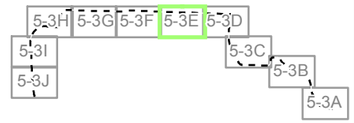

FIGURE INDEX

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Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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PROJECT NAME:
AERA - EAST CAT CANYON
SANTA BARBARA COUNTY, CA

PROJECT NUMBER: 1002-0457

DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE
5-3E

Z:\Kristin\GIS_Maps\Maps_Project\East Cat Canyon\Permit Doc Figures\Bio\SoCalGas Import Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (Alternate 1).mxd

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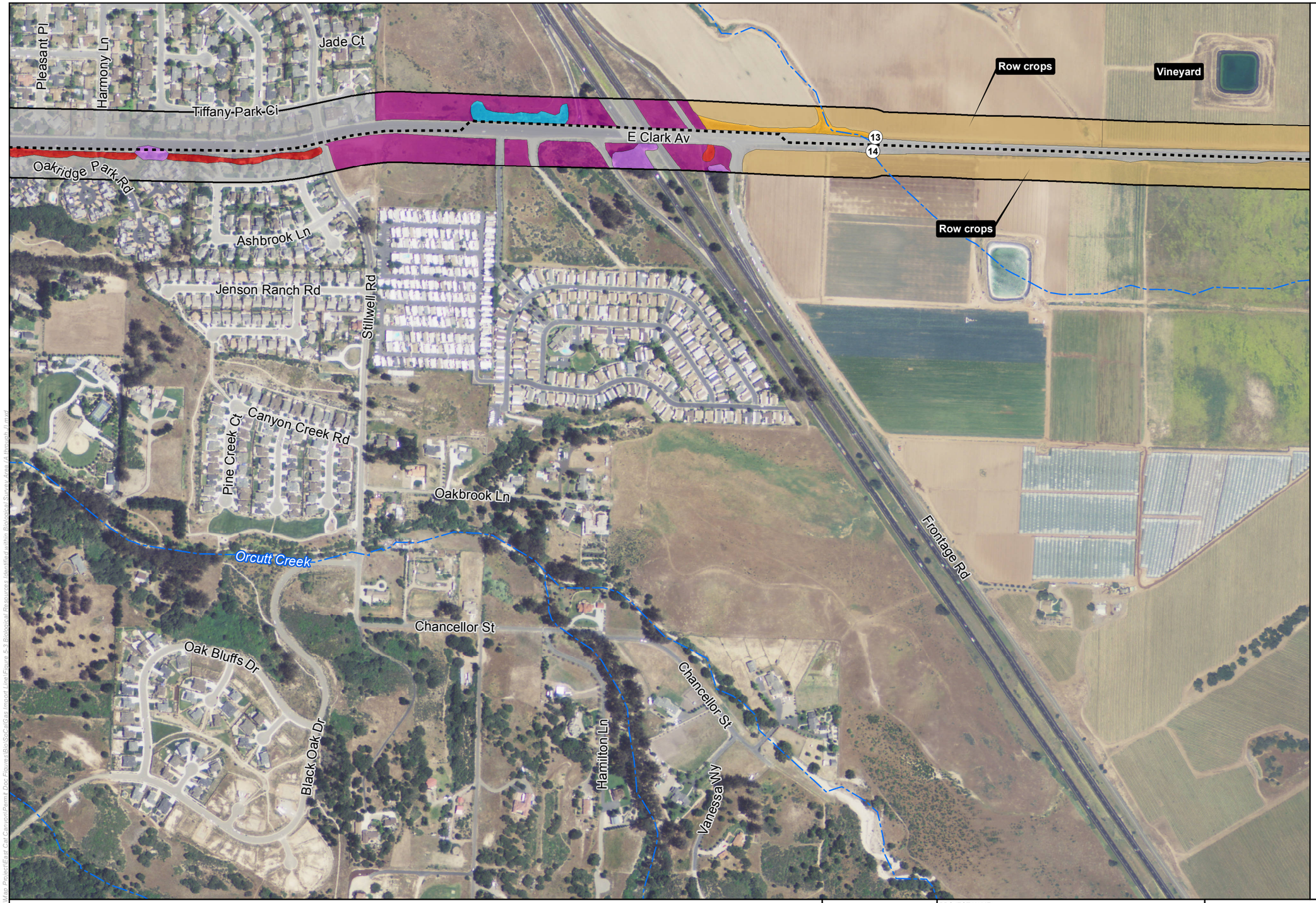

LEGEND:

- Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

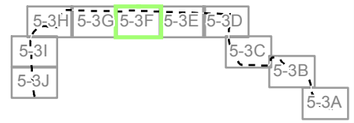

FIGURE INDEX

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FEET

Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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AERA - EAST CAT CANYON
SANTA BARBARA COUNTY, CA

PROJECT NUMBER: 1002-0457
DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE
5-3F

Z:\Kristin\GIS Mxds\Mxd Project\East Cat Canyon\Rpt mxd Doc Figure\Bio\SoCalGas Impact Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (4 through 7).mxd

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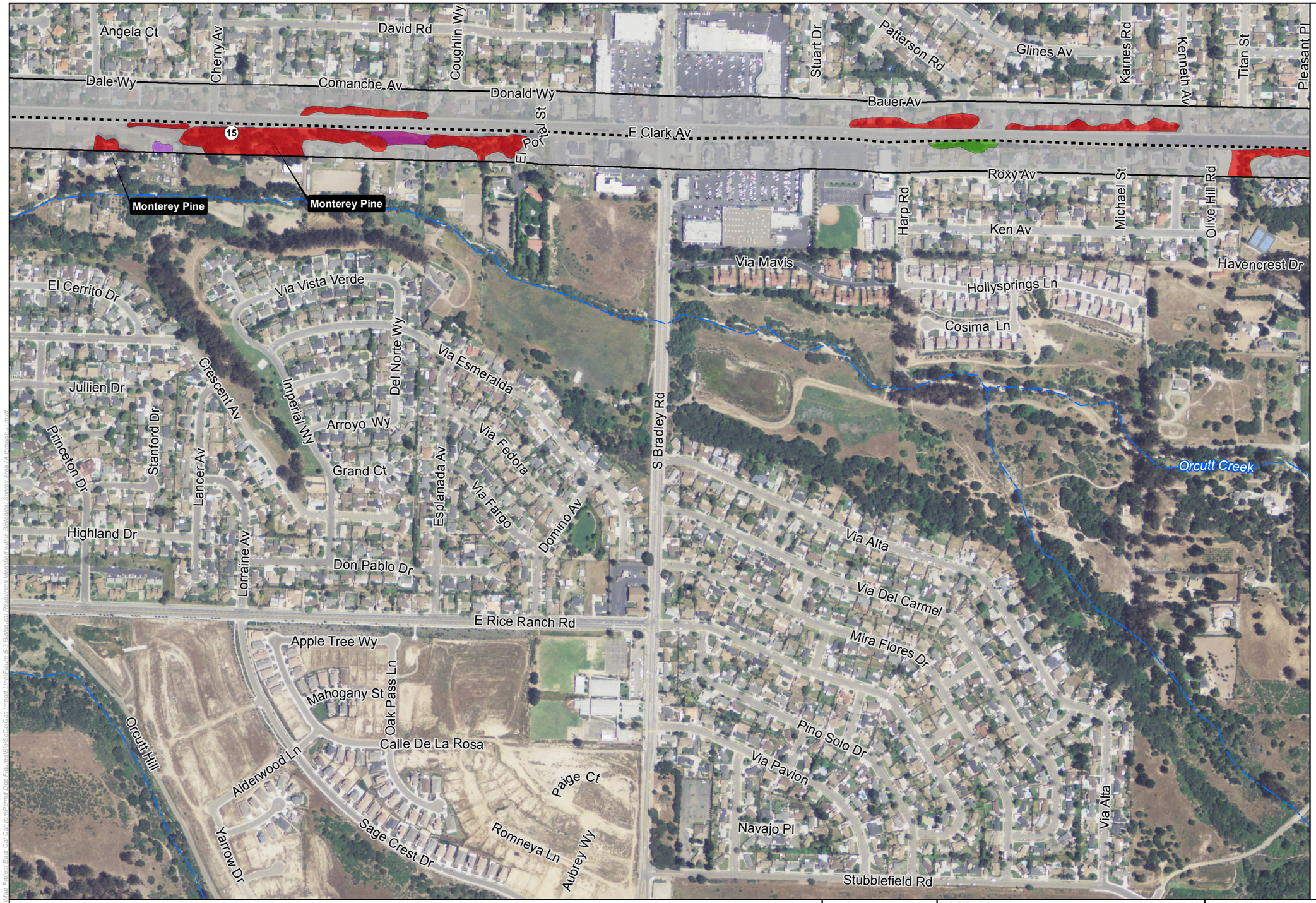

LEGEND:

- Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

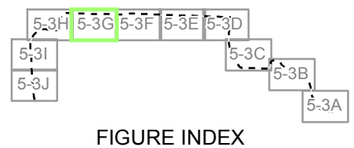

FIGURE INDEX

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Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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PROJECT NUMBER: 1002-0457
DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE 5-3G

Z:\Kristin\GIS Maps\Map Projects\East Cat Canyon\Report Doc Figures\Bio\ScCo\GIS Import Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (Monterey Pine).mxd

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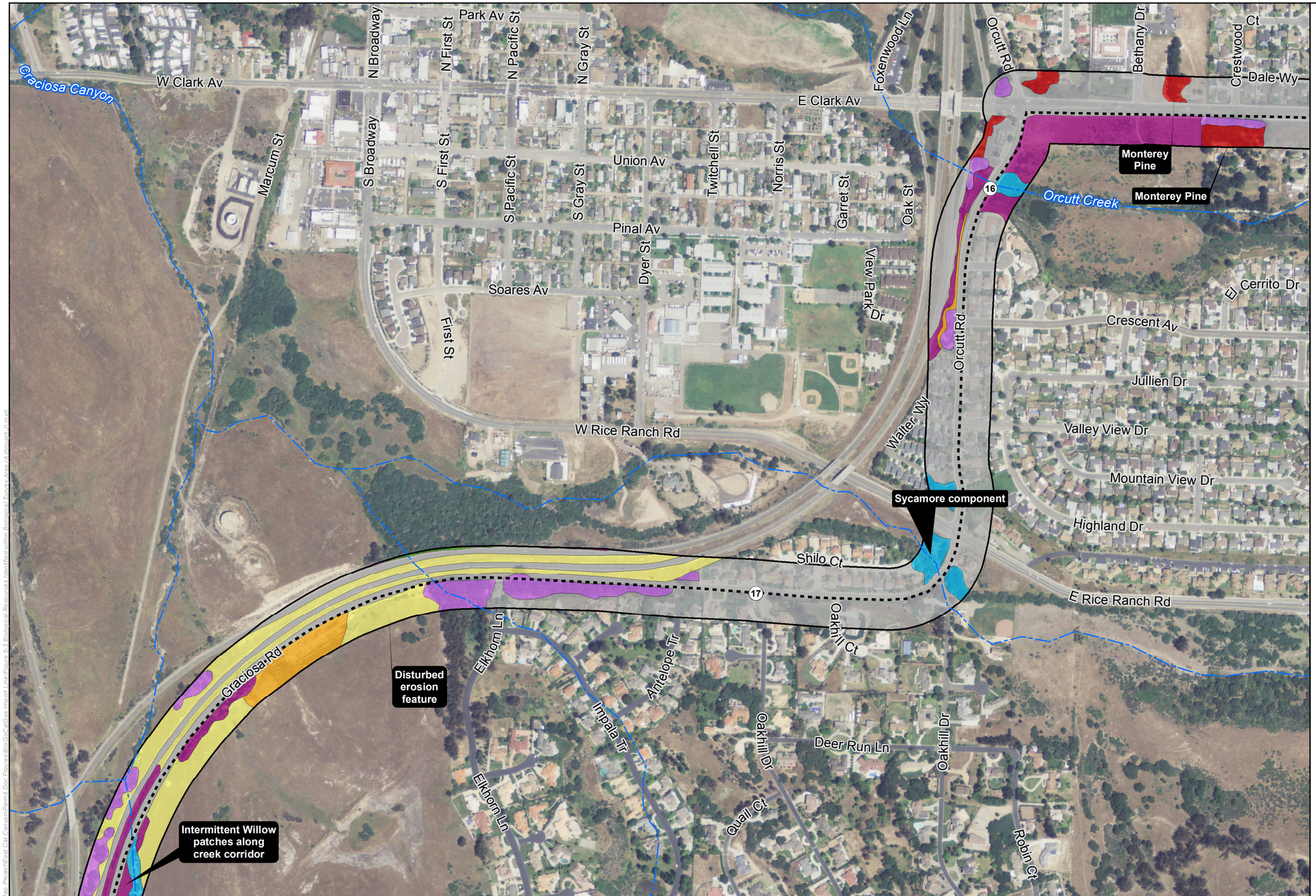

LEGEND:

- (#) Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

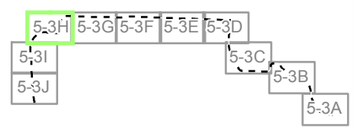

FIGURE INDEX

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Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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PROJECT NUMBER: 1002-0457
DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE 5-3H

Z:\Kristin\GIS Mxds\Map Project\East Cat Canyon\Permit Doc Figures\Bio\SoCalGas Import Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (Although).mxd

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Graciosa Rd
Graciosa Canyon
Elkhorn Ln
Impala Tr
Quail Ct
Oak Valley Ct
Oakhill Dr
Intermittent Willow patches along creek corridor
Heavily grazed

LEGEND:

- # Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

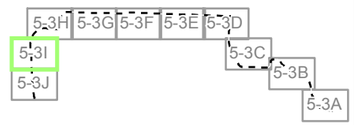

FIGURE INDEX

0 250 500
FEET

Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE
5-3I

Z:\Kristin\GIS Maps Project\East Cat Canyon\Permit Doc Figures\Bio\SoCalGas Impact Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (Although).mxd

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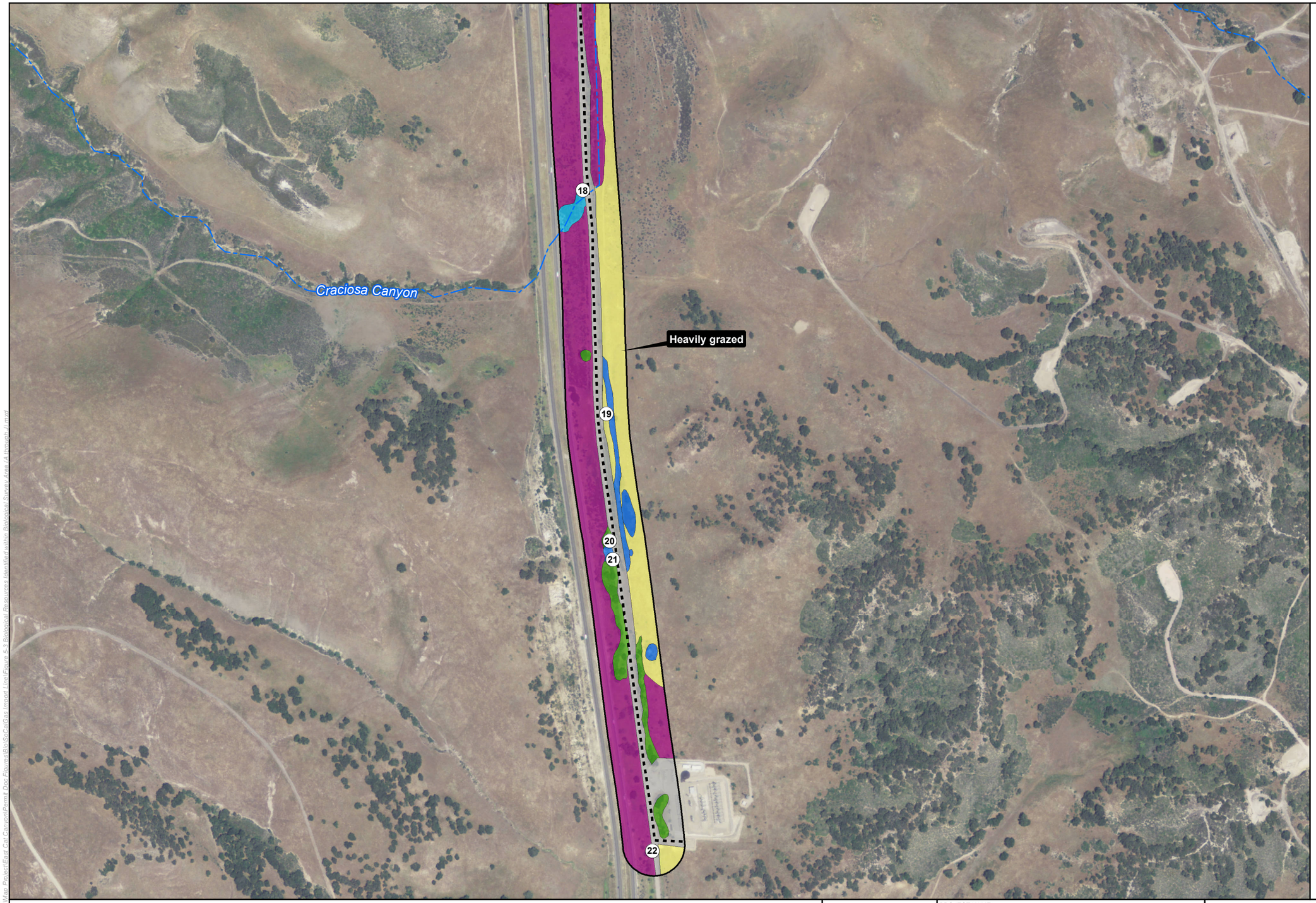

LEGEND:

- # Photo Location
- Proposed Gas_Line Route
- Hydrological Feature
- Aera Energy LLC Property
- Biological Survey Area

Vegetation Type

- Agricultural
- Annual Brome Grasslands
- Arroyo Willow Thickets
- Coast Live Oak Woodland
- Coyote Brush Scrub
- Developed
- Drainage Feature
- Eucalyptus Groves
- Ornamental
- Ruderal

N

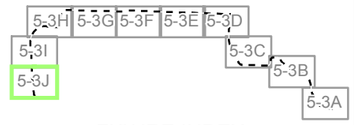

FIGURE INDEX

0 250 500
FEET

Source: Santa Barbara County, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

padre associates, inc.
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SANTA BARBARA COUNTY, CA

PROJECT NUMBER: 1002-0457

DATE: October 2014

BIOLOGICAL RESOURCES IDENTIFIED WITHIN BIOLOGICAL SURVEY AREA

FIGURE 5-3J

Z:\Kristin\GIS Mxds\Mxd Project\East Cat Canyon\Permit Doc Figures\BioSciCalGrp Import Line\Figure 5-3 Biological Resources Identified within Biological Survey Area (All Images).mxd

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Annual Brome Grasslands. Annual brome grasslands (*Bromus diandrus, hordeaceus – Brachypodium* Semi-Natural Herbaceous Stands) occur in all topographic settings in foothills, waste places, rangelands, and openings in woodlands. Typical vegetation includes ripgut brome (*B. diandrus*), soft chess (*B. hordeaceus)*, and/or false brome (*Brachypodium distachyon*) as dominant or co-dominant with native and non-native component species in the herbaceous layer. Cover can be intermittent to continuous (Sawyer *et. al.*, 2009). Annual brome grassland are scattered throughout the BSA, primarily in the less-developed areas of the eastern portion of the proposed pipeline corridor. Based on field surveys, Annual brome grassland is principally composed of non-native annual grass species dominated by rigput grass (*Bromus diandrus*) with co-dominant to component species including slender wild oat (*Avena barbata*), soft chess, red brome (*Bromus madritensis*), foxtail barley (*Hordeum murinum*), storksbill (*Erodium botrys*), red-stemmed filaree (*Erodium cicutarium*), and Italian ryegrass (*Festuca perennis*).

Coyote Brush Scrub. Coyote brush scrub (*Baccharis pilularis* Shrubland Alliance) occurs in river mouths, stream sides, terraces, stabilized dunes of coastal bars, spits along the coastline, coastal bluffs, open slopes, and ridges. Coyote brush is dominant to co-dominant in the shrub canopy, and the canopy cover is variable (Sawyer *et. al*., 2009). Based on field surveys, coyote brush scrub is scattered throughout the BSA and is comprised of native and non-native shrubs, forbs and grasses, dominated by coyote brush, with component species including California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), deerweed (*Acmispon glabra* [*Lotus scoparius*]), ripgut grass, red brome, horseweed (*Erigeron canadensis*), telegraph weed (*Heterotheca grandiflora*), black mustard (*Brassica nigra*). Coyote brush scrub was also found amid intermittent stands of coast live oak (*Quercus agrifolia*) at several locations. Areas of coyote brush scrub located on Aera property within the BSA are relatively disturbed as a result of past and current land use practices (i.e., grazing, oil field activities, buildings, etc.), and consist primarily of coyote brush, telegraph weed, and scattered pepper trees (*Schinus molle*).

Arroyo Willow Thickets. Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance) occur on stream banks and benches, slope seeps, and stringers along drainages. This alliance has an open to continuous canopy. Coyote brush is a dominant or co-dominant species in the shrub or tree canopy (Sawyer *et al.,* 2009). Arroyo willow thickets occurs in patches at several locations within the BSA, in drainages and or creek crossings along Cat Canyon Road, Palmer Road, and Dominion Road, and Graciosa Road. Based on field surveys, this vegetation type is dominated by arroyo willow, with component tree, shrub, forb and grass species including coyote brush, poison oak (*Toxicodendron diversilobum*), scattered coast live oak, blue elderberry (*Sambucus nigra*), and foxtail barley. These thickets occur within the majority of the drainages intersecting the BSA.

Coast Live Oak Woodland. Coast live oak woodland (*Quercus agrifolia* Woodland Alliance) occurs on alluvial terraces, canyon bottoms, stream banks, slopes, and flats. Soils are deep, and sandy or loamy soils associated with the alliance have high levels of organic matter. Coast live oak is a dominant or co-dominant in the tree canopy, and the canopy ranges from open to continuous (Sawyer *et al.,* 2009). Coast live oak woodland is particularly important for its ability to support a wide variety of wildlife species due to its high value as foraging habitat and protective cover (e.g., acorn production, forest canopy, etc.). Coast live oak woodland is recognized by the CDFW as a valuable habitat that should be protected. Further, oak woodland is considered to be an

ESHA by Santa Barbara County. Coast live oak woodland occurs in small stands (i.e., less than one acre) primarily within the eastern and western portions of the BSA, adjacent to Cat Canyon Road, Palmer Road, and Graciosa Road. Based on field surveys, coast live oak woodland is dominated by coast live oak with component species including coyote brush, arroyo willow, Italian thistle, ripgut grass, slender wild oat, Italian ryegrass (*Festuca perennis*), woodmint (*Stachys bullata*), poison oak, and California hummingbird sage (*Salvia spathacea*).

Eucalyptus Groves. Eucalyptus groves (*Eucalyptus* [*globulus, camaldulensis*] Semi-Natural Woodland Stands) were generally planted as trees, groves, and windbreaks and are naturalized on uplands and stream courses. Dominant or co-dominant species include blue gum (*E.globulus)* or river red gum (*E. camaldulensis).* The canopy is intermittent to continuous (Sawyer *et. al.* (2009). Eucalyptus groves often provide suitable nesting habitat for birds and overwintering habitat for monarch butterfly. Eucalyptus groves occur primarily within the central and western portion of the BSA, along Clark Avenue and Graciosa Road. Based on field surveys, eucalyptus groves are comprised of blue gum and Monterey pine (*Pinus radiata*), with component species including ripgut grass, Italian thistle, California everlasting (*Gnaphalia californicum*), and dense leaf litter layer.

Ruderal. Ruderal is a term used to describe those areas that have been significantly altered by past land use practices that may have allowed for establishment of vegetation typically consisting of disturbance-related plant species. These disturbed areas that are not paved may support minimal vegetative cover, depending on current land use of the area. Ruderal areas may occur on unpaved road shoulders, parking lots, and driveways. Overall, the BSA has extensive disturbance from historic and current urban, suburban, agricultural, oil field, and ranching activities. Plant cover within the ruderal areas range from bare ground to minimally vegetated land consisting almost entirely of non-native, annual grasses and forb species tolerant of disturbance including, but not limited to, ripgut grass, soft chess, black mustard (*Brassica nigra*), cheeseweed (*Malva parviflora*), wild radish (*Raphanus sativus*), common sowthistle (*Sonchus oleraceous*), telegraph weed, redstem filaree, tree tobacco (*Nicotiana glauca*), bur-clover (*Medicago polymorpha*), and storksbill.

Ornamental. The term ornamental is used to describe the presence of horticultural species planted as a component of urban and suburban landscape design within the BSA. Ornamental habitat may provide some food and cover for wildlife; however, some ornamental species may be poisonous to wildlife. Ground cover is usually limited in ornamental communities due to allelopathic properties of leaf litter from various ornamental plant species and/or landscape maintenance activities. Based on field surveys, the primary ornamental species observed include Monterey pine, Peruvian peppertree, cypress (*Cupressus* sp.), and eucalyptus.

Agricultural. The term agricultural is used to describe those areas that are currently or recently utilized for rotational row-crops or vineyards. Crop cover can provide suitable habitat for a variety of common wildlife species and may act as wildlife migratory corridors. Crop cover may be variable depending on time of year and species being cultivated. Based on field surveys, agricultural areas occur primarily in the central portion of the BSA, adjacent to Clark Avenue and Highway 101. All agricultural areas consisting of row-crops and vineyards are collectively referred

to as Agriculture as illustrated in Figure 5-3 - Biological Resources Identified within Biological Survey Area.

Developed. Developed land is a term that describes areas where soil has been modified and converted to buildings, parking lots, and paved roads. Developed lands typically do not support any vegetative cover due to the presence of impervious surfaces. Within the BSA, the majority of the developed land consists of paved roads, sidewalks, parking lots and residential development in the Orcutt community. Land that has been developed and does not provide any plant components is illustrated as Developed in Figure 5-3 - Biological Resources Identified within Biological Survey Area.

5.4 SPECIAL-STATUS PLANT SPECIES

Special-status plant species are either listed as Endangered or Threatened under FESA or CESA, considered rare under the California Native Plant Protection Act, or considered rare (but not legally listed) by resources agencies, professional organizations, and the scientific community. For the purposes of this Report, special-status plant species are defined in Table 5-1 - Definitions of Special-Status Plant Species.

Table 5-1. Definitions of Special-Status Plant Species

Regulatory Protection Provided for Special-Status Plant Species
• Plants listed or proposed for listing as Threatened or Endangered under the Federal Endangered Species Act (50 CFR 17.12 for listed plants and various notices in the Federal Register for proposed species).
• Plants that are candidates for possible future listing as Threatened or Endangered under the Federal Endangered Species Act (Federal Register Vol. 67, No. 114, pp.40657-4067, June 13, 2002).
• Plants that meet the definitions of Rare or Endangered species under the CEQA (State CEQA Guidelines, Section 15380).
• Plants considered by the CNPS to be "Rare, Threatened, or Endangered" in California (Ranks 1B and 2 in CNPS, 2013).
• Plants listed by CNPS as plants about which we need more information and plants of limited distribution (Ranks 3 and 4 in CNPS, 2013).
• Plants listed or proposed for listing by the State of California as Threatened or Endangered under the California Endangered Species Act (14 CCR 670.5).
• Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.).
• Plants considered sensitive by other federal agencies (i.e., U.S. Forest Service, Bureau of Land Management), state and local agencies or jurisdictions.
• Plants considered sensitive or unique by the scientific community or occurring at the limits of their natural range (State CEQA Guidelines).

The desktop review and field surveys found that several special-status plant species have been recorded within the Project region (within five-miles of the BSA), and the BSA may provide suitable habitat for potentially occurring special-status species. Table 5-2 - Special-Status Plant Species of the Project Region lists these species, their current status, habitat description, nearest known occurrence to the BSA, as well as the potential for occurrence within the BSA.

Table 5-2. Special-Status Plant Species of the Project Region

Plant Species *Arranged alphabetically by scientific name*	Regulatory Protection Status	Habitat Description *As described by CDFW, 2014 and CNPS, 2013*	Nearest Documented Occurrence	BSA			
				Habitat Present	Occurrence ≤ Five Miles	Observed	Potential for Occurrence
Agrostis hooveri Hoover's bent grass	Rank 1B.2	Dry sandy soils within closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland.	Cat Canyon Oil Field in Soloman Hills near Santa Maria; approximately 0.5 mile from the BSA (CDFW, 2014).	X	X		X
Arctostaphylos purissima La Purisima manzanita	Rank 1B.1	Chaparral, coastal scrub. Sandy soils.	Vandenberg Air Force Base, approximately four-miles SW of the BSA (CDFW, 2014).	X[1]	X		
Arctostaphylos rudis Sand mesa manzanita	Rank 1B.2	Chaparral (maritime), coastal scrub. Sandy soils.	Upper Graciosa Valley, east of Highway 1 and Highway 135, three-miles south of Orcutt; approximately 0.2 mile east of the BSA (CDFW, 2014).	X[1]	X		
Astragalus didymocarpus var. *milesianus* Miles' milk-vetch	Rank 1B.2	Coastal scrub (clay).	Foxen Canyon, approximately 3.2-miles east of the BSA (CDFW, 2014).	X	X		X
Calycadenia villosa Dwarf calycadenia	Rank 1B.1	Chaparral, cismontane woodland, valley and foothill grassland, meadows and seeps.	Los Alamos, approximately 4.5-miles south of the BSA (CDFW, 2014).	X	X		X
Chorizanthe rectispina Straight-awned spineflower	Rank 1B.3	Chaparral, cismontane woodland, coastal scrub.	SW of Vandenberg village, north of Highway 1 in Burton Mesa, approximately 13.5-miles SW of the BSA (CDFW, 2014). Observed by Padre within the East Cat Canyon Oil Field, within one-mile of the BSA during April 2013 surveys.	X[2]	X		
Cirsium scariosum var. *loncholepis* La Graciosa thistle	FE, ST Rank 1B.1	Mesic and sandy cismontane woodland, coastal dunes, riparian scrub, brackish marshes, valley and foothill grassland.	South of Orcutt; within the BSA (CDFW, 2014).	X	X		X
Cladium californicum California sawgrass	Rank 2.2	Meadows and seeps, marshes and swamps.	Barka Slough, Vandenberg Air Force Base, approximately three-miles SW of the BSA (CDFW, 2014).		X		
Deinandra increscens ssp. *villosa* Gaviota tarplant	FE, SE Rank 1B.1	Coastal scrub, valley and foothill grassland, coastal bluff scrub.	3.5 miles west of Orcutt on Highway 1, approximately 2.3 miles NW of the BSA (CDFW, 2014).	X	X		X
Delphinium parryi ssp. *blochmaniae* Dune larkspur	Rank 1B.2	Maritime chaparral, coastal dunes.	Documented within the BSA along Graciosa Road (CDFW, 2014). Not observed during field surveys.		X		X[3]
Erigeron blochmaniae Blochman's leafy daisy	Rank 1B.2	Coastal dunes, coastal scrub.	SW of Santa Maria along Black Road, north of Betteravia Road, approximately 5.3 miles NW of the BSA (CDFW, 2014).	X			X

Table 5-2. Special-Status Plant Species of the Project Region

Plant Species *Arranged alphabetically by scientific name*	Regulatory Protection Status	Habitat Description *As described by CDFW, 2014 and CNPS, 2013*	Nearest Documented Occurrence	BSA			
				Habitat Present	Occurrence ≤ Five Miles	Observed	Potential for Occurrence
Eriodictyon capitatum Lompoc yerba santa	FE, SR, Rank 1B.2	Closed-cone coniferous forest, maritime chaparral.	Orcutt Oil Field, Graciosa Ridge, Solomon Hills, approximately 0.7-mile south of the BSA (CDFW, 2014).		X		
Horkelia cuneata var. *puberula* Mesa horkelia	Rank 1B.1	Chaparral, cismontane woodland, coastal scrub.	The Sisquoc River, approximately one mile NE of the BSA (CDFW, 2014).	X	X		X
Layia heterotricha Pale-yellow layia	Rank 1B.1	Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland.	Along Highway 1, within Burton Mesa north of Lompoc, approximately 5.3 miles SW of the BSA (CDFW, 2014).	X			X
Nasturtium gambelii Gambel's water cress	FE, ST, Rank 1B.1	Marshes and swamps (freshwater or brackish).	Barka Slough, San Antonio Valley, approximately four miles SW of the BSA (CDFW, 2014).	X	X		X
Scrophularia atrata Black-flowered figwort	Rank 1B.2	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, riparian scrub.	Purisima Hills, approximately 2.8 miles south of the BSA (CDFW, 2014).	X	X		X

Notes:

1 Although general coastal scrub habitat is present within the BSA, suitable ecological conditions consisting of maritime chaparral and sandy soils are absent, and no manzanita was observed during surveys. Therefore, this species is not expected to occur within the BSA.
2 Although general coastal scrub habitat is present within the BSA, suitable ecological conditions consisting of bare, rocky/granite areas are absent; therefore, this species is not expected to occur within the BSA.
3 No suitable habitat is present within the BSA, however, the CNDDB has documented dune larkspur along Graciosa Road within the BSA; therefore there is potential for this species to occur within the BSA.

Status Codes:

FE Federal Endangered (USFWS)
FC Federal Species of Concern (USFWS)
SE State Endangered (CDFW)
ST State Threatened (CDFW)
SR State Rare (CDFW)

Rank 1B Plants Rare, Threatened, or Endangered in California and Elsewhere (CNPS)
0.1 Seriously Endangered in California
0.2 Fairly Endangered in California
0.3 Not very Endangered in California
Rank 2 Plants rare, Rare, Threatened, or Endangered in California, but More Common Elsewhere (CNPS)
Rank 4 Plants of Limited Distribution – A Watch List (CNPS)

Field surveys were completed in June and October, and did not cover the blooming periods for all special-status plants occurring within the region. The June surveys had the greatest potential to capture the majority of the blooming periods for special-status plants; however, species, such as, sand mesa manzanita and dune larkspur may not have been identifiable during this time. Refer to Table 5-3 - Blooming Period for Special-Status Plants for blooming periods for special-status species listed above. Additionally, the presence/absence of plants associated with the habitats occurring in the BSA may vary from year to year based on environmental conditions. Variations in plant abundance and presence/absence can vary annually as a result of a species' resistance to stresses such as annual fluctuations in precipitation, fire, non-native and/or invasive

species, human disturbance, agricultural operations, and/or seed banks that can stay dormant for several years.

No special-status species were observed during field surveys, however, results may be confounded by seasonal fluctuations, survey timing, and access constraints. Field surveys did not consist of walking the entire BSA, only portions of the public rights-of-way where the project activities are expected to occur were walked. Some portions of the rights-of-way were driven to clear turn-outs where there were clear vantage points to see the entirety of the BSA. Therefore, special-status plant species may still have a potential to occur in the BSA, outside the right-of-way, if suitable habitat is present.

Table 5-3. Blooming Period for Special-Status Plants

	Blooming Period (month)											
Plant Species (common name)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Hoover's bent grass												
La Purisima Manzanita												
Sand mesa manzanita												
Miles' milk-vetch												
Dwarf calycadenia												
Straight-awned spineflower												
La Graciosa thistle												
California sawgrass*												
Gaviota tarplant												
Dune larkspur*												
Blochman's leafy daisy												
Lompoc yerba santa*												
Mesa horkelia												
Pale-yellow layia												
Gambel's water cress												
Black-flowered figwort												

Note:
*Suitable habitat does not occur within the BSA, and therefore the species does not have potential to occur within the BSA. However, known occurrences of the species are less than five miles from the BSA, and as such, blooming period is provided for informational purposes.

Source: Blooming period information was provided by Baldwin, e. al., 2012 and CNPS, 2013.

The following descriptions briefly discuss biological information and ecological requirements for those species with the greatest potential to occur, based on presence of suitable habitat and/or documented occurrences within five-miles from the BSA.

Hoover's bent grass. No Hoover's bent grass was observed within the BSA; however, suitable habitat may occur in the annual brome grassland community within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and

minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

La Purisima manzanita. No La Purisima manzanita or associated suitable habitat was observed within the BSA; however, La Purisima manzanita has been documented within five-miles of the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Sand mesa manzanita. No sand mesa manzanita or associated suitable habitat was observed within the BSA; however, sand mesa manzanita been documented within five-miles from the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Miles' milk-vetch. No Miles' milk-vetch was observed within the BSA; however, suitable habitat may occur in the coyote brush scrub communities within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Dwarf calycadenia. No dwarf calycadenia was observed within the BSA, however, suitable habitat may occur in grassland communities within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Straight-awned spineflower. No straight-awned spineflower was observed within the BSA; however, straight-awned spineflower has been documented by Padre in 2013 within one mile of the BSA in the East Cat Canyon Oil. This species occurs in bare rocky/granite soils that were not observed within the BSA; therefore, is not expected to occur within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

La Graciosa thistle. No La Graciosa thistle was observed within the BSA; however, the CNDDB has documented La Graciosa thistle within the BSA along Graciosa Road and USFWS Critical Habitat has been designated in portions of the BSA. Additionally, suitable habitat may occur within grassland and wetland communities within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization

measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

California sawgrass. No California sawgrass or associated suitable habitat was observed within the BSA; however, California sawgrass has been documented within five-miles of the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Gaviota tarplant. No Gaviota tarplant was observed within the BSA; however, suitable habitat may occur in grassland communities within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Dune larkspur. No dune larkspur or associated suitable habitat was observed within the BSA. The CNDDB has documented dune larkspur within the BSA along Graciosa Road, just outside the proposed pipeline alignment; therefore, dune larkspur may have the potential to occur within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Blochman's leafy daisy. No Blochman's leafy daisy was observed within the BSA; however, suitable habitat may occur in the scrub communities consisting of sandy soils within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Lompoc yerba santa. No Lompoc yerba santa or associated suitable habitat was observed within the BSA; however, USFWS Critical Habitat has been designated adjacent to the BSA along Graciosa Road. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Mesa horkelia. No mesa horkelia was observed within the BSA, however, suitable habitat may occur in scrub and woodland habitats within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Pale-yellow layia. No pale-yellow layia was observed within the BSA; however, suitable habitat may occur in the grassland communities within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization

measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Gambel's watercress. No Gambel's watercress was observed within the BSA; however, suitable habitat may occur in wetland and grassland communities within the BSA. Additionally, a common species of watercress (*Nasturtium officinale*) was observed within a small drainage feature along Graciosa Road within the BSA, and as such, indicates that there is potential for Gambel's watercress to occur. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

Black-flowered figwort. No black-flowered figwort was observed within the BSA; however, suitable habitat may occur in scrub habitats within the BSA. Project activities are not expected to include any vegetation or topsoil removal that may contain a potential seed bank for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to special-status plants to less than significant.

5.5 WILDLIFE OCCURRING WITHIN THE BSA

Wildlife species observed include those seen or detected by track, scat, skeletal remains, burrows, and/or vocalization during the field surveys conducted within the BSA. Complications in the quantitative assessment of terrestrial vertebrate and invertebrate populations may have influenced observations made during field surveys. These complications include:

- Many species may occur in the area only for short periods during migrations;
- Many species of amphibians and reptiles become inactive during one or more seasons;
- Seasonal or annual fluctuations in climate or weather patterns may confound observations;
- Field surveys were limited to public rights-of-way within the BSA; areas within the BSA located outside of the public-right-of-way were not accessed, but reviewed within vantage points along the roadside and with aerial imagery; and
- No focused protocol-level surveys, mist-netting, trapping, tracking surveys, invertebrate surveys, aquatic dip-net or nocturnal surveys were completed during field surveys by Padre Biologists.

A list of wildlife species potentially occurring within the BSA was compiled. The list includes species observed within the BSA during the field surveys, species reported by other sources identified in the desktop review, and species that have the potential to utilize the BSA based on suitable habitat and other environmental conditions (Appendix C). Descriptions of wildlife species that were observed within BSA or have potential to occur are discussed below.

Invertebrates. A wide variety of invertebrates are expected to occur in the BSA, including ground beetles (Order Coleoptera) and burrowing bugs (*Aethus* sp.), spiders (Order Araneida), millipedes (Class Diplopoda), butterflies (Order Lepidoptera), dragonflies (Order Odonata), bees, wasps, and ants (Order Hymenoptera). The presence of aquatic branchiopods is dependent on the availability of water in ephemeral pools that may form during the rainy season (typically from December through April). Several common terrestrial invertebrates were observed during the field surveys, however, aquatic surveys were not performed and no invertebrates were collected and/or further identified to the species level.

Fish. The streams within the BSA do not support fish due to their ephemeral nature and lack of suitable spawning habitat for anadromous fish.

Amphibians. Amphibians dependent upon surface water for a sufficient duration to complete breeding cycles, such as California toad (*Bufo boreas halophilus*) and California red-legged frog (*Rana draytonii*), may occur in aquatic features within the BSA, including agricultural drainages. Also, the surrounding oak woodland community, specifically within the southern portions of the BSA near the Cat Canyon Oil Field, provides shade, moist logs, and dense leaf litter that hold moisture throughout the year for terrestrial amphibians, such as ensantina (*Ensatina eschscholtzii*), black-bellied slender salamander (*Batrachoseps nigriventris*), and arboreal salamander (*Aneides lugubris*). During the rainy season, these amphibians become more active, but do not require pools of water for survival or reproduction. No aquatic surveys or protocol-level amphibian surveys were performed during field surveys.

Reptiles. Reptile species expected to occur within the BSA based on the presence of suitable habitat include, but are not limited to, western rattlesnake (*Crotalus veridus*), California kingsnake (*Lampropeltis getulus*), gopher snake (*Pitophis catenifer*), valley garter snake (*Thamnophis sirtalis fitchi),* striped racer (*Maticophis lateralis*), and ring-neck snake (*Diadophis punctatus*). Reptiles observed within the BSA during field surveys were limited to Coast Range fence lizard (*Sceloporus occidentalis bocourtii*).

Birds. Birds that were observed in the BSA during the field surveys included, but not limited to, western scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), spotted towhee (*Pipilo maculatus*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum),* and red-tailed hawk (*Buteo jamaicensis*). These birds are likely to utilize surrounding habitats for breeding activities during the spring and summer months. A variety of habitats occur within the BSA, suitable to support migratory and residential foraging and breeding activities for a wide range of bird species.

Mammals. Mammals observed directly and/or by sign during the field survey included, but are not limited to, Audubon's cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*) (burrow sign), American badger (*Taxidea taxus*) (burrow signs), coyote (*Canis latrans*) (tracks), black-tailed hare (*Lepus californicus*), mule deer (*Odocoileus hemionus*), and woodrat (*Neotoma* sp.) (nests). Other common mammal species expected to occur within the BSA based on the presence of suitable habitat and migratory corridors (i.e., ridgelines, roadways, stream channels) included gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), and raccoon (*Procyon lotor*).

Migratory Corridors. Wildlife migration corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Migration corridors may be local, such as those between foraging and nesting/denning areas, or they may be regional in nature. Migration corridors are not unidirectional access routes; however, reference is usually made to source and receiver areas in discussions of wildlife movement networks. "Habitat linkages" are migration corridors that contain contiguous strips of native vegetation between source and receiver areas. These natural linkages provide cover and forage sufficient for temporary inhabitation by a variety of ground-dwelling animal species. Wildlife migration corridors are essential to the regional fitness of an area as they provide avenues of genetic exchange and allow animals to access alternative territories as fluctuating dispersal pressures dictate.

The BSA consists of several stream corridors and agricultural ditches that could be utilized by wildlife moving through the region. Many amphibian species in the region depend on undeveloped open space and grassland habitats between established water sources found throughout the region, in which the proposed pipeline intersects. The proposed pipeline alignment is situated along existing paved roads and road shoulders that currently provide migratory barriers to localized amphibian species, including special-status species, along stream corridors. During the night hours there is a higher potential for wildlife to cross over these barriers.

5.6 SPECIAL-STATUS WILDLIFE SPECIES

Special-status wildlife species are either listed as Endangered or Threatened under FESA or CESA, considered rare by resources agencies, professional organizations, and the scientific community. For the purposes of this Report, special-status wildlife species are defined in Table 5-4 – Definitions of Special-Status Wildlife Species.

Table 5-4. Definitions of Special-Status Wildlife Species

Regulatory Protection Provided for Special-Status Wildlife Species
• Animals listed or proposed for listing as Threatened or Endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species).
• Animals that are candidates for possible future listing as Threatened or Endangered under the Federal Endangered Species Act (Federal Register Vol. 70, No. 90, pp. 24869-24934, May 11, 2005).
• Animals that meet the definitions of Rare or Endangered species under the CEQA (*State CEQA Guidelines*, Section 15380)
• Animal Species of Special Concern to the CDFW (Shuford and Gardali, 2008 for birds; Williams, 1986 for mammals; Moyle *et al.*, 1989 for fish; and Jennings and Hayes, 1994 for amphibians and reptiles).
• Animals listed or proposed for listing by the State of California as Threatened and Endangered under the California Endangered Species Act (14 CCR 670.5).
• Animal species of special concern to the CDFW (Shuford and Gardali, 2008 for birds; Williams, 1986 for mammals).
• Animal species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).
• Birds of Conservation Concern. Migratory and nonmigratory bird species (beyond those already designated as federally Threatened or Endangered) that represent the USFWS highest conservation priorities in effort to draw attention to species in need of conservation action (USFWS, 2008).
• Birds on the CDFW Watch List include "Taxa to Watch" (Shuford and Gardali, 2008) 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously state or federally listed and now are on neither list; or 3) are on the list of "Fully Protected" species.

Regulatory Protection Provided for Special-Status Wildlife Species
• The Western Bat Working Group is comprised of agencies, organizations and individuals interested in bat research, management and conservation from the 13 western states and provinces. Species designated as "High Priority" are imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats. • The CNDDB ranking element codes are part of the "Heritage Methodology" for special animals in which the CDFW is interested in tracking, regardless of their legal protection status. It is a shorthand formula that provides information about the status of a taxon, both throughout its entire range and within California.

Table 5-5 – Special-Status Wildlife Species of the Project Region lists special-status wildlife that have been documented within the Project region (within five-miles of the BSA) and/or may occur within the region based on presence of suitable habitat within the BSA. Figure 5-1 - Documented Sensitive Resources illustrates occurrences of special-status wildlife documented within the region.

Table 5-5. Special-Status Wildlife Species of the Project Region

Wildlife Species *Arranged alphabetically by common name in phylogenetic order*	**Regulatory Protection Status**	**Habitat Description**	**Nearest Documented Occurrence**	**BSA**			
				Habitat Present	Occurrence ≤ Five Miles	Observed	Potential for Occurrence
Invertebrates							
Lompoc grasshopper *Trimerotropis occulens*	GH/SH	Known only in San Luis Obispo and Santa Barbara counties. Limited information available.	Lompoc in 1938 (CDFW, 2014).		X		
Monarch butterfly *Danaus plexippus*	G5/S3	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Waller Park, Santa Maria, 2.7 miles from BSA (CDFW, 2014).		X		X
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	Vernal pools, swales, and ephemeral depressions where pooling occurs during rainy season as long as the pool persist for longer than 40-days.	Sargent Fee (Padre, 2010), within one mile of the BSA.	X	X		X
Fish							
Southern Steelhead – southern California ESU *Oncorhynchus mykiss irideus*	FE, CSC	Warmer waters and more variable conditions from Santa Maria river into San Diego County.	USFWS Critical Habitat occurs along the Sisquoc River, approximately three miles of BSA.		X		
Unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	FE, SE	Weedy pools, backwaters and emergent vegetation at the stream edge in small southern California streams.	San Antonio Creek, approximately four miles from BSA (CDFW, 2014).		X		
Reptiles							

Table 5-5. Special-Status Wildlife Species of the Project Region

Wildlife Species *Arranged alphabetically by common name in phylogenetic order*	Regulatory Protection Status	Habitat Description	Nearest Documented Occurrence	BSA			
				Habitat Present	Occurrence ≤ Five Miles	Observed	Potential for Occurrence
Blainville's horned lizard *Phrynosoma blainvillii*	CSC	Wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Cat Canyon Oil Field located adjacent to the BSA.	X	X		X
Coast patch-nosed snake *Salvadora hexalepis virgultea*	CSC	Brushy or shrubby vegetation in Southern California. Require small mammal burrows for refuge and overwintering sites.	Avena Rd., 2.2 miles NE of La Purisima Mission State Historical Park, greater than five miles from BSA (CDFW, 2014).	X			X
California legless lizard *Anniella pulchra*	CSC	Sandy or loose loamy soils, under sparse vegetation. Soil moisture is essential.	South of Santa Maria airport, approximately 1.2 miles northwest of BSA (CDFW, 2014).	X	X		X
Southwestern pond turtle *Actinemys marmorata pallida*	CSC	Permanent or nearly permanent bodies of water in many habitat types.	Nearest documented location: along the Sisquoc River, adjacent to the BSA (CDFW, 2014).	X	X		X
Amphibians							
Arroyo toad *Anaxyrus californicus*	FE, CSC	Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravely areas of streams in drier parts of range.	Sisquoc River, approximately 3.1 miles north-northeast of BSA (CDFW, 2014).		X		
California red-legged frog *Rana draytonii*	FT, CSC	Lowlands and foothills in water with dense, shrubby or emergent riparian vegetation.	Stock pond near Sisquoc River, adjacent to the BSA (CDFW, 2014).	X	X		X
California tiger salamander *Ambystoma californiense*	FT, ST, CSC	Upland ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	Gill Pond near the Dominion and Clark Road (CDFW, 2014), within one mile of the BSA.	X	X		X
Western spadefoot *Spea hammondii*	CSC	Sandy soils in a wide variety of habitats. Vernal pools are essential for egg laying and breeding.	Along Cat Canyon Road (Sage, 2012, and CDFW, 2014), within one mile from BSA.	X	X		X
Birds							
Burrowing owl *Athene cunicularia*	CSC, BCC, MBTA	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Northwest of junction of Betteravia Road and Black Road, within five miles of the BSA (CDFW, 2014).	X	X		X

Table 5-5. Special-Status Wildlife Species of the Project Region

Wildlife Species *Arranged alphabetically by common name in phylogenetic order*	**Regulatory Protection Status**	**Habitat Description**	**Nearest Documented Occurrence**	**BSA**			
				Habitat Present	Occurrence ≤ Five Miles	Observed	Potential for Occurrence
California horned lark *Eremophila alpestris actia*	MBTA, BCC, WL	Grasslands with low-lying vegetation.	Observed during Padre April 2013 field surveys within Cat Canyon Oil Field.	X	X		X
Golden eagle *Aquila chrysaetos*	FP, MBTA, WL, BCC	Open grasslands, foothills, prairies, open forests.	Cat Canyon Oil Field during field visits.	X	X		X
Least Bell's vireo *Vireo belii pusillus*	FE, SE, MBTA	Low riparian in vicinity of water or in dry river bottoms, below 2000 ft.	Sisquoc River in Foxen Canyon, approximately 3.3 miles east of BSA. (CDFW, 2014).	X	X		X
Loggerhead shrike *Lanius ludovicianus*	CSC, BCC, MBTA	Open pastures and prairies with scattered bushes, hedgerows and trees.	Observed during field surveys within the Cat Canyon Oil Field.	X	X		X
Oak titmouse *Baeolophus inornatus*	MBTA, BCC	Oak woodland	Observed within BSA during field surveys.	X	X	X	X
Purple martin *Progne subis*	MBTA, CSC	Oak woodland, conifer forests	No observations for this species were noted in the desktop review; however, species may occur in region.	X			X
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	MBTA, WL	Coastal scrub.	Observed during Padre April 2013 field surveys within the Cat Canyon Oil Field.	X	X		X
Tricolored blackbird *Agelaius tricolor*	CSC, BCC, MBTA	Requires open water and protected nesting substrate and foraging area with insect prey within a few km of the colony.	Cat Canyon Road by Padre Biologists on previous site visits in 2012.	X	X		X
Yellow warbler *Dendroica petechia brewsteri*	CSC, MBTA	Riparian plant associations, prefers willows, cottonwoods, aspens, sycamores and alders for nesting and foraging.	Sisquoc River, approximately 2.5 miles north-northeast of BSA (CDFW, 2014).	X	X		X
Mammals							
Pallid bat *Antrozous pallidus*	CSC, WBWG-H	Deserts, grasslands, shrublands, woodlands, and forests, open dry habitats with rocky outcrops for roosting	Cat Canyon Oil Fields, approximately one- mile from BSA.		X		X
Western red bat *Lasiurus blossevillii*	CSC, WBWG-H	Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Vandenberg Air Force Base, 2.9 miles from BSA (CDFW, 2014).		X		X

Table 5-5. Special-Status Wildlife Species of the Project Region

Wildlife Species *Arranged alphabetically by common name in phylogenetic order*	**Regulatory Protection Status**	**Habitat Description**	**Nearest Documented Occurrence**	**BSA**			
				Habitat Present	Occurrence ≤ Five Miles	Observed	Potential for Occurrence
Hoary bat *Lasiurus cinereus*	G5/S4, WBWG-M	Open habitats or open mosaics, with access to trees for cover and open areas or habitat edges for feeding. Requires water.	Vandenberg Air Force Base, 2.9 miles from BSA (CDFW, 2014).		X		X
Townsend's big-eared bat *Corynorhinus townsendii*	CSC, WBWG-H	Roosts in the open, hanging from walls, ceilings. Roosting sites extremely sensitive to human disturbance.	Vandenberg Air Force Base, 4.1 miles from BSA (CDFW, 2014).		X		X
Yuma myotis *Myotis yumanesis*	G5/S4, WBWG-LM	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Vandenberg Air Force Base, 2.8 miles from BSA (CDFW, 2014).		X		X
American badger *Taxidea taxus*	CSC	Shrub, forest, and herbaceous habitats, with friable soils.	Badger burrows observed within BSA during field surveys and individuals observed during 2013 field surveys within Aera East Cat Canyon Oil Field.	X	X	X	X

Status Codes:

FE	Federal Endangered (USFWS/NMFS)
FT	Federal Threatened (USFWS/NMFS)
CSC	California Species of Special Concern (CDFW)
MBTA	Migratory Bird Treaty Act (USFWS)
FP	Fully Protected (CDFW)
SE	State Endangered (CDFW)
ST	State Threatened (CDFW)
BCC	Birds of Conservation Concern (USFWS)
WBWG	Western Bat Working Group; H – High Priority; MH – Medium-High Priority; LM – Low-Medium Priority

CNDDB Global (G) and State (S) Rank

G1/S1 Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres. Critically Imperiled– At very high risk of extinction or elimination due to extreme rarity, very steep declines, or other factors.

G2/S2 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres. Imperiled – At high risk of extinction or elimination due to very restricted range, very few populations or occurrences, steep declines, or other factors.

G3/S3 21-80 EOs or 3,000-10,000 individuals OR 10,000-50,000. Vulnerable – At moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors.

G4/S4 Apparently secure - this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat

S5/G5 Common, widespread, and abundant. Population or stand demonstrably secure to ineradicable due to being commonly found in the world

SH/GH Possibly Extinct – Known from only historical occurrences but still some hope of rediscovery.

Based on the desktop review and field surveys, the BSA may provide suitable habitat to support several special-status wildlife species. The following discussion provides an overview of the general habitat requirements for these species and further detail on the potential for each of these wildlife species to occur in the BSA.

5.6.1 Invertebrates

Lompoc grasshopper. No invertebrates were collected or identified to species-level during field survey visits. Grasshopper species are likely to occur within the BSA; however, further

survey efforts would be required to determine presence/absence of this species. Limited information is available on this species occurring within Santa Barbara County and the last documented occurrence was in 1938. Project activities are not expected to include any vegetation or topsoil removal that may support habitat for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to less than significant.

Monarch butterfly. Monarch butterfly wintering sites are classified as "demonstrably secure" worldwide but within California they are considered of "restricted range; rare." Monarch butterflies will begin to abandon autumnal roosts within northern United States and Canada in early November to December to over-wintering sites in the warmer climates in southern California (butterflies west of the Rocky Mountains) and Mexico (butterflies east of the Rocky Mountains). Monarch butterflies will fly north for breeding as the milkweed plants bloom in the spring. Wintering aggregations of monarch butterflies in California can primarily be found on Monterey pines and in eucalyptus groves (Sakai and Calvert, 1991). Wintering habitat components frequently include sources of moisture, such as streams, ponds or abundant morning dew. Other habitat preferences include little direct sunlight, minimal wind, and moist ambient conditions. No monarch butterflies were observed during field surveys; however, the eucalyptus groves and clusters of Monterey pine and other large trees occurring along the pipeline route may provide suitable over-wintering roosts. Project activities are temporary and do not include the removal of any large trees. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to less than significant.

Vernal pool fairy shrimp (VPFS). VPFS are uniquely adapted to the ephemeral conditions of vernal pools. Vernal pools are seasonal depressional wetlands that contain water for variable periods and dry completely during the summer and fall. VPFS do not occur in riverine, marine, or other permanent bodies of water. When these ephemeral pools dry down in the summer, VPFS persist as resting eggs in the soil and remain in a state of suspended development (diapause) until rainfall and environmental stimuli hatch them during the wet season (USFWS, 1994). The VPFS die when water temperatures rise and/or the pools dry down. Vernal pool habitat that supports VPFS is protected by the USFWS both when the pool is inundated and after the pool has dried during the summer months.

The CNDDB has documented VPFS in Santa Barbara County on Porter Peak in the Los Padres National Forest located over 18 miles northeast of the BSA. The nearest documented occurrence of VPFS occurs at the Chevron Sargent Fee Project Site located less than one mile from the BSA. This occurrence was identified during spring surveys by Padre Biologists in 2010 and has not yet been recorded in the CNDDB (Padre, 2010). The existing conditions within the BSA are generally inconsistent with natural vernal pool systems typically occurring in valley and foothill grasslands. Potential aquatic habitat is limited to manmade roadside drainages, ephemeral creek crossings, and ponded areas on highly compacted paved areas. Project activities are not expected to include any vegetation or topsoil removal that may support habitat for this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to less than significant.

5.6.2 Fishes

Southern steelhead. Steelhead are an anadromous form of rainbow trout that reproduce in freshwater, but spend much of their life cycle in the ocean, where increased prey density provides a greater growth rate and size. Steelhead have been divided into 15 evolutionary significant units (ESUs) based on similarity in life history, location, and genetic markers. The southern California ESU includes all naturally spawned populations of steelhead (and their progeny) in streams from the Santa Maria River to the San Mateo Creek in San Diego County.

No steelhead streams designated by the NMFS/USFWS occur within the BSA. Southern Steelhead Critical Habitat includes the Sisquoc River (USFWS, 2005), east of the Aera East Cat Canyon Oil Field. Drainages that occur within the BSA are highly ephemeral and do not support suitable hydroperiods to support the steelhead life cycles. Additionally, these stream corridors are very sandy and do not contain suitable cobble and gravel for nesting sites. Project activities are not expected to include any activities in stream channels with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to less than significant.

Unarmored threespine stickleback. Unarmored three-spine stickleback are anadromous fish with the ability to establish non-anadromous freshwater populations. They inhabit slow moving reaches of streams and rivers with dense and abundant vegetation or in-stream cover (algal mats, rocks, and snags) in open waters. This species reproduces throughout the year, with the least breeding activity occurring from October to January (Baskin, 1974). The species historically was distributed throughout southern California but are now restricted to three areas: the upper Santa Clara River and its tributaries in Los Angeles County, San Antonio Creek on the Vandenberg Air Force Base in Santa Barbara County (within five-miles of the BSA), and Shay Creek vicinity in San Bernardino County (USFWS, 2009b).

Nearest documented occurrence of unarmored threespine stickleback occurs within San Antonio Creek, within five-miles of the BSA. The drainages that occur within the BSA are highly ephemeral and do not support suitable hydroperiods to support this species. Project activities are not expected to include any activities in stream channels with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

5.6.3 Reptiles

Blainville's horned lizard. Blainville's horned lizard inhabit open areas of sandy soil and low vegetation in valleys and foothills throughout northern California to Baja California. This species is found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil, including sandy washes and along dirt roads.

Blainville's horned lizard have been documented throughout the Aera East Cat Canyon Oil Field during multiple field visit. No horned lizards were observed during field surveys; however, the sandy habitats along the roadsides may provide suitable habitat. Project activities are not expected to include removal of habitats with the potential to support this species. Additionally,

implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to less than significant.

Coast patch-nose snake. Coast patch-nosed snake occurs in California from the northern Carrizo Plains in San Luis Obispo County, south through the coastal zone, south and west of the deserts, into coastal northern Baja California. It inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. This snake is considered uncommon along the southern coast area due to land changes from heavy grazing, development and loss of former habitat, though it's natural history and abundance have not been extensively studied.

Coast patch-nose snake was not been observed within the BSA during surveys; however, suitable scrub habitat may occur within the BSA. Project activities are not expected to include removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to less than significant.

California legless lizard. California legless lizard occur in moist warm loose soil found in sparsely vegetated areas of beach dunes, chaparral, sandy washes, and stream terraces with oaks and is often found under surface objects such as rocks, boards and logs (Stebbins, 2003). The range for this species is from the southern Santa Barbara County, San Luis Obispo County, and Monterey County, and patches in the San Joaquin vallay west of the Sierra Nevada.

Nearest documented occurrence of California legless lizard is within five-miles of the BSA within the La Purisima Mission State Historical Park. California legless lizard were not been identified within the BSA; however, suitable sandy habitat to support this species may occur within the BSA. Project activities are not expected to include removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Southwestern pond turtle. The southwestern pond turtle is an aquatic turtle inhabiting streams, marshes, ponds, and irrigation ditches within woodland, grassland, and open forest communities. This species requires upland sites, usually along stream or pond margins, for nesting and over-wintering. Stream habitat consists of large, deep pool areas with moderate-to-good plant and debris cover, and rock and cobble substrates for escape retreats. Southwestern pond turtles will over-winter underwater, often in the muddy bottom of a pool, making it difficult to determine presence or absence in a given creek without completing aquatic surveys. Females dig upland nests between April and August and hatchlings emerge in early fall or overwinter (Stebbins, 2003; Behler and King, 1992). They may travel some distance from water for egg-laying, moving as much as 0.5 mile away from the nearest source of water. Females will also cover the nest with soil and adjacent low vegetation, making it difficult to find nests.

No pond turtles were observed within the BSA during field surveys. Southwestern pond turtle have been documented within five-miles from the BSA, specifically within the Sisquoc River. Suitable habitat occurs along many of the drainages throughout the BSA and is likely to occur throughout the BSA. Project activities are not expected to include removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

5.6.4 Amphibians

Sensitive amphibian species that have been documented within a five-mile radius from the BSA include: Arroyo toad, western spadefoot toad, CTS, and CRLF. All of these species include both aquatic and terrestrial components in their life cycles, each requiring a different hydroperiod (period in which a soil area is waterlogged) for egg laying and to metamorphose into their adult stage. Determining presence/absence is difficult due to the species limited movements and limited pool availability in dry years. The USFWS has created survey protocols to assist surveyors in determining presence/absence by focusing on specific natural history for each species. No protocol-level surveys were completed as part of this assessment. Aquatic resources observed within the BSA were limited to agricultural and roadway drainages that may or may not provide suitable conditions for aquatic amphibians in any given time of year.

Arroyo toad. Arroyo toad occupy habitats consisting of shallow pools and open sand and gravel flood terraces of streams that flood on a regular basis (USFWS, 2011). Breeding pools for this species must persist for a minimum of two months for the completion of larval developments (USFWS, 2011). Designated USFWS Arroyo Toad Critical Habitat is present along the Sisquoc River, within five miles of the BSA. Critical Habitat for arroyo toad includes: 1) rivers or streams for all the life stages of the toads; 2) riparian and adjacent upland areas for foraging and breeding, and accessible areas between occupied habitat so that the toads can disperse; and 3) areas that flood periodically, leaving behind pools where toads breed, and terrace habitats that provide for their life functions.

The drainages occurring within the BSA do not support suitable habitat conditions of regular flooding or provide pools with suitable hydroperiod to support toad development. No protocol-level surveys were completed for arroyo toad as part of this assessment. Project activities are not expected to include any activities in stream channels or aquatic pools with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

California red-legged frog (CRLF). CRLF is generally found along marshes, streams, ponds, and other permanent sources of water where dense scrubby vegetation such as willows, cattails, and bulrushes dominate. Breeding sites occur along watercourses with pools that remain long enough for breeding and the development of larvae. Breeding time occurs between November and April, depending on locality (Stebbins, 1985; Storer, 1925). Permanent or nearly permanent pools are required for larval development, which takes 11 to 20 weeks (Storer, 1925; Calef, 1973).

Critical Habitat for the CRLF occurs along the southern extent of the BSA and several documented occurrences of CRLF occur within five-miles of the BSA (CDFW, 2014). No CRLFs were observed during field surveys and no suitable aquatic habitat to support CRLF lifecycles was observed within the BSA; however, seasonal rainfall fluctuations vary from year to year and may suitable habitat may be provided in periods of wet years. Suitable CRLF habitat may also occur in agricultural ditches adjacent to the BSA during periods of flow; therefore, there remains a potential for CRLF to occur within the BSA. No protocol-level surveys have been conducted within the BSA. Project activities are not expected to include any activities in aquatic resources

with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

California tiger salamander (CTS). The Santa Barbara County CTS population is federally listed as Endangered and recently listed with the State of California as Threatened. Adults breed in ponds between November and March after migrating from upland habitats during the first big rain within November/December. Females lay eggs in ephemeral pools and within three to four months the larvae metamorph and then migrate upland from May through August. The young CTS remain strictly terrestrial for three to four years remaining in small mammal burrows, then migrate to aquatic habitats to breed. CTS move through terrestrial habitats during the night and rarely come to the surface to feed during non-migration periods. The aquatic habitats include agricultural stock ponds, vernal pools, and ditches. Breeding ponds must be non-permanent and water must persist in these pools at least into May (preferably into July or August) to allow more time for metamorphosis. Upland habitat includes grasslands, edge of oak savannas, sometimes chaparral and shrublands (in coastal areas) and may or may not be grazed by cattle. CTS regularly use California ground squirrel (*Otopermophilus beecheyi*) and Botta's pocket gopher burrows and other man-made structures (Shaffer *et al.*, 1993, Barry and Shaffer, 1994) in upland habitats.

The BSA is located along the southern border of the USFWS-designated Critical Habitat for this species (Figure 5-2 and 5-2B - USFWS Critical Habitat Areas). Known and potential CTS breeding pools have been documented within one-mile from the BSA, specifically near East Clark Avenue and Dominion Road (CDFW, 2014). The USFWS has also identified several pools with aerial imagery that occur within the vicinity of the BSA. These pools have not been surveyed for CTS and may or may not contain suitable breeding or upland habitat; however, the USFWS is interested in the protection of these potentially important pools. While CTS are known to disperse up to 1.2 miles away from breeding ponds, 95 percent of adult and sub-adult CTS are found within 0.4 mile of breeding ponds (Trenham, Koenig, and Shaffer, 2001). The habitat with the highest conservation value for CTS therefore occurs within one-half mile of a known breeding pond. The BSA occurs within one mile of a known CTS breeding pond (TWDA-12), located near East Clark Avenue and Dominion Road. Project activities are not expected to include any activities in or adjacent to any known pools with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Western spadefoot. Western spadefoot is not seen during most of the year, as it resides in burrows up to nine months with infrequent nocturnal sojourns. The species is typically associated with sandy, friable soils that inundate temporarily with water, similar to the stream channels occurring throughout the BSA. They emerge during spring rains and breed in temporary pools from January to May. Oviposition (egg laying) will not occur until water temperatures reach a minimum of 48°F, usually between late February and late May (Jennings and Hayes, 1994). Eggs hatch within three to four days and tadpoles will transform within four to 11 weeks, depending on food availability and the duration of the pool. Spadefoot require temporary breeding pools that must last for at least 30 days or larvae will not survive. Suitable habitat occurs within depressional features that are capable of providing ponded water for at least 30 days following a rain event.

This species has been identified within the Cat Canyon valley, south of the BSA, and documented by Sage Institute (2012) during CRLF surveys. This species can be difficult to detect due their mostly terrestrial lifecycle expect for years they emerge for breeding, which may not occur every year, dependent on rainfall and available aquatic habitats. Project activities are not expected to include any activities in aquatic resources with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

5.6.5 Birds

Burrowing owl. Burrowing owls are year-round residents in annual and perennial grasslands or other vegetation communities that support little to no tree or shrub cover. In California, the species is typically found in close association with California ground squirrels, which create burrows that are used by burrowing owls for year-round shelter and seasonal nesting habitat. They may also utilize badger, coyote and fox dens, or holes (Ronan, 2002), as well as human-made structures such as culverts, corrugated metal pipes, debris piles, or openings beneath pavement as shelter and nesting habitat (CDFG, 1995). Typical burrowing owl breeding season in California is from March to August, but can begin as early as February and extend into December (Rosenberg and Haley, 2004).

Burrowing owls were not observed within the BSA; however, suitable habitat does occur within the BSA. No protocol-level surveys were completed as part of this assessment. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

California horned lark. California horned lark are included within the CDFW Watch List as a species not on the current Special Concern list but were on previous lists. Therefore, they are considered a taxa to watch and conservation of the habitat for this species should be considered. Horned lark commonly occur in grasslands and other open habitats with low, sparse vegetation, often flocking together in small groups. It nests is low lying vegetation during the spring months.

Horned lark was observed by Padre Biologists during the April 2013 field surveys within the Cat Canyon Oil Field and potential suitable habitat occurs throughout the grassland and previously disturbed areas within the BSA. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Least Bell's vireo. Least Bell's vireo is a state and federally listed Endangered species. It prefers dense, low, shrubby vegetation in riparian areas, brushy fields, young second-growth forest or woodland, scrub oak, coastal chaparral, and mesquite brushlands, often near water. Least Bell's vireo begin to return to breeding sites in mid- to late-March and are generally present on the breeding grounds until late September before migrating to wintering grounds in southern Baja California, Mexico. Current breeding distribution is concentrated in Ventura and San Diego counties, but breeding is known to occur in the Sisquoc and Santa Ynez rivers to the south of the

BSA. Along the Santa Ynez River, least Bell's vireo have occurred mainly in mugwort, mulefat, and willow shrubs (*Salix* spp.) (Olson and Gray, 1989).

Least Bell's vireo has been documented along the Sisquoc River within five-miles from the BSA. Critical Habitat occurs approximately 40 miles south of the BSA. Suitable habitat may occur in portions of the willow thickets occurring within the BSA. No least Bell's vireo were observed during field surveys; however, protocol-level surveys have not been completed as part of this assessment to accurately determine presence or absence. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Loggerhead shrike. Loggerhead shrike is a USFWS Bird of Conservation Concern and CDFW Species of Special Concern. It is a common species within the Project vicinity; however, was not observed within the BSA during field surveys. This species generally occurs in a variety of open grassland, oak savanna, shrubland, and other similar habitats where it feeds on arthropods, reptiles, amphibians, small rodents, and birds (Craig, 1978). Loggerhead shrikes nest from March to June with young becoming independent during July or August. Nests are generally well-concealed in dense foliage on stable branches of a shrub or tree.

This species is expected to occur within the annual grassland habitats throughout the BSA. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Oak titmouse. Oak titmouse is a USFWS Bird Species of Concern and conservation of the habitat for this species should be considered. Oak titmouse occur in oak woodland and mixed riparian habitats and occur year-round throughout California. They nest in natural cavities in tree trunks in mid-March. Oak titmouse was identified in the oak woodland habitats throughout the BSA during field surveys. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Purple martin. Purple martin is distributed throughout California in central and northern coastal conifer forests, interior foothills, and southern California forests. Purple martin are migratory birds the primarily occur within the eastern United States during the summer months and winter in South America. However, purple martin do occur along the California coast during migration from mid-March to late September and some small populations stay to breed from May to mid-August (Williams, 1998). Purple martins rely on cavities in trees, bridges, utility poles, lava tubes, and buildings. Most tree nest sites in San Luis Obispo and Santa Barbara counties occur in large oaks and sycamores and will commonly colonize one area year after year; therefore, protection of nest sites are critical to the protection of the species. Purple martin populations have been threatened primarily by removal of large snags, specifically from post-fire salvage logging, and competition from European starlings (*Sturnus vulgaris*), an invasive non-native bird species that have colonized much of the United States.

Purple martins were not observed within the BSA; however, large oak trees with snags and abandoned woodpecker holes that occur within the oak woodland habitats in the BSA may provide suitable habitat for purple martin nesting colonies. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Southern California rufous-crowned sparrow. Southern California rufous-crowned sparrow is a resident of southwest California on the slopes of the Transverse and Coastal ranges from northern Santa Barbara and Ventura counties south to Baja California. The CNDDB does not document this bird in the region; however, it was identified by Padre Biologists during the April 2013 field survey within the Cat Canyon Oil Field among hillsides consisting of sage scrub, specifically along Foxen Canyon Road. This sparrow nests on the ground, often wedged in hollows among rocks or under clumps of grass, low bushes, or shrubs on open brush or grass-covered rocky hillsides from mid-March through mid-July (Cogswell, 1968; Wolf, 1977; Harrison, 1978; Shuford, 1993; and Rising, 1996). It appears to prefer coastal sage scrub dominated by California sagebrush (Grinnell and Miller, 1944), but they can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats (Thorngate and Parsons, 2005).

Southern California rufous-crowned sparrow was observed in scrub habitats within the East Cat Canyon Oil Field during April 2013 field surveys and are expected to occur in scrub habitats within the BSA. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Tricolored blackbird. The tricolored blackbird is a colonial nesting species breeding from mid-March through early August (Beedy and Hamilton, 1999). They nest at colony sites near freshwater marshes (Neff, 1937), in canopies of willows (*Salix* spp.), and other riparian trees. They require open areas accessible to water, a protected nesting substrate within flooded areas or thorny or spiny vegetation, and a suitable foraging space providing adequate insect prey near the colony (Beedy and Hamilton, 1999). Wintering tricolored blackbirds congregate in flocks with mixed species of blackbirds that forage in grasslands and agricultural fields with low-growing vegetation and at dairies and feedlots (Shuford *et al.*, 2008). Preferred foraging habitats include agriculture fields (e.g., rice, alfalfa, oats, and wheat). Degradation of habitat from human activities, such as converting grassland and pastures to vineyards or developed lots, is the greatest threat to the sustainability of this species (Beedy and Hamilton, 1999).

Tricolored blackbirds have been observed along Cat Canyon Road along ephemeral and perennial stream channels by Padre Biologists and may also occur within the BSA; however, no tricolored blackbirds were observed during field surveys within the BSA. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Yellow warbler. Yellow warbler generally occupy riparian vegetation in close proximity to water (Lowther *et al.*, 1999), and is a common nesting species in riparian habitats in San Luis

Obispo and Santa Barbara counties. Breeding season begins in mid-March and the potential for this species to occur within riparian habitats as a migratory stop-over, for nesting, or for foraging is considered moderate to high.

Yellow warbler was not observed within the BSA during field surveys; however, this species has the potential to occur in the spring/summer months within willow thickets occurring in the BSA. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Birds of Prey. Red-tailed hawk, American kestrel (*Falco sparverius*), Cooper's hawk, (*Accipiter cooperii*), merlin (*Falco columbarius*), golden eagle, and turkey vulture (*Cathartes aura*) are wide ranging birds-of-prey that could use the BSA for the purposes of foraging during migration and/or movement through the region. Birds of prey may also utilize the region for nest sites, which are protected by federal and/or state agencies. Use of the BSA by these species is expected to be temporary in nature throughout the region; however, there is also a potential for these raptors to use the BSA for nesting. Project activities are not expected to include any vegetation or tree removal that may support raptor nest sites. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

Other Protected Birds. A number of bird species potentially occurring within the BSA are protected during their nesting period under the provisions of the federal MBTA. The MBTA restricts the killing, taking, collecting, and selling or purchasing of native bird species or their parts, nests, or eggs. During the field surveys within the BSA, several bird species protected by the MBTA were observed. Refer to Appendix C for a complete list of birds observed during the field surveys within the BSA and other protected bird species expected to utilize the area. Project activities are not expected to include any vegetation removal that support nesting birds. Additionally, implementation of recommended avoidance and minimization measures reduce impacts to less than significant.

5.6.6 Mammals

Bats. Special-status bat species that could occur in the Project region include Townsend's bat, pallid bat, hoary bat, western red bat, and Yuma myotis. Maternal colonies for most bats occur between April and August. Most bat species will migrate from maternal roosts to wintering sites and some bats will migrate out of the area to warmer climates during the winter months. Bats will often occupy abandoned structures, caves, abandoned mines, and/or trees for roosting sites and will forage in a variety of habitats. Each bat species require specific habitat features for roosting and foraging sites.

Padre Biologists and Central Coast Bat Research Group completed a bat survey in the western extent of Cat Canyon on June 19, 2008. Numerous bats were observed and/or detected as part of this survey effort via Anabat acoustic detectors including several species in the *Myotis* genus, California myotis (*Myotis californicus*), Mexican free-tailed bat (*Tadarida brasiliensis*), and the special-status pallid bat. No bats or sign of bat (i.e., guano) were observed during field surveys; however, no specific bat surveys were completed as part of this assessment. It is

expected that several bat species utilize the BSA for foraging and day-time roost sites. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

American badger. American badger typically inhabits grasslands, farmland, and forest edges with friable soils (CDFG, 1986). Badgers dig elliptical burrows with 8 to 12-inch openings, which they utilize for cover, sleeping, hunting, caching food, and breeding (CDFW, 1986). They breed in the months of July and August (National Audubon Society, 1996). Badgers do not hibernate; however, they will occupy their burrows during torpor during the coldest part of the winter, remaining in the burrow for several days per week. This species typically preys on small burrowing mammals, such as ground squirrels, rats, and mice, and will also feed on birds, snakes and other reptiles. Badgers are nocturnal; however, they are well known to be active during the day as well. Badger's typically have a large home range varying from 590 to 4,200 acres, in which they will utilize for foraging, denning, and breeding.

Badger activity was identified within grassland and agricultural communities throughout the BSA and within the Aera property during several field visits by Padre Biologists. Project activities are not expected to include any removal of habitats with the potential to support this species. Additionally, implementation of recommended avoidance and minimization measures would reduce impacts to less than significant.

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6.0 RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES

The proposed Project has incorporated many avoidance and minimization measures into the Project design, including, use of HDD to minimize impacts to waterways. The pipeline alignment, however, is surrounded by large sections of relatively undisturbed habitats suitable to support a wide variety of species including special-status species. Therefore, it is recommended that the following additional measures be implemented during proposed Project activities to further reduce potential impacts to sensitive biological resources to a less than significant level.

1. The use of heavy equipment and vehicles will avoid impacts to native vegetation to the greatest extent feasible.
2. Work areas, including equipment lay-down areas, will be pre-designated on plans prior to the start of work.
3. A Drilling Fluid Release Contingency Plan will be prepared for all horizontal directional drilling (HDD) operations and will be prepared with special emphasis on stream crossings. This plan will include appropriate measures for containment of spills, agency notifications, clean-up protocols, and procedures for restoring lay down areas and other impacted areas to pre-disturbance conditions. Spill containment equipment will be available on-site during all Project drilling and fuel handling activities. A qualified Biologist knowledgeable in HDD operations will be onsite during HDD operations along actively flowing streams or ponded water to document any spill or drilling fluid release and provide additional guidance to protect biological resources in the event of a spill or drilling fluid release. In the event that a spill or drilling fluid release occurs within a stream corridor, all work will be halted and the spill will be contained using the procedures outlined in the Project-specific Drilling Fluid Release Contingency Plan.
4. In the event Project activities are scheduled during the nesting bird season, between March 15 and September 1, a nesting bird survey will be completed by a qualified Biologist with experience in bird identification and nest searching. No active nests of native bird species protected by the Migratory Bird Treaty Act will be removed by Project activities and appropriate buffers will be incorporated into the Project plan to ensure the protection of the nest. Buffers will be established and delineated by a qualified Biologist based on an appropriate distance to minimize disturbance to the active nest.
5. Project activities will be completed during the daylight hours, to the greatest extent possible. Project activities will avoid rainy nights, when California tiger salamanders (CTS) are most active. A qualified Biologist will complete a pre-activity survey prior to work that follows a rainy night, to ensure no CTS are present within the work areas. Training will be provided to the crew and crew supervisors to recognize, report, and avoid CTS. In the event a CTS is observed in the work area, the work in the immediate area of the CTS will temporarily cease until agency notification is complete.

6. A qualified Biologist with experience identifying American badger and their potential dens will conduct a pre-activity survey prior to initial work activities. All potentially active badger dens that would be directly impacted by construction activities will be inspected by a qualified Biologist using an optic scope or monitored using tracking medium/remote sensor cameras (3-days) to ensure the den is vacant. After verification that the den is unoccupied it will be immediately excavated and backfilled. If badger activity is detected at a den, the entrance to the den will blocked with soil, sticks, or debris for three to five days to discourage the use of the dens prior to project disturbance activities. After the biologist determines that the badger has stopped using an active den, the den will be hand-excavated with a shovel to prevent re-use during project construction.

7. A qualified Biologist with experience identifying special-status plants and associated habitats will conduct a pre-activity survey of all work areas, including staging and laydown areas, prior to any ground disturbing activities. Any special-status plant populations encountered will be flagged and avoided to the greatest extent possible. These areas will be avoided for staging or stockpiling of material or soil when feasible. La Graciosa thistle, Gaviota tarplant, and Lompoc yerba santa observations will be reported to the USFWS.

8. All food-related items and trash will be removed from the site daily or contained within a closed container.

9. An Environmental Sensitivity Orientation will be presented to all on-site personnel at the beginning of the initial work activities. The orientation will discuss sensitive species with potential to occur in the work areas, with emphasis on special-status wildlife and plant species. The orientation will explain the importance of minimizing disturbance, adhering to all permit conditions, and proper reporting of observations or incidents. The orientation will be repeated if additional personnel are added to the Project.

10. At no time will oak trees be removed as part of Project activities. A certified arborist will oversee trimming of oak tree limbs that have the potential to be impacted as a result of vehicle or equipment usage associated with Project activities.

11. As necessary, erosion control measures will be implemented to prevent runoff into nearby drainages. Straw waddles, in conjunction with other methods, will be temporarily installed to prevent erosion of soils disturbed by the project and to avoid and/or minimize disturbed sediments from entering adjacent waterways. Silt fencing will be avoided adjacent to water resources, to the greatest extent feasible, to minimize potential barriers to migrating amphibians and other wildlife.

Implementation of the above-mentioned measures will reduce impacts to special-status species and existing sensitive habitat areas to a less than significant level.

7.0 IMPACT SUMMARY

The following impact discussion incorporates FESA, CESA, and Santa Barbara County biological resource policies for determining the level of effect on biological resources as a result of the proposed installation of a SoCalGas pipeline.

The Project has been designed to limit construction activities as much as possible to areas beneath public roadways and to avoid stream channels, agricultural drainages, wetlands, and associated riparian habitats, to the greatest extent feasible. HDD will be used for areas along the pipeline alignment that must intersect these resources. HDD activities will be staged at the top of bank outside designated wetlands to avoid impacts to the integrity of the channel and wildlife that may utilize the channels for any portions of their life cycle (i.e., cover, foraging, local migration, and/or breeding). The Project has also been designed to avoid impacts to oak trees and no oak trees will be removed as part of Project activities.

The proposed pipeline construction has been designed to focus activities within the public right-of-way to the greatest extent feasible. Specifically, the pipeline would be installed predominantly under existing paved roads and staging areas would be restricted to pre-disturbed road shoulders and adjacent ruderal areas. No grading or other vegetation removal activities will be incorporated into the Project. Construction activities (i.e., trenching, staging, HDD activities) may result in short-term temporary disturbances to existing communities, specifically ruderal and disturbed areas along the road shoulders. The impacts to these communities are not considered to be significant because the quality of habitat in these areas provides low value of cover, native species components, and regularly disturbed by adjacent traffic (dust, vehicles).

Local wildlife populations, including special-status species, may potentially be adversely affected by the temporary disruption of foraging, burrowing, and nesting activities due to an increase of human activity, use of heavy equipment, and noise associated with the initial road excavation, pipeline installation, and road repair activities. Impacts to biological resources are expected to be temporary and implementation of recommended avoidance and minimization measures (refer to Section 6.0) would reduce impacts to less than significant.

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APPENDIX A

SITE PHOTOGRAPHS

Photo 1
Latitude: 34.822881
Longitude:-120.289149
Aspect: W
Date: 1/30/2014
Description: Eastern terminus of pipeline corridor.

Photo 2
Latitude: 34.822038
Longitude: -120.289149
Aspect: E
Date: 1/30/2014
Description: Coastal sage scrub habitat and scattered coast live oak within pipeline corridor.

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

0 0.5 1
MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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PROJECT NAME: EAST CAT CANYON SANTA BARBARA COUNTY, CA
PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 1

Photo 3
Latitude: 34.821789
Longitude:-120.289207
Aspect: S
Date: 1/30/2014
Description: Overview of pipeline crossing creek corridor.

Photo 4
Latitude: 34.821264
Longitude: -120.28909
Aspect: E
Date: 1/30/2014
Description: Additional view of pipeline corridor creek crossing; grazed coastal sage scrub and coast live oak.

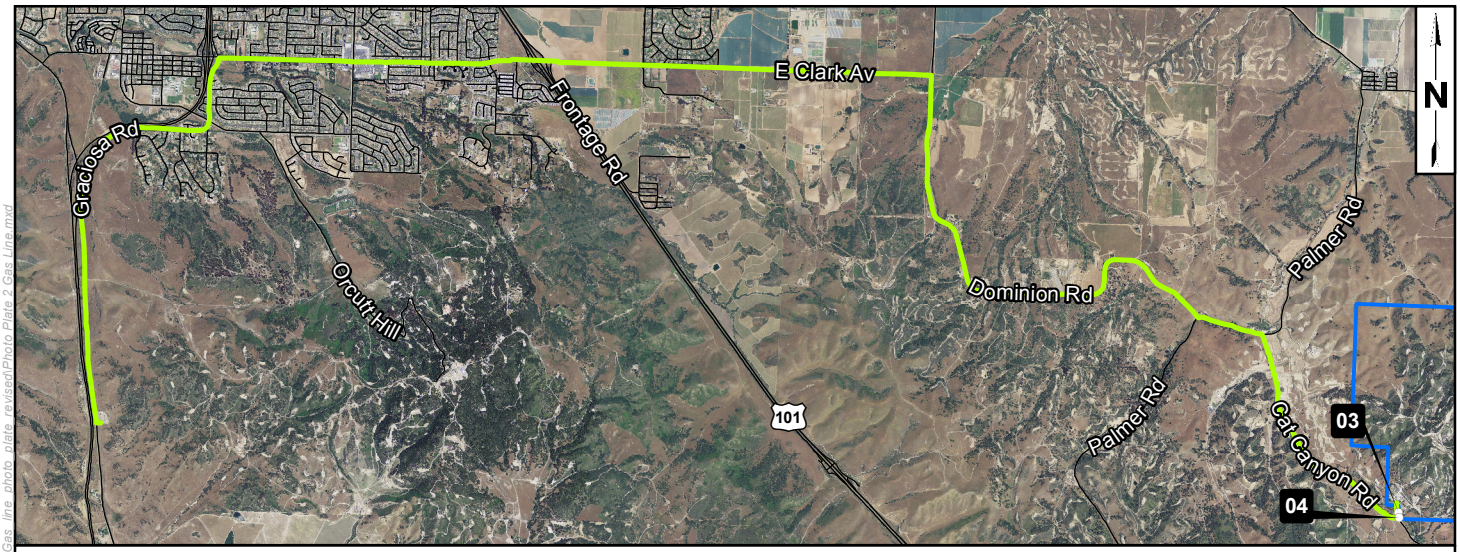

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 2

Photo 5
Latitude: 34.823736
Longitude:-120.293429
Aspect: NW
Date: 6/18/2013
Description: Representative ruderal habitat on road shoulder

Photo 6
Latitude: 34.825145
Longitude: -120.295344
Aspect: SE
Date: 6/18/2013
Description: Representative view of roadside ruderal habitat.

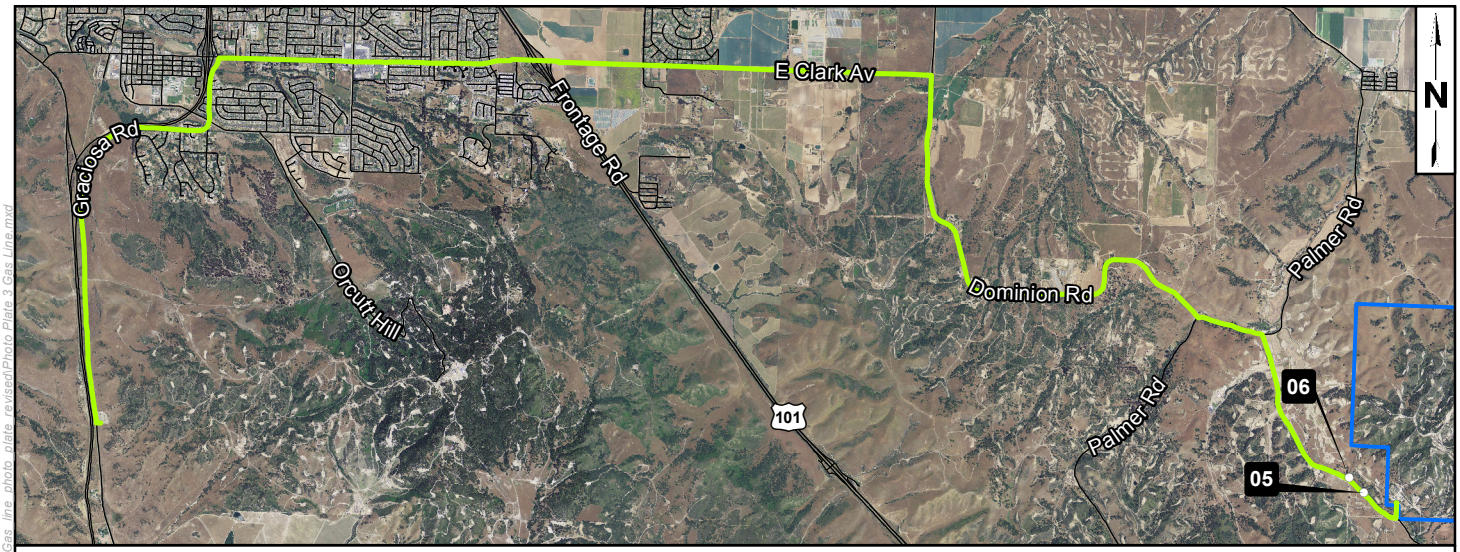

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 3

Photo 7
Latitude: 34.83903
Longitude:-120.306007
Aspect: North
Date: 6/18/2013
Description: Ruderal and grazed annual grassland plant communities

Photo 8
Latitude: 34.841198
Longitude: -120.314581
Aspect: SW
Date: 10/1/2013
Description: Culvert for unamed ephemeral drainage at intersection of Palmer Road and Dominion Road

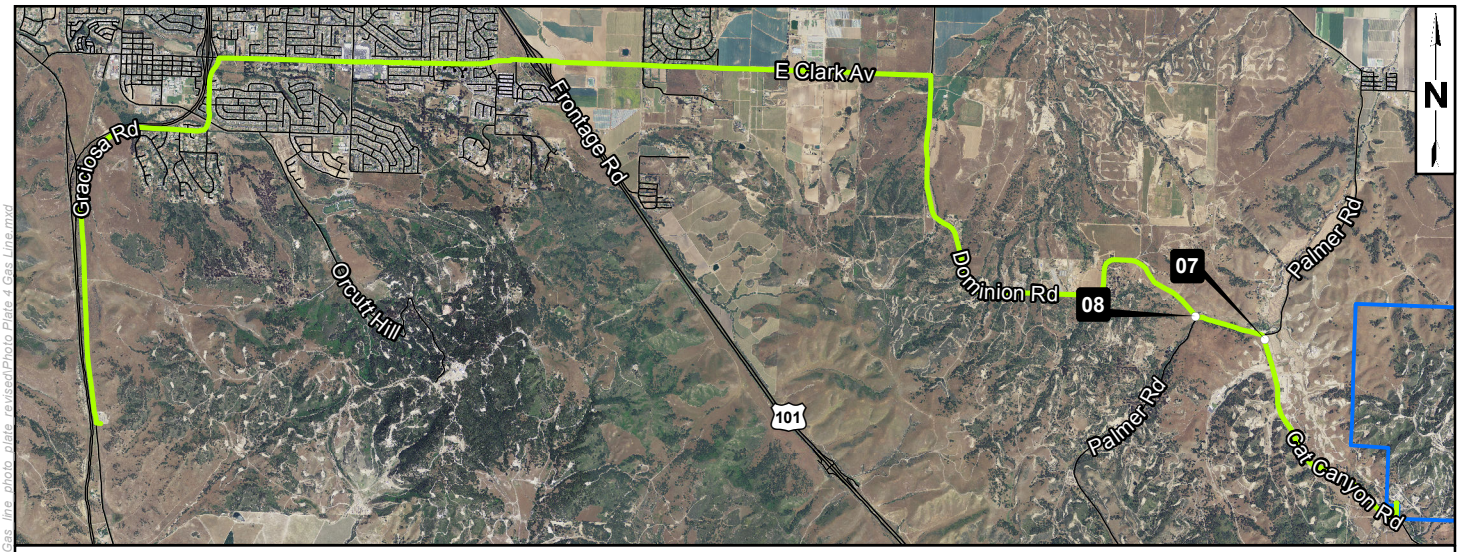

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 4

Photo 9
Latitude: 34.846718
Longitude:-120.322705
Aspect: West
Date: 6/18/2013
Description: Heavily grazed annual grassland, ornamental and vineyard (agricultural) along Cat Canyon Road

Photo 10
Latitude: 34.843144
Longitude:-120.335722
Aspect: East
Date: 6/18/2013
Description: Representative view of coastal scrub and willow thicket within drainage feature along Cat Canyon Road

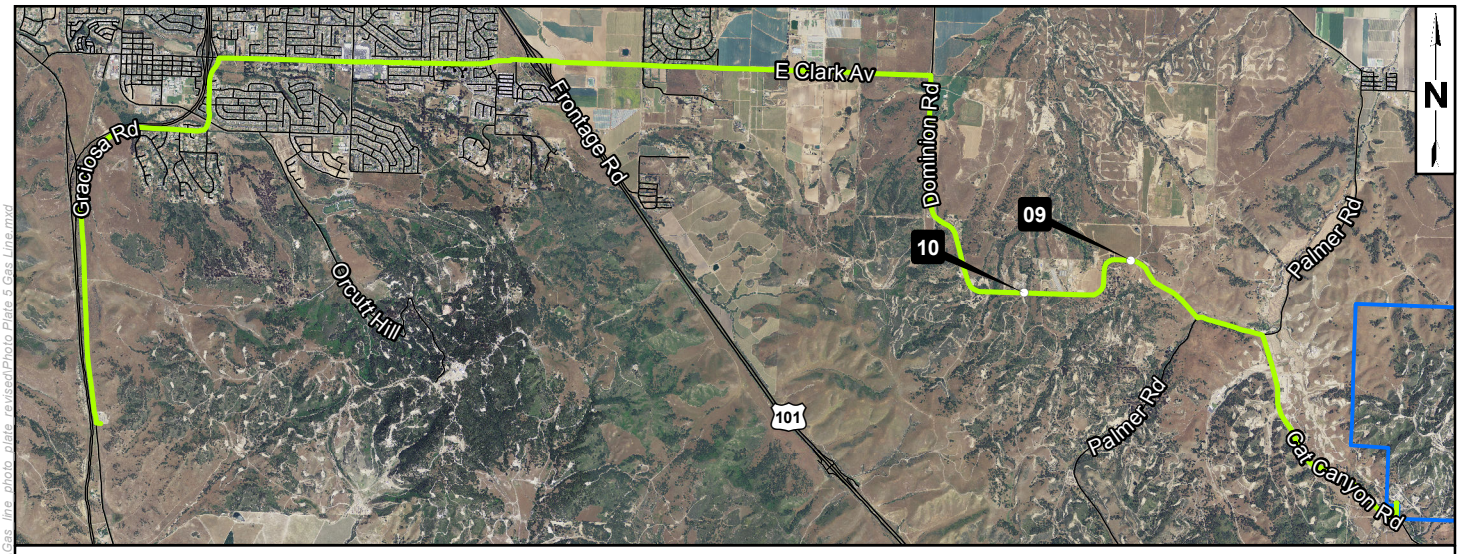

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 5

Photo 11
Latitude: 34.855562
Longitude:-120.347806
Aspect: North
Date: 6/18/2013
Description: Ruderal, coastal scrub, and coast live oak woodland plant communities along Dominion Road

Photo 12
Latitude: 34.864881
Longitude:-120.348951
Aspect: SE
Date: 10/1/2013
Description: Ephemeral channel with willow thicket and scattered oaks

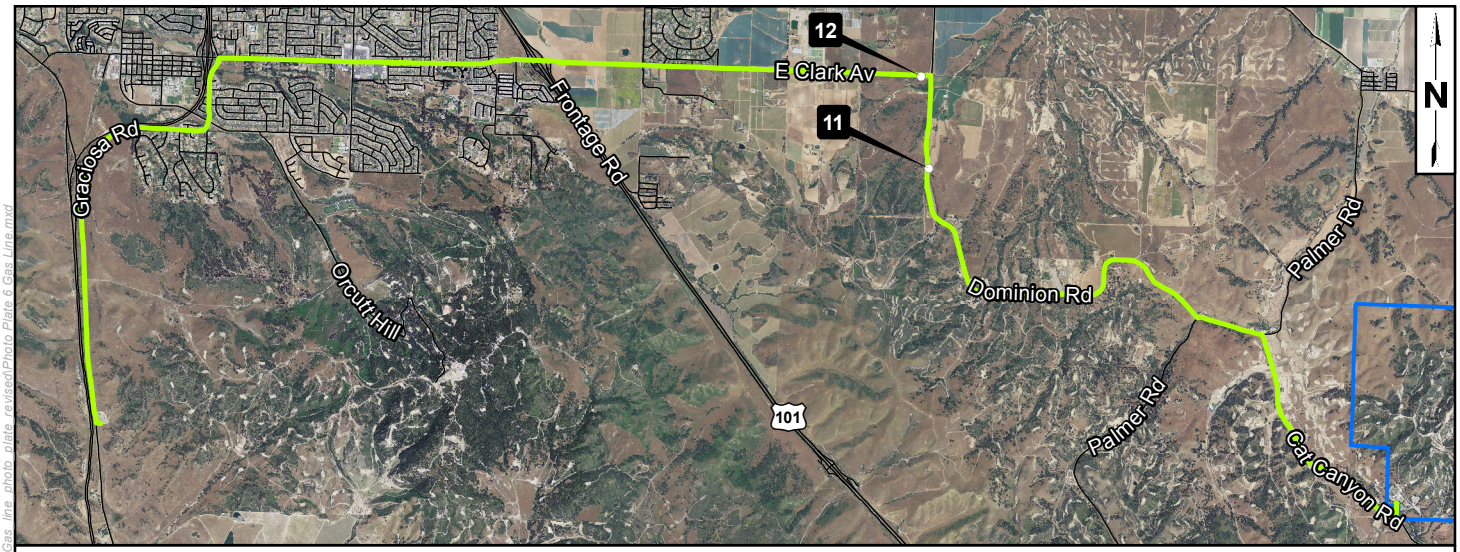

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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PROJECT NAME: EAST CAT CANYON SANTA BARBARA COUNTY, CA
PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 6

Photo 13
Latitude: 34.865459
Longitude:-120.391901
Aspect: NW
Date: 10/1/2013
Description: Agricultural drainage feature

Photo 14
Latitude: 34.865248
Longitude:-120.391941
Aspect: South
Date: 10/1/2013
Description: Agricultural drainage feature

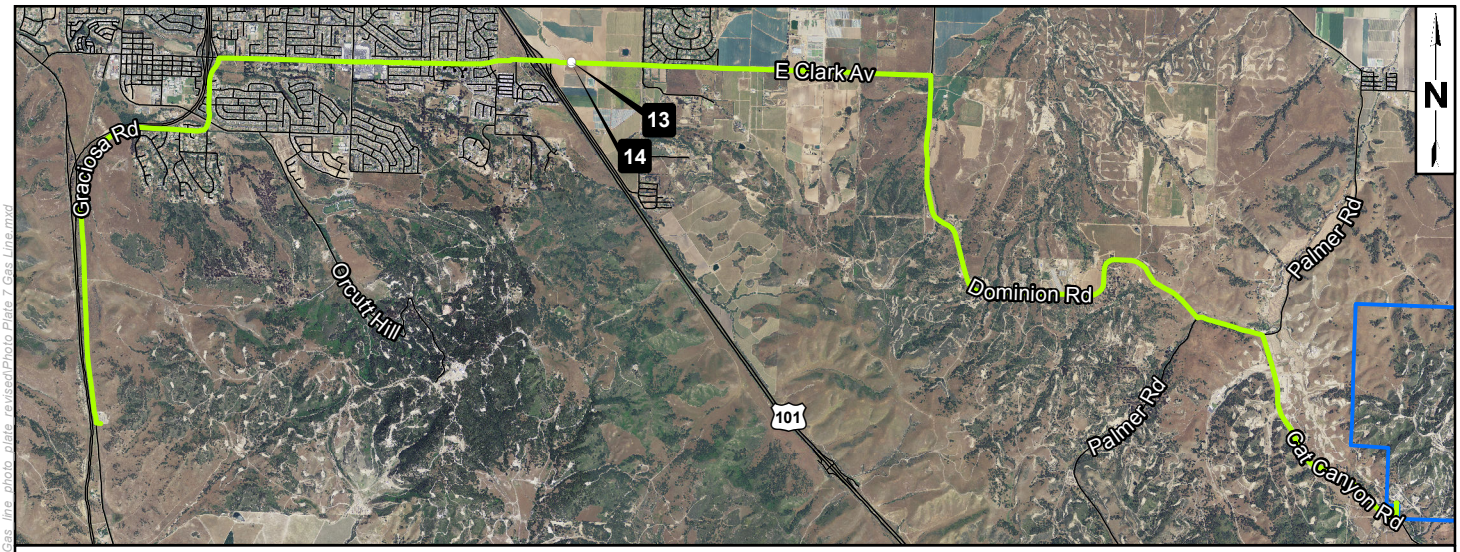

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 7

Photo 15
Latitude: 34.864837
Longitude:-120.426769
Aspect: West
Date: 10/1/2013
Description: Ornamental plant community consisting of; Monterey pine and scattered eucalyptus

Photo 16
Latitude: 34.863811
Longitude:-120.435912
Aspect: North
Date: 6/1/2013
Description: Willow thicket and oak woodland adjacent to Orcutt Creek bridge

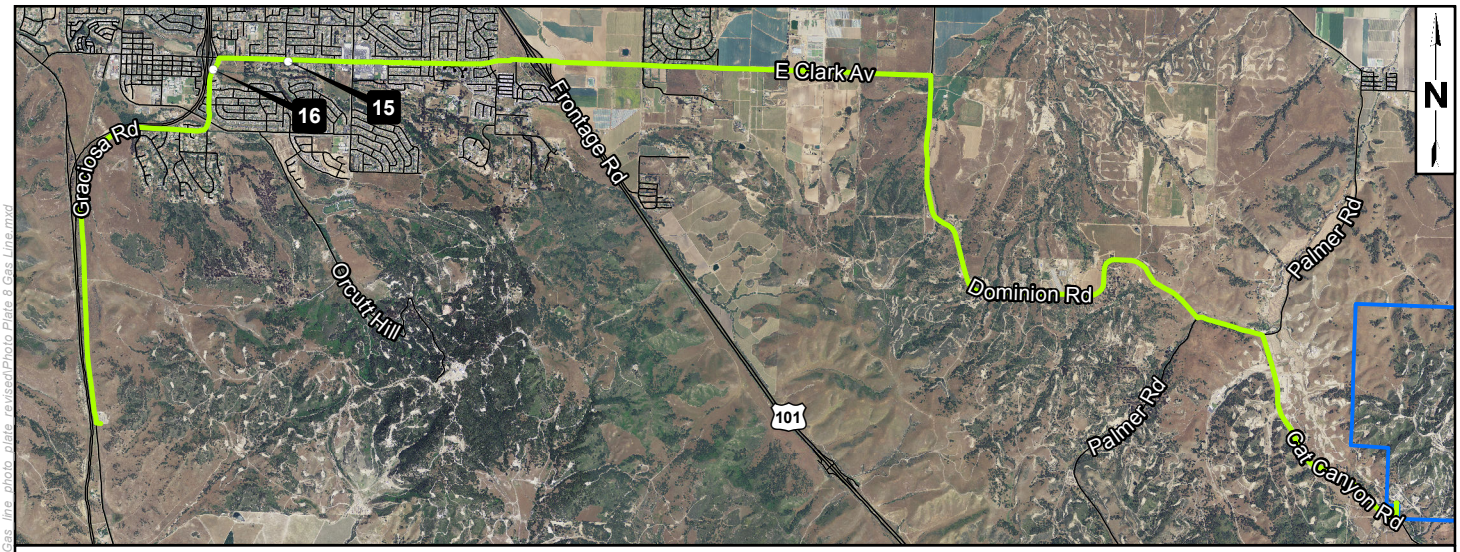

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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PROJECT NAME: EAST CAT CANYON SANTA BARBARA COUNTY, CA
PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 8

Photo 17
Latitude: 34.85762
Longitude:-120.440019
Aspect: West
Date: 10/1/2013
Description: Developed and Ornamental plant community consisting of eucalyptus along Graciosa Road

Photo 18
Latitude: 34.837506
Longitude:-120.450844
Aspect: South
Date: 10/1/2013
Description: Drainage feature adjacent to Coyote brush scrub along Graciosa Road

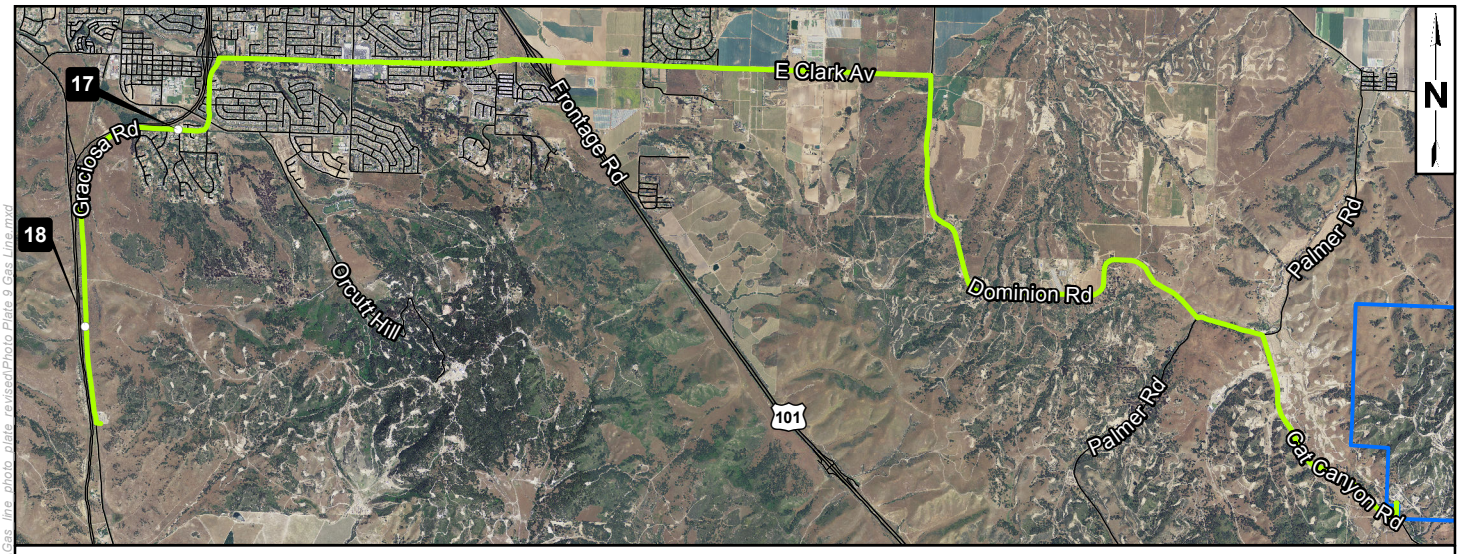

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

0 0.5 1
MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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PROJECT NAME: EAST CAT CANYON SANTA BARBARA COUNTY, CA
PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 9

Photo 19
Latitude: 34.834147
Longitude:-120.450313
Aspect: North
Date: 6/18/2013
Description: Drainage feature and coast live oak woodland adjacent to Graciosa Road

Photo 20
Latitude: 34.832232
Longitude:-120.450202
Aspect: SW
Date: 6/18/2013
Description: Drainage feature and culvert along Graciosa Road

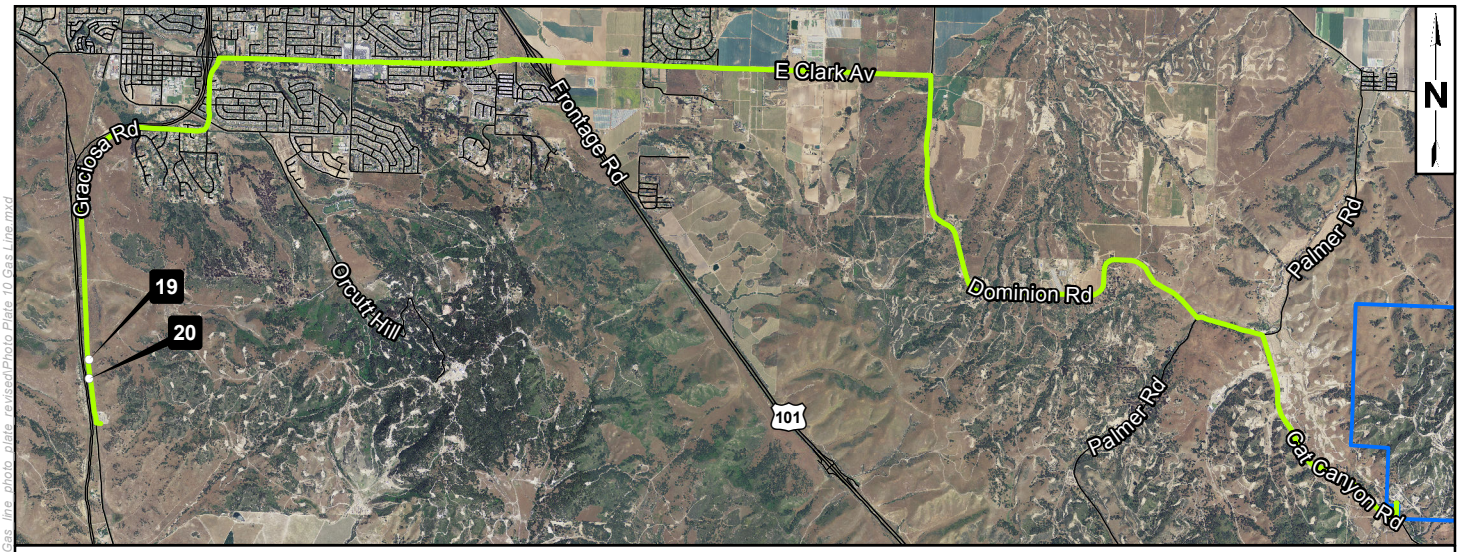

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

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MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
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PROJECT NAME: EAST CAT CANYON SANTA BARBARA COUNTY, CA
PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 10

Photo 21
Latitude: 34.831952
Longitude:-120.45013
Aspect: NW
Date: 10/1/2013
Description: Drainage feature and culvert along Graciosa Road

Photo 22
Latitude: 34.827578
Longitude:-120.449278
Aspect: North
Date: 10/1/2013
Description: Terminus of proposed SCG pipeline

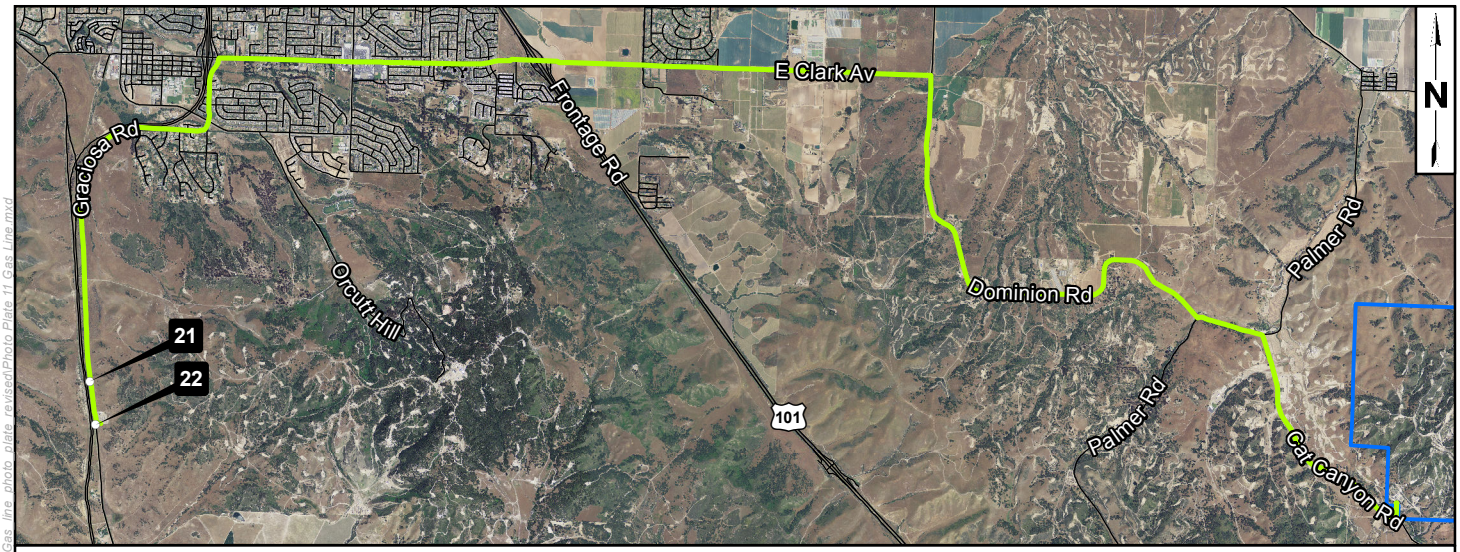

Photo Location
Existing Road
Proposed Gas Line Route
Aera Energy LLC Property

0 0.5 1
MILES

Source: County of Santa Barbara, NAIP 2012 Image
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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PROJECT NAME: EAST CAT CANYON SANTA BARBARA COUNTY, CA
PROJECT NUMBER: 1002-0457
DATE: February 2014

APPENDIX A: SITE PHOTOGRAPHS

PLATE 11

APPENDIX B

VASCULAR PLANT INVENTORY

Vascular Plant List for the East Cat Canyon Redevelopment Project - Gas Pipeline
Santa Barbara County, California

Scientific Name	Common Name	Habit	Wetland Indicator Status	Family
Acmispon americanus [*Lotus purshianus*]	Spanish lotus	AH	.	Fabaceae
Acmispon glaber [*Lotus scoparius*]	Deerweed/California broom	PH	.	Fabaceae
*Ailanthus altissima**	Tree of Heaven	T	FACU	Simaroubaceae
*Ambrosia artemisiifolia**	Common ragweed	AH	FACU	Asteraceae
*Anagallis arvensis**	Scarlet pimpernel	BH	FAC	Myrsinaceae
*Apium graveolens**	Celery	A/BH	.	Apiaceae
Artemisia californica	California sagebrush	S	.	Asteraceae
Artemisia douglasiana	California mugwort	PH	FAC	Asteraceae
Asclepias eriocarpa	Kotolo	PH	.	Apocynaceae
*Asphodelus fistulosus**	Asphodel	A/PH	.	Asphodelaceae
*Avena barbata**	Slender wildoat	AG	.	Poaceae
Baccharis pilularis	Coyote brush	S	.	Asteraceae
*Briza minor**	Annual quaking grass	AG	FAC	Poaceae
Baccharis salicifolia ssp. *salicifolia*	Mule fat	S	FAC	Asteraceae
*Brassica nigra**	Black mustard	AH	.	Brassicaceae
*Bromus diandrus**	Ripgut grass	AG	.	Poaceae
*Bromus hordeaceus**	Soft chess brome	AG	FACU	Poaceae
Bromus madritensis ssp. *rubens**	Red brome	AG	.	Poaceae
Camissonia strigulosa	Contorted primrose	AH	.	Onagraceae
*Carduus pycnocephalus**	Italian thistle	AH	.	Asteraceae
*Carpobrotus edulis**	Freeway iceplant	PH/S	.	Aizoaceae
*Centaurea melitensis**	Tocalote	A/BH	.	Asteraceae
Centromadia sp.	Spikeweed	A/PH	.	Asteraceae
*Chamaesyce maculata**	Spotted spurge	AH	.	Euphorbiaceae
*Cirsium vulgare**	Bull thistle	PH	FACU	Asteraceae
*Conium maculatum**	Poison hemlock	PH	FACW	Apiaceae
*Cortaderia jubata**	Pampas grass	PG	FACU	Poaceae
Croton californicus	California croton	PH	.	Euphorbiaceae
Croton setigerus [*Eremocarpus setigerus*]	Turkey mullein	A/PH	.	Euphorbiaceae
*Cynodon dactylon**	Bermuda grass	PG	FAC	Poaceae
Cyperus eragrostis	Tall flatsedge	PH	FACW	Cyperaceae
Datura wrightii	Jimsonweed	A/PH	.	Solanaceae
Deinandra paniculata [*Hemizonia paniculata*]	Tarweed	AH	.	Asteraceae
Distichlis spicata	Saltgrass	PG	FACW	Poaceae
Dracaena sp.*	Dragon tree	S/T	.	Asparagaceae
Dudleya lanceolata	Dudleya	PH	.	Crassulaceae
*Ehrharta calycina**	Veldt grass	PG	.	Poaceae
Eleocharis macrostachya	Common spikerush	PH	OBL	Cyperaceae
Eleocharis parishii	Parish's spikerush	PH	FACW	Cyperaceae
Elymus condensatus [*Leymus condensatus*]	Giant wild rye	PG	FACU	Poaceae
Epilobium brachycarpum	Annual willowherb	AH	.	Onagraceae
Epilobium ciliatum	Fringed willowherb	PH	FACW	Onagraceae
Erigeron canadensis	Horseweed	AH	FACU	Asteraceae
Eriophyllum confertiflorum	Golden yarrow	S	.	Asteraceae
*Erodium botrys**	Storksbill, filaree	AH	.	Geraniaceae
*Erodium cicutarium**	Red-stemmed filaree	AH	.	Geraniaceae
Eschscholzia californica	California poppy	A/PH	.	Papaveraceae
*Eucalyptus globulus**	Blue gum	T	.	Myrtaceae
Festuca perennis [Lolium perenne ssp. multiflorum]*	Italian ryegrass	A/BG	FAC	Poaceae
*Foeniculum vulgare**	Fennel	PH	.	Apiaceae
Frangula californica [*Rhamnus californica*]	California coffeeberry	S	.	Rhamnaceae

Scientific Name	Common Name	Habit	Wetland Indicator Status	Family
Heliotropium curassavicum var. *oculatum*	Seaside heliotrope	PH	FACU	Boraginaceae
*Helminthotheca echioides** [*Picris echioides*]	Bristly ox-tongue	A/BH	FACU	Asteraceae
Hemizonia congesta	Hayfield tarweed	AH	.	Asteraceae
Heteromeles arbutifolia	Toyon	S	.	Rosaceae
Heterotheca grandiflora	Telegraph weed	AH	.	Asteraceae
*Hirschfeldia incana**	Shortpod mustard	A/BH	.	Brassicaceae
*Holcus lanatus**	Common velvet grass	PG	FAC	Poaceae
Hordeum murinum ssp. *leporinum**	Foxtail barley	AG	.	Poaceae
*Hypochaeris glabra**	Smooth cat's ear	AH	.	Asteraceae
Juglans californica	California walnut	T	.	Juglandaceae
Juncus bufonius	Toad rush	AH	FACW	Juncaceae
Juncus patens	Spreading rush	PH	FACW	Juncaceae
Juncus phaeocephalus	Brown-headed rush	PH	FACW	Juncaceae
*Lactuca serriola**	Prickly lettuce	AH	FACU	Asteraceae
Lupinus sp.	Silver lupine	S	.	Fabaceae
*Lythrum hyssopifolia**	Hyssop loosestrife	A/PH	OBL	Lythraceae
*Malva parviflora**	Cheeseweed	AH	.	Malvaceae
Marah fabacea	California manroot	PH,V	.	Cucurbitaceae
*Marrubium vulgare**	Horehound	PH	FAC	Lamiaceae
*Medicago polymorpha**	Bur clover	AH	.	Fabaceae
*Melilotus indicus**	Yellow sweet clover	AH	FACU	Fabaceae
Mimulus guttatus	Sticky monkeyflower	S	.	[Scrophulariaceae]
Nasturtium officinale	Watercress	PH	OBL	Brassicaceae
*Nicotiana glauca**	Tobacco tree	S/T	FAC	Solanaceae
*Oxalis corniculata**	Creeping wood sorrel	PH	FACU	Oxalidaceae
Opuntia sp.	Prickly pear	P/S	.	Cactaceae
Phacelia ramosissima	Branching phacelia	PH	FACU	Boraginaceae
*Piptatherum miliaceum**	Smilo grass	PG	.	Poaceae
*Plantago coronopus**	Cut leaf plantain	A/BH	FACW	Plantaginaceae
*Plantago lanceolata**	English plantain	PH	FAC	Plantaginaceae
*Plantago major**	Common plantain	A/PH	FAC	Plantaginaceae
Platanus racemosa	Western sycamore	T	FAC	Platanaceae
*Poa annua**	Annual bluegrass	A/BH	FACU	Poaceae
Polygonum aviculare subsp. *depressum**	Prostrate knotweed	AH	FACW	Polygonaceae
*Polypogon monspeliensis**	Annual rabbitsfoot grass	AG	FACW	Poaceae
*Polypogon viridis**	Water beard grass	PG	FACW	Poaceae
Pteridium aquilinum	Bracken fern	PF	FACU	Dennstaedtiaceae
Pseudognaphalium californicum [Gnaphalium californicum]	California everlasting	A/PH	.	Asteraceae
*Pseudognaphalium luteoalbum**	Jersey cudweed	AH	FAC	Asteraceae
Quercus agrifolia	Coast live oak	T	.	Fagaceae
*Raphanus sativus**	Radish	A/BH	.	Brassicaceae
Rubus ursinus	California blackberry	S	FACU	Rosaceae
*Rumex acetosella**	Sheep sorrel	PH	FACU	Polygonaceae
*Rumex crispus**	Curly dock	B/PH	FACU	Polygonaceae
*Rumex salicifolius**	Willow dock	PH	FACW	Polygonaceae
Salix lasiolepis	Arroyo willow	S	FACW	Salicaceae
Salvia columbariae	Chia	AH	.	Lamiaceae
Salvia mellifera	Black sage	S	.	Lamiaceae
Salvia spathacea	California hummingbird sage	PH	.	Lamiaceae
Sambucus nigra ssp. *caerulea [Sambucus mexicana]*	Blue elderberry	S	FAC	Adoxaceae [Caprifoliaceae]
*Schismus arabicus**	Mediterranean grass	AG	.	Poaceae
Schoenoplectus californica	Southern bulrush	PH	OBL	Cyperaceae

Scientific Name	Common Name	Habit	Wetland Indicator Status	Family
*Schinus molle**	Pepper tree	T	.	Anacardiaceae
Scrophularia californica	California bee plant	PH	FAC	Scrophulariaceae
*Senecio vulgaris**	Common groundsel	AH	FACU	Asteraceae
*Silene gallica**	Windmill pink		.	Caryophyllaceae
*Silybum marianum**	Milk thistle	AH	.	Asteraceae
*Sonchus asper**	Prickly sow thistle	AH	FAC	Asteraceae
*Sonchus oleraceous**	Common sowthistle	AH	.	Asteraceae
*Spergularia rubra**	Red sand spurry	A/PH	FAC	Caryophyllaceae
Stachys bullata	Woodmint	PH	.	Lamiaceae
Stephanomeria virgata	Tall stephanomeria	AH	.	Asteraceae
Toxicodendron diversilobum	Western poison oak	S	.	Anacardiaceae
Trifolium sp.	Clover	AH	.	Fabaceae
Verbena lasiostachys	Western vervain	PH	.	Verbenaceae
Vicia villosa	Hairy vetch	AH,V	.	Fabaceae
Typha sp.	Cattail	PH	OBL	Typhaceae
Urtica dioica	Stinging nettle	PH	FAC	Urticaceae

Notes: Scientific nomenclature follows Second Edition of the Jepson Manual (Baldwin, et.al., 2012)
"*" indicates non-native species which have become naturalized or persist without cultivation.

Habit definitions:

AF: annual fern or fern ally	AV: annual vine	S: shrub
AG: annual grass	PG: perennial grass	T: tree
AH: annual herb	PH: perennial herb	
BH: biennial herb	PF: perennial fern or fern ally	

Wetland indicator status California - Arid West Region, U.S. Army Corps of Engineers (CRREL 2012):
OBL: obligate wetland species, occurs almost always in wetlands (>99% probability)
FACW: facultative wetland species, usually found in wetlands (67-99% probability).
FAC: facultative species, equally likely to occur in wetlands or non-wetlands (34-66% probability).
FACU: facultative upland species, usually occur in nonwetlands (1-33% probability).
UPL: upland species, almost always occurs in non-wetlands in the region specified (<1% probability).
A period (.) indicates that no wetland indicator status has been given.

APPENDIX C

WILDLIFE SPECIES LIST

Aera Oil Field Redevelopment Project - Gas Pipeline
Wildlife Species List
Project No. 1002-0457

Common Name	*Scientific Name*	Observed During Field Surveys*	Residence Status	Protected Status	Habitat
Amphibians					
Arboreal salamander	*Aneides lugubris*		R	-	W
Black-bellied slender salamander	*Batrachoseps nigriventris*		R	-	W
California toad	*Bufo boreas halophilus*		R	--	M
Monterey ensatina	*Ensatina eschscholtzii eschscholtzii*		R	--	R,G,P
California tiger salamander	*Ambystoma californiense*				
Pacific treefrog	*Pseudacris regilla*		R	--	A,R
Reptiles					
Silvery legless lizard	*Anniella pulchra pulchra*		R	CSC	M
California whiptail	*Aspidoscelis tigris munda*		R	--	G,D,P,M
Western yellow-bellied racer	*Coluber constrictor mormon*		R		M
Northern Pacific rattlesnake	*Crotalus oreganus oreganus*		R	--	R,G,P
Ringneck snake	*Diadophis punctatus*		R	--	R,G,P
Skilton's skink	*Eumeces skiltonianus skiltonianus*		R	--	M
Southern alligator lizard	*Gerrhonotus multicarinatus*		R	--	A,R,G
California kingsnake	*Lampropeltis getula californiae*		R	--	A,R,P,M
Red coachwhip	*Masticophis flagellum piceus*		R		M
California striped racer	*Masticophis lateralis*		R	--	M
Coast horned lizard	*Phrynosoma coronatum frontale*		R	CSC	G,P
Pacific gopher snake	*Pituophis catenifer*		R	--	R,G,P
Western fence lizard	*Sceloporus occidentalis*		R	--	G,D,P,M
Skilton's skink	*Plestiodon skiltonianus siltonianus*		R	-	G,D,P,M
Coast garter snake	*Thamnophis elegans terrestris*		R	--	R,G,P
Western side-blotched lizard	*Uta stanburiana elegans*		R	--	G,D,P,M
Birds					
Acorn woodpecker	*Melanerpes formicivorous*	X	R	M	P
Allen's hummingbird	*Selasphorus sasin*		B	M	R,G,P
American crow	*Corvus brachyrhynchos*		R	M	M
American goldfinch	*Carduelis tristis*		R	M	R,P
American kestrel	*Falco sparverius*	X	R	M	R,G,P
American robin	*Turdus migratorius*		R	M	P,G
Anna's hummingbird	*Calypte anna*		R	M	R,G,P
Ash-throated flycatcher	*Myiarchus cinerascens*		B	M	R,G,P
Band-tailed pigeon	*Columba fasciata*		R	M	R
Barn owl	*Tyto alba*		R	M	R,G,P
Barn swallow	*Hirundo rustica*		B	M	R,G
Bewick's wren	*Thryomanes bewickii*		R	M	R,G
Black phoebe	*Sayornis nigricans*		R	M	R,G,P
Black-chinned hummingbird	*Archilochus alexandri*		B	M	R,G,P
Black-headed grosbeak	*Pheucticus melanocephalus*		B	M	R,P
Black-throated gray warbler	*Dendroica nigrescens*		B	M	G,P
Blue grosbeak	*Guiraca caerulea*		B	M	R,W,G
Blue-gray gnatcatcher	*Polioptila caerulea*		B	M	R,G
Brewer's blackbird	*Euphagus cyanocephalus*	X	R	M	R,W,G
Brown creeper	*Certhia americana*		R	M	W,R,P
Brown-headed cowbird	*Molothrus ater*		R	M	R,W,G

Common Name	*Scientific Name*	Observed During Field Surveys*	Residence Status	Protected Status	Habitat
Bullock's oriole	*Icterus bullockii*		B	M	R,P
Bushtit	*Psaltriparus minimus*	X	R	M	P
California quail	*Cillipepla californica*	X	R	--	R,P
California thrasher	*Toxostoma redivivum*	X	R	M	W,G
California towhee	*Pipilo crissalis*	X	R	M	W, G
Canyon wren	*Catherpes mexicanus*		R	M	M
Cassin's finch	*Carpodacus cassinii*		R	M	M
Cassin's kingbird	*Tyrannus vociferans*		B	M	G
Cassin's vireo	*Vireo cassinii*		B	M	W,R
Cedar waxwing	*Bombycilla cedrorum*		W	M	G,W
Chestnut-backed chickadee	*Parus rufescens*		R	M	R,P
Cliff swallow	*Hirundo pyrrhonota*		B	M	R,G
Common raven	*Corvus corax*	X	R	M	M
Common yellowthroat	*Geothlypis trichas*		R	M	W,R
Cooper's hawk	*Accipiter cooperii*		R	M, CSC	R,G
Costa's hummingbird	*Calypte costae*		B	M	R,G,P
Dark-eyed junco	*Junco hyemalis*	X	R	M	R,W,G
Downy woodpecker	*Picoides pubescens*		R	M	R,P
European starling	*Sturnus vulgaris*	X	R	--	R,P
Fox sparrow	*Passerella iliaca*		W	M	G,W
Golden eagle	*Aquila chrysaetos*		R	M	R,G,P
Golden-crowned sparrow	*Zonotrichia atricapilla*		W	M	W,R
Great horned owl	*Bubo virginianus*		R	M	R,G,P
Great-tailed grackle	*Quiscalus mexicanus*		R	M	M
Greater roadrunner	*Geococcyx californianus*				
Hairy woodpecker	*Picoides villosus*		R	M	W, R
Hermit thrush	*Catharus guttatus*		W	M	R,G
Hermit warbler	*Dendroica occidentalis*		W	M	P
Hooded oriole	*Icterus cucullatus*		B	M	M
House finch	*Carpodacus mexicanus*	X	R	M	R,G,P
House sparrow	*Passer domesticus*		R	--	D
House wren	*Troglodytes aedon*		R	M	R,G
Hutton's vireo	*Vireo huttoni*		R	M	W,R
Killdeer	*Charadrius vociferus*		R	M	W,G
Lark sparrow	*Chondestes grammacus*		B	M	G
Lawrence's goldfinch	*Carduelis lawrencei*		R	M	R,P
Lazuli bunting	*Passerina amoena*		B	M	R,W,G
Lesser goldfinch	*Carduelis psaltria*		B	M	R,P
Lewis's woodpecker	*Melanerpes lewis*		W	M	P
Lincoln's sparrow	*Melospiza lincolnii*		W	M	W,R
Long-eared owl	*Asio otus*		R	M	R,P,W
MacGillivray's warbler	*Oporonis tolmiei*		B	M	W,R
Merlin	*Falco columbarius*		W	M	R,G,P
Mountain quail	*Oreotyx pictus*		R	M	P
Mourning dove	*Zenaida macroura*	X	R	M	R,G
Nashville warbler	*Vermivora ruficapilla*		B	M	R, W
Northern flicker	*Colaptes auratus*	X	R	M	R,P
Northern mockingbird	*Mimus polyglottos*		R	M	R
Northern pygmy-owl	*Glaucidium gnoma*		R	M	R
Northern rough-winged swallow	*Stelgidopteryx serripennis*		B	M	R,G

Common Name	*Scientific Name*	Observed During Field Surveys*	Residence Status	Protected Status	Habitat
Northern saw-whet owl	*Aegolius acadicus*		R	M	R,G,P
Nuttall's woodpecker	*Picoides nuttallii*		R	M	R,P
Oak titmouse	*Baeolophus inornatus*	X	R	M	R,P
Olive-sided flycatcher	*Contopus cooperi*		B	M	R,P
Orange-crowned warbler	*Vermivora celata*		R	M	G,P
Pacific-slope flycatcher	*Empidonax difficilis*		B	M	R,G,P
Purple finch	*Carpodacus purpureus*		R	M	R,G,P
Red-breasted nuthatch	*Sitta canadensis*		W	M	P
Red-breasted sapsucker	*Sphyrapicus ruber*		B	M	R,P
Red-shouldered hawk	*Buteo lineatus*		R	M	R,G
Red-tailed hawk	*Buteo jamaicensis*	X	R	M	R,G
Rock dove	*Columba livia*		R	--	D
Rock wren	*Salpinctes obsoletus*		R	M	M
Ruby-crowned kinglet	*Regulus calendula*		W	M	P
Rufous-crowned sparrow	*Aimophila ruficeps*		R	M	G
Savannah sparrow	*Passerculus sandwichensis*		R	M	G
Say's phoebe	*Sayornis saya*		R	M	G
Sharp-shinned hawk	*Accipiter striatus*		W	M	P,R,G
Song sparrow	*Melospiza melodia*		R	M	G,W
Spotted towhee	*Pipilo maculatus*		R	M	R,P
Steller's jay	*Cyanocitta stelleri*		R	M	R,G
Swainson's thrush	*Catharus ustulatus*		B	M	P
Townsend's warbler	*Dendroica townsendi*		W	M	P
Tree swallow	*Tachycineta bicolor*		R	M	R,G
Turkey vulture	*Cathartes aura*	X	R	M	R,G,P
Varied thrush	*Ixoreus naevius*		W	M	P
Violet-green swallow	*Tachycineta thalassina*		R	M	R,G
Warbling vireo	*Vireo gilvus*		R	M	W,R
Western bluebird	*Sialia mexicana*	X	R	M	R
Western kingbird	*Tyrannus verticalis*		B	M	G
Western meadowlark	*Sturnella neglecta*		R	M	G
Western screech-owl	*Otus kennicottii*		R	M	R,G,P
Western scrub-jay	*Aphelocoma c. californica*		R	M	R,G,P
Western wood-pewee	*Contopus sordidulus*		B	M	R,P
White throated swift	*Aeronautes saxatalis*		R	M	R,G,P
White-breasted nuthatch	*Sitta carolinensis*		R	M	P
White-crowned sparrow	*Zonotrichia leucophrys*		R	M	R,W,G
White-tailed kite	*Elanus leucurus*		R	M, FP	G,P
Wild turkey	*Meleagris gallopavo*		R	--	P
Wilson's warbler	*Wilsonia pusilla*		B	M	W,R
Wrentit	*Chamaea fasciata*		R	--	R
Yellow-bellied sapsucker	*Sphyrapicus varius*		R	M	R, W
Yellow-billed magpie	*Pica nuttalli*		R	M	W,G
Yellow-rumped warbler	*Dendroica coronata*		B	M	G,P
Mammals					
Pallid bat	*Antrozous pallidus*		R	CSC	M
Ringtail	*Bassariscus astutus*		R	FP	R
Domestic dog	*Canis familiaris*		R	--	D
Coyote	*Canis latrans*		R	--	M
California pocket mouse	*Chaetodipus californicus*		R	--	M

Common Name	*Scientific Name*	Observed During Field Surveys*	Residence Status	Protected Status	Habitat
Townsend's Big-eared Bat	*Corynorhinus townsendii*		R	CSC	G, M
Virginia opossum	*Didelphis virginiana*		R	--	R,P
Big brown bat	*Episticus fuscus*		R	--	M
Common Porcupine	*Erethizon dorsatum*		R		G, M
Domestic cat	*Felis catus*		R	--	M
Mountain lion	*Felis concolor*		R	--	R,P
Red bat	*Lasiurus borealis*		R	--	M
Hoary bat	*Lasiurus cinereus*		R	--	M
Western yellow bat	*Lasiurus xanthinus*		R	--	M
Black-tailed jackrabbit	*Lepus californicus*		R	--	P,G
Bobcat	*Lynx rufus*		R	--	R
Striped skunk	*Mephitis mephitis*	X	R	--	R,G
California vole	*Microtus californicus*		R	--	R,G,W
House mouse	*Mus musculus*		R	--	D
Long-tailed weasel	*Mustela frenata*		R	--	M
California myotis	*Myotis californicus*		R	--	P
Western small-footed myotis	*Myotis ciliolabrum*		R	--	M
Long-eared myotis bat	*Myotis evotis*		R	--	R,P
Fringed myotis	*Myotis thysanodes*		R	--	P
Long-legged myotis	*Myotis volans*		R	--	P
Yuma myotis	*Myotis yumanensis*		R	--	P, G, R
San Diego desert woodrat	*Neotoma lepida intermedia*		R	CSC	R,P
Dusky footed woodrat	*Neotoma fuscipes*		R		M
Mule deer	*Odocoileus hemionus*		R	--	R,G
White-eared pocket mouse	*Perognathus alticolus*		R	--	M
San Joaquin pocket mouse	*Perognathus inornatus inornatus*		R	--	M
Little pocket mouse	*Perognathus longimembris*		R	--	M
Pacific pocket mouse	*Perognathus longimembris pacificus*		R	--	M
Brush mouse	*Peromyscus boylii*		R	--	G
California mouse	*Peromyscus californicus*		R	--	G
Deer mouse	*Peromyscus maniculatus*		R	--	M
Pinyon Mouse	*Peromyscus truei*		R	--	M
Western pipistrelle	*Pipestrellus hesperus*		R	--	M
Townsend's big-eared bat	*Plecotus townsendii*		R	CSC	M
Raccoon	*Procyon lotor*		R	--	M
Mountain Lion	*Puma concolor*		R		P, R, B
Norway rat	*Rattus norvegicus*		R	--	D
Black rat	*Rattus rattus*		R	--	M
Western harvest mouse	*Reithrodontomys megalotis*		R	--	G
Broad-footed Mole	*Scapanus latimanus*		R		M
Western gray squirrel	*Sciurus griseus*		R	--	R,P
Ornate Shrew	*Sorex ornatus*		R		M
California ground squirrel	*Spermophilus beecheyi*	X	R	--	G
Western spotted skunk	*Spilogale gracilis*		R	--	R
Wild pig	*Sus scrofa*		R	--	M
Audubon's cottontail	*Sylvilagus audubonii*	X	R		M
Brush rabbit	*Sylvilagus bachmani*		R	--	R
Brazilian free-tailed bat	*Tadarida brasiliensis*		R	--	R,P,G

Common Name	*Scientific Name*	Observed During Field Surveys*	Residence Status	Protected Status	Habitat
American badger	*Taxidea taxus*	X	R	SSC	M
Botta's pocket gopher	*Thomomys bottae*	X	R	--	R,G,P
Gray fox	*Urocyon cinereoargenteus*		R	--	M
Black bear	*Ursus americanus*		R	--	R,P,G

*Observed and/or signs (e.g., scat, tracks, vocalization, etc.) detected during field surveys conducted by Padre

Residence Status
R = Permanent resident
W- Winter resident
B - Summer resident

Protected Status
FE – Federal endangered species
FT -- Federal threatened species
FC – Federal candidate species
M – Migratory Bird Treaty Act
SE – State endangered species
ST – State threatened species
CSC – California Species of Special Concern
FP – California Fully Protected Species

Typical Habitat
A – Aquatic
D – Developed areas
G – Grassland
M – Multiple habitats
P – Woodland
R – Riparian
W - Wetland