

LISTS OF TABLES AND FIGURES

TABLES

1. Estimates to QCB Habitat over the life of the Plan.

FIGURES

1. Plan Area
2. Critical Habitat
3. Mapped Areas
4. General Protocols for Operations and Maintenance Activities Flowchart
5. General Protocols for Operations and Maintenance Activities for Emergency
Periodic Non-Deferrable Activities Flowchart
6. Protocols for New Construction Flowchart

1.0 INTRODUCTION

The San Diego Gas and Electric Company (SDG&E) has prepared this Habitat Conservation Plan (Plan or HCP) to minimize and mitigate the effects of its activities on the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*)(QCB or Quino), and to obtain incidental take authorization for QCB. The Plan Area includes San Diego County west of the desert, the portion of Orange County within the existing SDG&E service territory, and the SDG&E Moreno Compressor Station in Riverside County, as depicted in Figure 1. The Plan Area is the same as the Plan Area for SDG&E's 1995 Subregional Natural Community Conservation Plan (Subregional Plan), which addresses 110 species, but not QCB. The Plan qualifies as a "Low-Effect" HCP as provided by the Department of the Interior Manual (516 DM 2 Appendix 1, and 516 DM 6 Appendix 1) and as defined in the Habitat Conservation Planning Handbook (November 1996).

1.1 Purpose and Need

SDG&E is a California public utility providing natural gas, electricity, and other services to customers in its service and operational territory, including San Diego County and portions of Orange and Riverside Counties. SDG&E's ability to provide these services depends on the development, installation, construction, maintenance, operation, and repair of an extensive and evolving array of public utility Facilities located throughout its service and operational territory. SDG&E is seeking a permit for incidental take of QCB in the course of otherwise lawful activities listed above. Such authorization is necessary because the activities may result in incidental take of QCB through the removal or modification of QCB habitat, despite the avoidance and minimization measures incorporated into SDG&E operational protocols. Incidental take authorization for the QCB would ensure that SDG&E could conduct its critical activities while conserving the species.

1.2 Regulatory Requirements

The Endangered Species Act of 1973, 16 U.S.C. 1531 *et seq.*, provides for the protection and conservation of fish, wildlife, and plants that have been federally listed as threatened or endangered. Activities otherwise prohibited by section 9 of the Act and subject to the civil and criminal enforcement provisions of section 11 of the Act may be authorized for Federal entities pursuant to the requirements of section 7 of the Act and for other persons pursuant to section 10 of the Act. Section 10(a)(2)(A) of the Act states that no permit may be issued authorizing any taking referred to in section 10(a)(1)(B) unless the applicant submits an HCP that specifies:

1. The impact which will likely result from such taking;
2. What steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;

3. What alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and
4. Such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan.

All HCPs must meet the following criteria in order to receive a permit:

1. The taking will be incidental;
2. The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking;
3. The applicant will ensure that adequate funding for the plan will be provided;
4. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and
5. The measures, if any, required under subparagraph (A)(iv) will be met.

The Service has determined this document to be a "Low-Effect" HCP. A Low-Effect HCP is one "involving: (1) minor or negligible effects on federally-listed, proposed or candidate species and their habitats ... and (2) minor or negligible effects on other environmental values or resources. 'Low-Effect' incidental take permits are those permits that, despite their authorization of some small level of incidental take, individually or cumulatively have a minor or negligible effect on species covered ..." (HCP Handbook November 1996).

This Plan has been prepared in consultation with the Service to fulfill the requirements of section 10(1)(2)(A) of the Act as part of section 10(a)(1)(B) take permit being sought for the proposed activities and locations listed above.

1.3 Permit Applicant

San Diego Gas and Electric Company is the applicant for the incidental take permit.

1.4 Permit Duration

The duration of the section 10(a)(1)(B) permit for this project is fifty (50) years from the date of issuance. The permit allows SDG&E or their successors to incidentally take, either directly or indirectly, QCB within the geographical boundaries identified in the Plan (Figure 1) over the 50-year time period. The permit may only be transferred consistent with 50 C.F.R. § 13.25. After expiration of the permit, any "take" within said geographic boundaries will require re-authorization.

1.5 Project Description

This Plan addresses potential impacts to QCB from the use, maintenance, and repair of existing gas and electric Facilities and, with limited exception, includes typical expansions to those systems. SDG&E constructs new, expanded, and modified utility infrastructure on an ongoing basis, and conducts maintenance and repair activities on existing Facilities to maintain uniform, adequate, safe, and reliable electric and gas service. SDG&E activities other than maintenance of existing access roads include, without limitation, all current and future actions arising out of, or in any way connected with, the siting (including any site assessment, surveying, testing, or planning), design, installation, construction, use, maintenance, operation, repair and removal of Facilities within SDG&E's service territory. Some examples of these activities are described below:

Insulator Washing

- Insulator washing is essential to maintain clean insulators and prevent service outages. It involves using a high-pressure hose within 60 feet of the facility and spraying water at the insulator.

Pole Insetting

- Insetting poles places poles in-line between existing structures to provide additional strength to support new or heavier conductors, as well as achieving necessary wire clearances. Insetting is an effective method of fully utilizing existing electric line structures and alignments which often defers the need for new structures, lines and alignments.

Pole Anchor, Guy Wire, and Stub Replacement

- Pole anchors, guy wires, and stubs are used to support poles. Generally one end of a guy wire attaches to the upper portion of a wood pole and the other end attaches to the top of a stub or to an anchor buried in the ground.

Fire Control

- Fire control areas are required from the outer circumference of any pole or tower, are needed for construction, and are required by law to be maintained for fire protection after construction. Areas cleared of vegetation are also required around gas line valve complexes and cathodic test stations for fire protection.

Pole and Tower Replacement

- Poles or towers may support a variety of equipment such as conductors, insulators, switches, transformers, lightning arresters, line junctions, and other electrical equipment. This type of equipment may need to be added, repaired, or replaced in order to maintain uniform, safe, adequate, and reliable service. Due to damage, changes in conductor size, or the like, an existing transmission structure may be removed or replaced with a larger/stronger structure at the same or nearby location.

In addition to the activities described above, the permit addresses incidental take within the Plan Area associated with limited expansion of the electric generation capacity or gas transmission systems including: (1) new electrical transmission line facilities which do not extend more than 30 miles outside the Plan Area; (2) electrical interconnections with other utilities that do not project more than 30 miles outside the Plan Area; (3) new gas transmission line facilities not exceeding 30 inches in diameter and 20 miles in length; (4) new substations and regulator stations with total habitat impacts under 20 acres; and new gas compressor stations with total habitat impacts under 10 acres (however, new Facilities which impact more than 1 acre of QCB habitat require additional Service review, see section 3.2.3).

Up to 33 acres of QCB habitat may be lost through implementation of the Plan over the 50-year term of the permit. SDG&E estimates up to 15 of the 33 acres of potential impacts to QCB habitat will result from road grading, and that other activities (e.g., new construction, pole brushing, and pole in-setting) will account for the remaining 18 acres of potential impact. These impacts would occur in unoccupied QCB habitat, occupied QCB habitat, and designated QCB critical habitat as outlined in Section 2.3 of this Plan.

2.0 QUINO CHECKERSPOT BUTTERFLY

2.1 Species Account

The Service listed the QCB as an endangered species on January 16, 1997. This butterfly is a member of the brush-footed family (Nymphalidae) and the subfamily Melitaeinae (checkerspots and fritillaries). The QCB is one of 12 subspecies of the editha checkerspot and was formerly known as *Euphydryas editha wrightii*. QCB are known from southwestern California and northwestern Baja California, Mexico (Mattoni *et al.* 1997). The QCB differs in physical appearance from other subspecies of *E. editha* in size, wing coloration, and larval and pupal characteristics (Mattoni *et al.* 1997).

The QCB use a variety of sparsely vegetated habitats including open coastal sage scrub and chaparral, vernal pool complexes, native and non-native grasslands, remnant forblands, desert scrub, and desert pinyon-juniper woodland. These vegetation types may

support primary QCB larval host plants as well as a variety of adult nectar resources. Densely vegetated areas are not known to support QCB (Mattoni *et al.* 1997). Habitat patch suitability is determined primarily by larval host plant density, topographic diversity, nectar resources availability, and climatic conditions (USFWS 2003).

Larval host plants include dot-seed plantain (*Plantago erecta*), white snapdragon (*Antirrhinum coulterianum*), wooly plantain (*Plantago patagonica*), and thread-leaved bird's beak (*Cordylanthus rigidus*). These primary host plants may also serve as secondary hosts. Purple owl's clover (*Castilleja exserta*) is known to be a secondary larval host and may also serve as a primary QCB Host Plant. There is a possibility that *Plantago bigelovii* and *Plantago insularis* could also serve as larval host plants. While the use patterns of primary and secondary larval host plants are not fully understood, there is evidence that both may be necessary for the survival of QCB larvae (USFWS 2003). The QCB Host Plants are usually most abundant in areas of cryptobiotic soil crusts and clay soils. The QCB larvae, particularly in the early instars, have a very limited capacity for dispersion. Therefore, high local host plant density is necessary for high larval survival rates (USFWS 2003).

The QCB uses a much wider range of plant species for adult nectar feeding than for larval foliage feeding. These nectar sources are known to include lomatium (*Lomatium spp.*), goldfields (*Lasthenia spp.*), popcorn flowers (*Plagybothrys and Cryptantha spp.*), gilia (*Gilia spp.*), ground pink (*Linanthus dianthiflorus*), chia (*Salvia columbariae*), annual lotus (*Lotus spp.*), onion (*Allium spp.*), yerba santa (*Eriodictyon spp.*), and California buckwheat (*Eriogonum fasciculatum*) (67 FR 18359, Mattoni *et al.* 1997).

Life History

The life cycle of QCB includes four distinct life stages: egg, larva, pupa, and adult. There is typically one generation of adults per year, with a 4 to 8 week adult flight period beginning between late February and May, depending on weather conditions (67 FR 18356). Adult emergence from pupae is staggered, with each adult butterfly living approximately 10 to 14 days.

After hatching from eggs, pre-diapause larvae normally consume the plant on which they hatch and then migrate in search of additional plants. Larval QCB activity periods usually range from October through June. During this period, movement of QCB larvae can range up to ten meters from the QCB Host Plant.

Sufficient rainfall is necessary to break diapause. This normally occurs during November or December. The time between diapause termination and pupation can range from two weeks to three months. Adults emerge from pupae after approximately ten days. Adult QCB spend time searching for mates, basking in the sun thermoregulating, feeding on nectar, defending territories, and, in the case of females, searching for oviposition sites and depositing eggs. The QCB egg clusters typically contain 20 to 150 eggs.

Male QCB, and to a lesser extent females, are frequently observed on hilltops and ridgelines. Hilltops may represent centers of QCB population density in some areas. Because adult QCB are frequently observed on hilltops, even in the absence of nearby larval host plants, hilltops and ridgelines may be crucial for population survival.

The flight period for the adult QCB usually ranges from late February through May, although the timing and duration of the flight period can vary considerably from year to year depending on rainfall and temperature patterns. Between 1910 and 1985, there were four recorded instances of QCB flight periods occurring from October to December in response to significantly greater than normal rainfall during September and October (Mattoni *et al.* 1997).

Population Dynamics

Most QCB populations are part of a larger metapopulation structure. Isolated habitat patches are not sufficient to ensure the long-term persistence of butterfly metapopulations. Persistence of metapopulations for longer periods of time results from interaction among sets of local habitat patch populations at larger geographic scales. The long-term persistence of butterfly species with metapopulation dynamics depends on the maintenance of temporarily unoccupied habitat patches and recolonization events that link habitat patches within metapopulations. Maintenance of landscape connectivity is essential in order to maintain metapopulation resilience (67 FR 18357). Rare population outbreak events are thought to play a crucial role in QCB metapopulation resilience (Murphy and White 1984).

Accounts of large population density fluctuations at historic QCB population sites indicate that the QCB is a climate-sensitive "eruptive" species that semi-regularly increases its adult densities by orders of magnitude over a period of 5 to 10 years, then drops back to much lower densities over a similar period of time.

Dispersal

Although QCB populations tend toward low population movements, it is believed that some individuals of this species may disperse long distances in drier years, and that rare population explosions such as the one observed in 1977 may allow dispersing individuals to recolonize areas where the butterfly was eliminated by fire or other disturbances (Ehrlich *et al.* 1975, as cited in Brown 1991). Plant resources shift over time, and QCB populations have evolved to respond to shifting habitat patch suitability in space and time (67 FR 18359).

2.2 Status of the Species

The QCB historically occurred from Los Angeles County south through western Riverside, western San Bernardino, Orange, and San Diego Counties. In Baja California, QCB were known to occur from El Rosario to the northern portion of the State of Baja California Norte (USFWS, 2003). The QCB's distribution included the westernmost slopes of the Santa Monica Mountains, the Los Angeles Plain and Transverse Ranges to the edge of the upper Anza-Borrego desert. Observations of QCB have been recorded across a wide elevation range, from approximately 153 meters to over 1,533 meters. Historical localities in San Diego County include Lake Hodges, Rancho Santa Fe, San Miguel Mountain, El Cajon, Dehesa, Dulzura, Dictionary Hill, Chula Vista, Otay Lakes, Kearny Mesa, Proctor Valley, and Brown Field (Brown 1991).

The QCB was historically a common butterfly within its range. Populations declined as a result of agriculture, grazing, and urbanization. By the late 1980s, the QCB was believed to be extinct. In 1990, the butterfly was rediscovered in southwest Riverside County. The QCB's potential current distribution is defined primarily by the distribution of its primary larval host plants. In California, the QCB is known to occur in several locations in southwestern Riverside County around Temecula, Murrieta, Vail Lake, Aguanga, and Anza. The QCB is known to occur near San Vicente Reservoir, Alpine, Otay Mesa, Otay Lakes, Otay Mountain, Marron Valley, Sweetwater Reservoir, Tecate, and Jacumba in southern San Diego County, and at Oak Grove in northern San Diego County (Mattoni *et al.* 1997, Ballmer *et al.* 1998, USFWS 2000, USFWS 2003). QCB have also recently been detected in the Campo area of San Diego County.

Threats

The QCB is threatened primarily by urban and agricultural development, non-native plant species invasion, off-road vehicle use, grazing, and fire management. Urban development poses the greatest threat and exacerbates all other threats (67 FR 18359). Both the larval and adult stages have specific habitat requirements that have been significantly impacted by development, invasive non-native vegetation, overgrazing, poorly planned fire management practices, extreme weather, and off-road vehicles (62 FR 2313).

Conservation Needs

The QCB was assigned a recovery priority of 6C, based on designation as a subspecies with a high degree of threat, a moderate to low potential for recovery, and existing conflict between the species' conservation and development. Identified conservation needs include protecting and managing habitat supporting known current population distributions and landscape connectivity between them, maintaining or creating resilient populations, and conducting research necessary to refine recovery criteria.

Critical Habitat

A total of approximately 171,605 acres in Riverside and San Diego Counties, California, are designated as critical habitat for the QCB (67 FR 18356). See Figure 2. The primary constituent elements for QCB designated critical habitat consist of:

- Grassland and open canopy woody plant communities, such as coastal sage scrub, open red shank, chaparral, and open juniper woodland with host plants or nectar plants.
- Undeveloped areas containing grassland or open canopy woody plant communities, within and between habitat patches, utilized for QCB mating, basking, and movement
- Prominent topographic features, such as hills and or ridges, with an open woody or herbaceous canopy at the top.

Lands designated as critical habitat have been divided into four critical habitat units, the Lake Mathews Unit, the Southwest Riverside Unit, the Otay Unit, and the Jacumba Unit. The Lake Mathews Unit consists of 14,250 acres in the northwestern portion of Riverside County, the Southwest Riverside Unit consists of 85,950 acres in southwestern Riverside County and northern San Diego County, the Otay Unit consists of approximately 64,430 acres in the southwestern portion of San Diego County, and the Jacumba Unit consists of 9,970 acres of land in southeastern San Diego County south of Interstate 8 in the vicinity of the town of Jacumba.

2.3 Assessment of Incidental Take

Up to 33 acres of QCB habitat may be impacted through implementation of the Plan over the 50-year term of the permit. However, the actual impact from covered activities is anticipated to be no more than 16.5 acres of Suitable or Occupied QCB habitat. Because SDG&E may presume presence of QCB instead of conducting surveys in some instances, the 16.5-acre estimate has been doubled to 33.0 acres to ensure a conservative estimate of potential impacts, and to provide greater flexibility under the Plan for covered activities. SDG&E will assess the actual acreage of impacts at the time of the activity, but an estimate of potential impacts to QCB habitat over the life of the Plan is described below and summarized in Table 1. Most potential impacts to QCB are expected to result from access road maintenance and from maintenance or repair of existing Facilities. Some additional impacts could occur, however, from construction of new Facilities.

2.3.1 Access Road Maintenance

SDG&E plans to grade its existing access roads at least every two years. Historically, the access roads are approximately 12 feet wide. During grading, dirt berms may be created that typically extend two (2) feet on either side of the road, but can be wider on slope banks. Typically, for each linear foot of road that is graded, 12 square feet of existing dirt road and 4 square feet of berm may be impacted, for a total of 16 square feet, with the exception of slope banks, which can increase the total somewhat.

SDG&E anticipates that it will conduct protocol-level QCB surveys for road maintenance projects. Based on recent experience with road maintenance (i.e., grading) for the Southwest Power Link project, in which surveys revealed only 2.18 acres of Suitable and Occupied Habitat on 33 miles of access roads that run through QCB Mapped Areas, it is anticipated that road maintenance over the life of the Plan will impact approximately 15.0 acres of QCB habitat. Because it is anticipated that roads will be maintained (i.e., graded) at least every two years, it is expected that QCB Host Plants will not recolonize the road beds during the life of the Plan. Impacts to QCB habitat as a result of road maintenance are therefore considered permanent impacts, provided the roads are maintained at least every two years. If road maintenance takes place more than two years after initial grading, impacts to QCB habitat will be considered as "new impacts" and will be mitigated accordingly.

2.3.2 Maintenance or Repair of Existing Facilities

Covered activities unrelated to access road maintenance have the potential to impact approximately 9.0 acres of QCB habitat over the life of the Plan. Based on the type of covered activities, SDG&E anticipates that approximately 8.5 acres of the impact would be temporary and that 0.5 acres of impact would be permanent.

Electric Transmission Lines

SDG&E expects approximately 1.5 acres of disturbance to Suitable QCB Habitat as a result of 2.8 miles of new 69kV transmission line. This will include 1.8 miles of new right-of-way. Approximately one mile will be new line in existing SDG&E rights-of-way. The line in existing rights-of-way will use the existing access road, but will cause 0.5 acre of disturbance due to spur roads to new poles, pulling sites and clearing around new poles. The 1.8 miles of new line in new rights-of-way will potentially disturb QCB habitat due mostly to the access road. The access road could account for 0.5 acre of impacts. Another 0.5 acre of disturbance will potentially result from clearing around poles and pulling sites. Of the 1.5 acres of impact, 1.0 acre will be permanent.

Electric Distribution

SDG&E has no present plan to build new electric distribution lines through QCB Mapped Areas, but it is possible that new distribution lines could be needed in the Mapped Areas at some time over the duration of the Plan. Normally, SDG&E constructs distribution lines in street rights-of-way. Occasionally some multiple customer service extension or an extension to a remote facility such as a pump station, communication site, military installation, etc. could require a cross-country distribution extension. For purposes of this Plan, 1.5 miles of cross-country distribution has been anticipated. Distribution impacts are generally temporary. Distribution access roads are typically irregularly maintained and only certain poles, such as transformer poles or those with switches or equipment capable of starting fires, would be brushed. However, under this Plan, SDG&E

will maintain access roads to distribution facilities within QCB Mapped Areas more regularly. Potential impacts associated with distribution facilities could be approximately 0.5 acre.

Transmission Reconductoring & Repairs and Maintenance

Limited transmission reconductoring is planned in QCB Mapped Areas within the next 5 years, but more reconductoring can be expected over the life of the Plan. Repair and maintenance activities will be continuous. Impacts from these activities are not anticipated to exceed 6 acres in aggregate. Most of these impacts would be temporary in nature.

New Gas Transmission and Gas Line Repair

SDG&E recently completed two major gas transmission projects. No new gas projects that would cross Mapped Areas are anticipated for the remaining life of the Plan. Because the gas lines are new and have a life expectancy of 100 years, SDG&E does not anticipate any major repairs during the remaining life of the Plan. Some erosion repair may be needed, from time to time. Such efforts are not expected to impact more than 1 acre of QCB habitat. Most of these impacts would be temporary in nature.

**TABLE 1
ESTIMATED IMPACTS TO QCB HABITAT OVER THE LIFE OF THE PLAN**

ACTIVITY	TEMPORARY IMPACT IN ACRES	PERMANENT IMPACT IN ACRES
Access Road Maintenance		7.5
Electric Transmission Lines		
1.0 mi. new 69kv transmission line in existing ROW, including spur roads, pulling sites, clearing around poles in existing ROW	0.5	
1.8 mi. new 69kv transmission line in new ROW; mostly access roads in new ROW		0.5
Pulling sites, clearing around poles in new ROW	0.5	
Electric Distribution	0.5	
Transmission Reconductoring/Repairs & Maintenance		
Repair and maintenance activities	6	
New Gas Transmission & Gas Line Repair		
Possible erosion repair	1	
TOTAL	8.5	8.0

By impacting QCB habitat, the covered activities may result in adverse effects to individual QCB eggs, larvae, diapausing larvae, or pupae if present at the time of the habitat disturbance. Impacts to the more mobile adult QCB are unlikely.

Based on an examination of QCB Mapped Areas and SDG&E Facilities within the Plan Area, it is expected that most of the impacts to QCB from the covered activities would occur in southern San Diego County, in the Southeast and Southwest Recovery Habitat Units. Portions of this area are also located in QCB critical habitat, in the Otay and Jacumba Critical Habitat Units (See Figure 3). Precise estimates of potential impacts to critical habitat are not possible, but to be conservative, it is assumed that up to 15 acres of critical habitat in the Otay unit and 15 acres in the Jacumba unit could be impacted by covered activities.

The impacts to QCB from covered activities under the Plan are expected to be insignificant because the Plan prioritizes the avoidance and minimization of impacts, and unavoidable impacts from covered activities would generally be very small. The Plan further provides offsetting mitigation for any unavoidable impacts, including situations for which mitigation is not required under the Act (e.g., mitigation for suitable but unoccupied habitat). Additionally, the covered activities are spread over a broad natural landscape, which reduces the significance of potential impacts on natural areas. The potential impacts of operation and maintenance activities are also spread over time, which has the potential to limit population-level effects and to allow opportunity for habitat re-establishment. This Plan also provides for mitigation for temporary impacts to QCB habitat even though SDG&E must conduct in-place restoration of temporary impacts consistent with their existing 1995 Subarea Plan.

3.0 HABITAT CONSERVATION PLAN

3.1 Purpose and Goals of the HCP

SDG&E's Low-Effect HCP addresses adverse impacts to QCB from SDG&E operations and maintenance activities, including construction of new Facilities. This Plan has been prepared to avoid and minimize impacts to QCB associated with covered activities within the Plan area. The Plan will mitigate for unavoidable impacts primarily through the establishment of the Quino Checkerspot Butterfly Mitigation Fund with the San Diego Foundation, although other QCB mitigation options are possible (see section 3.3). Such funds will be used to support the recovery of the QCB through purchase and/or management of high quality QCB habitat or through other actions.

3.2 Actions to Minimize Impacts

The following operational protocols are proposed by SDG&E to avoid and minimize impacts to QCB from SDG&E activities occurring in potential QCB habitat, also referred

to in this Plan as "Mapped Areas" (See Figure 3). The Service will update the Mapped Areas annually and provide the information to SDG&E. Potential QCB habitat was mapped during the development of the Plan using the Quino Recovery Plan and data collected from 1990 through 2005. The QCB protocols listed below are designed to work in concert with, and supplement, the existing protocols that have been incorporated into SDG&E activities as a result of their existing 1995 Subregional Plan that covers 110 species but not QCB. The protocols established by the 1995 Subregional plan will be followed for QCB along with the protocols below in order to provide additional minimization of impacts to the species. Should the 1995 Subregional Plan become ineffective (i.e., is no longer being implemented), the protocols therein will still be implemented whenever a covered activity takes place in QCB habitat. The existing 1995 Subregional Plan protocols are set forth in this Plan as Appendix A.

Protocol surveys, as prescribed below, will be considered valid for a period of two years.

3.2.1 General Protocols for Operations and Maintenance Activities (Figure 4)

1. A pre-activity survey will be conducted by a qualified biologist or botanist to identify Suitable QCB Habitat whenever an activity occurs within a Mapped Area. The pre-activity survey can be conducted at any time of the year, whether or not it is within the QCB activity period. The results of these surveys will be reported to the Service through the pre-activity reporting process established in the 1995 Subregional Plan.
2. In areas where no Suitable QCB Habitat is found during the pre-activity survey, grading may occur at any time consistent with the 1995 Subregional Plan and no mitigation will be required for the QCB.
3. If Suitable QCB Habitat is present in the Work Area, the project will be redesigned to avoid all impacts to Suitable QCB Habitat, if feasible. If impacts are avoided, then grading may occur and no QCB mitigation will be required. If impacts cannot be avoided, one of the following will occur:
 - a) If timing of the project will allow, a protocol-level adult flight season survey will be conducted by a Service-permitted biologist within the Suitable QCB Habitat to determine whether or not the Work Area is occupied by QCB. In areas where no QCB are detected, grading and grubbing activities may proceed without further review and impacts to Suitable QCB Habitat will be mitigated at a 1:1 ratio. If QCB are detected in the project Work

Area, the project will be redesigned to avoid impacts to QCB, if feasible. If project redesign is not feasible or will not avoid all impacts, unavoidable impacts to Occupied QCB Habitat will be mitigated at a 2:1 ratio, and impacts to Suitable QCB Habitat will be mitigated at 1:1;

- b) If the timing of the project will not allow for adult flight season surveys to determine the presence or absence of QCB in the Work Area, it will be assumed that the identified Suitable QCB Habitat is occupied. If project redesign is not feasible or will not avoid all impacts, unavoidable impacts to the assumed Occupied QCB Habitat will be mitigated at a 2:1 ratio
4. SDG&E plans to regularly regrade its transmission and gas line access roads at least every two years. If the roads are maintained at least once every two years, then no additional mitigation will be required for ongoing road maintenance. If the roads are not maintained at least every two years, however, additional mitigation may be required, depending on whether QCB habitat has become established on the roads. If more than two years pass without any vegetation clearing, a survey and appropriate mitigation as determined by the Plan's operational protocols will be required.

3.2.2 General Protocols for Operations and Maintenance Activities for Emergency Periodic Non-Deferrable Activities (Figure 5)

1. No pre-activity survey will be conducted and no QCB adult survey will be conducted. SDG&E may take action immediately, but must contact the Service within 24 hours after undertaking the activity to provide information on the location and emergency nature of the activity.
2. Unavoidable impacts to Suitable QCB Habitat within Mapped Areas will be mitigated at a 2:1 ratio.

3.2.3 Protocols for New Construction (Figure 6)

1. A pre-activity survey will be conducted by a qualified biologist or botanist to identify Suitable QCB Habitat. The pre-activity survey can be conducted at any time of the year, whether or not it is within the QCB activity period. The results of these surveys will be reported to the Service through the pre-project reporting process established in SDG&E's 1995 Subregional Plan. If Suitable QCB

Habitat is identified during the survey, the following will occur to the extent feasible:

- a) Site the new rights-of-way, access roads and/or Facilities to avoid Suitable QCB Habitat.
 - b) Place new poles and towers so that construction impacts to Suitable QCB Habitat will be avoided or minimized.
 - c) Span Suitable QCB Habitat when the intersection of new rights-of-way and habitat cannot be avoided.
 - d) Avoid trenching through Suitable QCB Habitat.
2. If the above siting and design methods for new construction are successful in avoiding impacts to Suitable QCB Habitat, then grading may occur at any time of the year, consistent with the 1995 Subregional Plan, and no mitigation for the QCB will be required.
 3. In areas where no Suitable QCB Habitat is found during the pre-activity survey, grading may occur at any time, consistent with the 1995 Subregional Plan, and no QCB mitigation will be required.
 4. If Suitable QCB Habitat is present in the Work Area and the new Facility cannot be sited or designed to avoid the Suitable QCB Habitat, then one of the following will occur:
 - a) A protocol-level adult flight season survey will be conducted by a Service-permitted biologist within the Suitable QCB Habitat areas to determine whether or not the site is occupied by QCB. In areas where there is no QCB detected, grading and grubbing activities may proceed without further review and the Suitable QCB Habitat will be mitigated at a 1:1 ratio;
 - b) If QCB are detected in the project Work Area, the Occupied QCB Habitat will be mitigated for at a 2:1 ratio. Suitable QCB Habitat will be mitigated at 1:1; or
 - c) If the timing of the project will not allow for adult flight season surveys to determine the presence or absence of QCB, presence of QCB will be assumed and mitigation will occur at a 2:1 ratio for impacts to all Suitable QCB Habitat.

- d) If impacts to Occupied QCB Habitat (as determined by surveys or assumed) is greater than one acre, SDG&E must confer with the Service to ensure that the activity's impact will not cause the extirpation of a QCB population.

3.3 Actions to Mitigate Impacts

If an SDG&E activity is within a QCB Mapped Area, SDG&E has the option of either considering the entire area as Suitable QCB Habitat, or SDG&E may conduct additional habitat assessments to determine whether the impact area actually includes Suitable QCB Habitat (as described in the Operational Protocols above, and in the Flowcharts depicted in Figures 4, 5, and 6). This allows SDG&E to accurately quantify its impact to Suitable QCB Habitat depending on time and resources. SDG&E will mitigate for all temporary and permanent impacts to Suitable and Occupied QCB Habitat. If SDG&E chooses, protocol-level adult QCB surveys may be conducted to determine if Suitable QCB Habitat areas are actually occupied by QCB. If protocol level surveys are conducted, then mitigation at a 2:1 ratio will occur for Occupied Habitat. Impacts to Suitable QCB Habitat will be mitigated at a 1:1 ratio, and there will be no mitigation for potential QCB habitat that is determined through field assessments not to be suitable.¹

3.3.1 Mitigation for Future Impacts

SDG&E will mitigate for unavoidable impacts through one or more of the following four options: 1) payment into a QCB habitat fund to be managed by the San Diego Foundation; 2) enhancement of a portion of the existing SDG&E mitigation parcel which could support QCB habitat; 3) purchase credits from an established QCB bank should one be approved by the Service at some future date; or 4) create a new mitigation bank. SDG&E may choose which option, or combination of options to use to mitigate impacts to QCB, subject to Service approval.

3.3.1.1 Pay into a QCB Habitat Fund to be Managed by the San Diego Foundation

The San Diego Foundation is a non-profit organization established in 1975. SDG&E will irrevocably transfer to the San Diego Foundation a sum of money, in a series of

¹ This QCB Plan is intended to be implemented in concert with the Subregional Plan. However, the Subregional Plan and the QCB Plan are designed as stand-alone Habitat Conservation Plans with separate permit durations and acreage caps. In addition, mitigation requirements for each plan are separate. Where impacts are identified to Suitable or Occupied QCB Habitat as part of the overall impacts arising from an activity, a portion of the mitigation will be specific to the conservation of the QCB. For example, if an activity impacts 10 acres of coastal sage scrub habitat, and a 0.8 acre portion of that impact is considered Occupied QCB Habitat, the following calculation would be used, assuming a 2:1 mitigation ratio. Under the 1995 Subregional Plan, a total of 20 acres of mitigation would be required for impacts to species covered by the Subregional Plan. To account for impacts to the Occupied QCB Habitat, an additional 1.6 (0.8 X 2) acres of QCB mitigation would be required. The total mitigation required under this scenario would be 21.6 acres which includes deduction of 20 acres of credit from the Subregional Plan bank and 1.6 acres of QCB mitigation in accordance with the provisions of this Plan.

payments, which will be used to mitigate for SDG&E impacts to Suitable and Occupied QCB Habitat. This fund will be implemented pursuant to the *Advised Non-Endowment Fund Agreement for the SDG&E Quino Checkerspot Butterfly Mitigation Fund* (QCB Mitigation Fund Agreement) and its associated *Memorandum of Understanding Between the United States Fish and Wildlife Service and San Diego Gas & Electric Company for the SDG&E Quino Checkerspot Butterfly Mitigation Fund* (Appendix B).

3.3.1.2 Deduct Credits from Existing SDG&E Mitigation Bank

At the time the Subregional Plan was approved in 1995, SDG&E contributed funds to purchase 240 acres of high quality habitat to be used as a mitigation bank to offset impacts from SDG&E activities to the 110 covered species identified in the 1995 Subregional Plan (See Figure 4). The Service currently manages the mitigation bank as part of the San Diego National Wildlife Refuge through an endowment fee of \$275/acre, paid by SDG&E, for management of the land in perpetuity as habitat (but not necessarily QCB habitat). After the bank was established, it was determined that portions of the 240-acre parcel could be enhanced and managed for QCB habitat. Therefore, a second mitigation strategy would be the enhancement and in perpetuity management of an unallocated portion of SDG&E's existing 1995 Subregional Plan which would be used to establish a separate QCB bank. Any acreage used to establish a QCB bank within SDG&E's existing mitigation parcel would be subtracted from the remaining 1995 Subregional Plan bank credits (i.e., QCB credits will be tracked separately from multi-species credits and acreage would not be considered part of both banks). Also, allocation of QCB credits would be subject to the development, and subsequent review and approval by the Service, of a QCB Enhancement and Management Plan.

3.3.1.3 Purchase Credits from Established QCB Bank

SDG&E will have the option to purchase credits from an established QCB bank, subject to Service approval, should one be approved by the Service at some future date.

3.3.1.4 Create a SDG&E QCB Mitigation Bank to Offset Impacts to QCB

SDG&E may, at its option, elect to create a mitigation bank of its own to offset impacts to the QCB. Establishment of a QCB mitigation bank by SDG&E would be contingent upon successfully establishing a mitigation banking agreement with the Service. Also, establishment of a QCB mitigation bank would be subject to the development and subsequent review and approval by the Service of an appropriate QCB enhancement and management plan.

3.3.2 Mitigation for Grading of Existing Access Roads

The first time an access road is graded after approval of the Plan, any unavoidable impacts to Suitable or Occupied QCB Habitat will be mitigated in the same manner as for all other future activities. SDG&E plans to regularly regrade its transmission and gas line access roads at least every two years. However, despite this regular grading, small patches of QCB Host Plants may grow back in the roads between regrading operations. QCB Host Plants are known to grow on dirt roads that have been abandoned or are irregularly maintained. If the roads are maintained (i.e., graded) at least once every two years, then no additional mitigation will be required for impacts to QCB from ongoing road maintenance. If the roads are not maintained at least every two years, additional mitigation may be required, depending on whether QCB habitat has become established on the roads. If more than two years pass without any vegetation clearing, a habitat assessment, pre-activity survey, protocol QCB survey, and appropriate mitigation as defined above, may be required. Pre-activity surveys, protocol level surveys, and QCB habitat assessments completed in Mapped Areas will be valid for two years.

3.4 Monitoring and Reporting

Monitoring and Reporting for the QCB will be integrated with the monitoring and reporting conducted for SDG&E's existing Subregional Plan. Reporting will include an annual summary describing the quality and type (i.e., temporary versus permanent) of QCB habitat impacts, by individual project, and will describe the type of mitigation utilized to offset QCB impacts. The annual report, due to the Service November 1 of each year, will also include a summary of mitigation credits available at the beginning of the reporting year, any deductions made throughout the year, and a final determination of credits remaining.

3.5 Funding

The *QCB Mitigation Fund Agreement* establishes the SDG&E Quino Checkerspot Mitigation Fund (Fund) to be used to mitigate adverse impacts to QCB and QCB habitat anticipated under the Plan. For mitigation of unavoidable impacts, SDG&E will ensure that mitigation occurs prior to the impact through advance (pre-impact) payments into this Fund. SDG&E shall make an initial deposit of \$250,000 into the Fund which will be used to create QCB "mitigation credits" prior to the initiation of any activities under this Plan. These mitigation credits will be available to SDG&E to mitigate impacts to QCB habitat anticipated under the Plan. As QCB mitigation credits are used, SDG&E can add mitigation credits by making additional contributions to the Fund. At the time of Plan submittal, each QCB mitigation credit (equating to one acre of QCB habitat) was priced at \$19,000 per credit. Therefore, SDG&E's initial deposit of \$250,000 (less Fund maintenance costs) will establish a balance of approximately 13 acres of QCB mitigation

credits. To adjust for inflation, the value of each QCB mitigation credit shall be reassessed every 5 years by the Fund Advisory Committee as provided for in the QCB Mitigation Fund Agreement (Appendix B). At the discretion of the Fund Advisory Committee, the cost of QCB mitigation credits may be adjusted based on the five year review. SDG&E shall maintain a minimum net positive balance of two acres of QCB mitigation credits in the Fund during the term of the Plan.

4.0 PLAN IMPLEMENTATION

4.1 Changed Circumstances

4.1.1 Changed Circumstances Defined

Changed Circumstances are defined under the Federal "No Surprises" rule as changes in circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by the Applicant and the Service and that can be planned for in the HCP (e.g., the listing of a new species, or a fire or other natural catastrophic event in areas prone to such events).

4.1.2 Changed Circumstances Provided for in this Plan

The Service and SDG&E agree that the Changed Circumstances defined by this Section of the Plan represent all Changed Circumstances to be addressed by SDG&E. These Changed Circumstances reflect changes in circumstances that can reasonably be anticipated to occur.

Each of the defined Changed Circumstances includes an assessment of risk, a description of preventative measures, and a summary of planned responses (measures to be undertaken in the case of Changed Circumstances). Preventative measures are those measures that are or will be undertaken by SDG&E to reduce the potential for occurrence of the Changed Circumstance, and/or that reduce the potential for damage to the habitat resulting from a Changed Circumstance event. Planned responses are the specific responses that will be undertaken in the event of a Changed Circumstance. Planned responses will not include any actions beyond those expressly identified in this section, nor for any event not specifically identified as a Changed Circumstance.

4.1.2.1 The New Listing of Species Not covered by the Plan

Risk Assessment

SDG&E recognizes, as noted in the Service's discussion of its "Habitat Conservation Plan Assurances ('No Surprises') Rule," (63 F.R. 8859; February 23, 1998), that the future listing of a species whose conservation was not provided for in the Plan to a level sufficient to include the species as a Covered Species can be viewed as a Changed Circumstance. In the event that a species which is not a covered species pursuant to this Plan is listed by the Service subsequent to the issuance of the section 10 permit pursuant to this HCP, such listing may be considered a Changed Circumstance.

Preventative Measures

The development and implementation of the operational protocols in the 1995 Subregional Plan and this Plan are intended to act in concert with other surrounding HCPs to preserve habitat sufficient to lessen the likelihood of the future addition of species to the lists of endangered or threatened species under the Act.

Planned Responses

In the event of a new listing of one or more species not covered by this Plan, the Service and SDG&E will identify actions that might cause take, and SDG&E will avoid such actions in the implementation of covered activities until approval of an amendment to the Plan to address the newly listed species, or until such measures are no longer required.

4.1.2.2 Changed Circumstances Applying to an Existing or New SDG&E Mitigation Site

In the event that SDG&E decides to mitigate QCB impacts by using the existing SDG&E Subregional Plan mitigation site at the San Diego National Wildlife Refuge (Refuge) or by creating a new QCB mitigation bank, the following Changed Circumstances provisions would apply to either mitigation site option, but not to other portions of the Plan Area:

- Repetitive Fire
- Severe Drought
- Invasion by Exotic Plant Species

Repetitive Fire

Repetitive fire is defined as a fire that 1) occurs in the same location as a previous fire; 2) occurs between three to ten years after the initial fire; and 3) burns at least 50 percent of the QCB mitigation bank.

Risk Assessment

Because much of the area within the existing Subregional Plan's mitigation site on the Refuge supports highly flammable scrub and grassland, risk of wildfire within this site is high. Based on the history of fire within the Plan Area, fire is sufficiently likely to occur at this site and other potential QCB mitigation bank sites during the life of the Plan to warrant specific measures to address such a change in circumstances, although it is expected that preventative measures, including fire suppression, will be effective at reducing the risk of fire.

Under certain circumstances, the occurrence of fire within potential QCB mitigation sites may adversely affect QCB or its host plants. Repetitive fires create conditions suitable for habitat type conversion from QCB habitat to non-QCB habitat.

The damage that a repetitive wildfire might cause to a mitigation site is difficult to predict because it depends on where the wildfire started, the wind direction and force, atmospheric conditions, and other temporal factors. The severity and temperature of the fire, as well as the habitat affected, would influence the extent of the damage and the appropriate response necessary to prevent habitat type conversion.

Preventative Measures

Because most of SDG&E's activities within the Plan Area occur on land that SDG&E does not own or control, it would be difficult for SDG&E to implement preventative measures to reduce the likelihood of, or harm from fire within the Plan Area, outside of a QCB mitigation site. SDG&E does implement protocols with respect to its maintenance activities, however, that are designed to reduce the risk of fire (e.g., not parking vehicles where catalytic converters can ignite dry vegetation, using shields, protective mats, and other preventive measures during grinding or welding).

Planned Responses

If a repetitive fire occurs, as above, SDG&E will provide funding for the monitoring of the QCB mitigation site to determine whether native plants are resprouting and if non-native weeds are establishing. If monitoring reveals non-native plant invasion or a lack of native sprouting over more than 50% of the burned area, SDG&E would fund appropriate remedial measures, as approved by the Service. Remedial measures may include, but are not limited to: (1) controlling non-native weeds through hand-weeding or other methods; (2) seeding the area with native seed mix, including *Plantago* species;

and/ or (3) allowing the vegetation to grow back without interference. SDG&E will provide a one time contribution of \$15,000 to fund responses to repetitive fire at the mitigation site. This \$15,000 contribution would be in addition to any endowment monies established for "regular" maintenance and monitoring activities associated with the in perpetuity operation of the QCB mitigation site, and in addition to monies addressing other Changed Circumstances in this section.

Severe Drought

For the purpose of defining Changed Circumstances, drought is defined as climatic drought with a duration of no less than three years, as declared by the California State Department of Water Resources and/or the San Diego County Water Authority (CWA).

Risk Assessment

Drought is a cyclical weather phenomenon that is beyond human control. Drought is not uncommon in Southern California, and it is a phenomenon to which local natural habitats and species have of necessity adapted over time. Drought occurs slowly over a multi-year period, differing from the catastrophic events of fire and flood, which occur rapidly and afford little time for preparing for disaster response. Drought conditions may adversely affect QCB habitat. The potential for drought to impact a QCB mitigation site increases with the length of a drought.

Preventative Measures

This Plan does not contain measures to prevent climatic drought because drought is not preventable by human intervention.

Planned Responses

Upon the occurrence of drought as defined by this section, the Service will notify SDG&E that a drought condition exists. Within 60 days of the determination of drought, the Service will assess the condition of the QCB mitigation site to determine if a monitoring program and/or remedial action is warranted.

SDG&E will provide a one-time contribution of \$15,000 to the management endowment established for any SDG&E-created QCB mitigation site. This \$15,000 contribution would be in addition to any endowment monies established for "regular" maintenance and monitoring activities associated with the in perpetuity operation of the QCB mitigation site, and in addition to monies addressing other Changed Circumstances in this section. Based upon the extent and severity of the drought, the QCB mitigation site manager may access the Changed Circumstances endowment (the \$15,000 specifically

set aside for drought response) to fund development and implementation of a monitoring program to monitor natural re-growth within the damaged area for a period of up to two years. The monitoring program will provide for site visits on a regular basis, as determined by the Service as appropriate to the drought situation.

At any time during the monitoring program, should monitoring observations indicate that allowing habitat to re-grow without interference is resulting in an unacceptable increased opportunity for invasion by exotic plant species and/or increased potential for type conversion, as determined by the QCB mitigation site manager, appropriate remedial measures will be instituted using the Changed Circumstances funding.

Invasion by Exotic Plant Species

Changed Circumstances will be deemed to have occurred when invasive weedy species exceed 30% cover on a QCB mitigation site.

Risk Assessment

Although invasive, exotic, or pest species of plants may currently be present within a QCB mitigation site, an unexpected and/or sudden increase in certain invasive species may create the potential for impacts to QCB and its host plants, which could have a significant adverse affect on QCB within the mitigation site. Opportunities for increases in invasive species could occur as urban development expands in areas surrounding a QCB mitigation site.

Preventative Measures

The occurrence of a catastrophic event, including Changed Circumstances, may precipitate sudden increases of invasive species. Any management plan approved by the Service used to establish a QCB mitigation site will include measures to reduce the opportunity for invasion by exotic species.

Planned Responses

Once invasion by exotic plant species has occurred, natural succession likely will not allow for the complete recovery of the QCB mitigation site to a pre-disturbance state. Active restoration will be required to control non-native annuals and reestablish native vegetation. SDG&E will provide a one time contribution of \$15,000 to fund exotic species control and native plant restoration in response to a Changed Circumstance. This \$15,000 contribution would be in addition to any endowment monies established for "regular" maintenance and monitoring activities associated with in perpetuity operation of the QCB mitigation site and monies associated with other Changed Circumstances.

4.1.3 Changed Circumstances Notification

If the Service or SDG&E becomes aware of the existence of a Changed Circumstance, each shall immediately notify the other. Thereafter, through a Changed Circumstance notice delivered to the QCB mitigation site manager, the Service shall identify planned responses identified in this Plan that the Service deems necessary to respond to the Changed Circumstance.

4.1.4 Changed Circumstances Funding

If SDG&E elects to create a QCB mitigation site, and such creation is approved by the Service, SDG&E will create a Changed Circumstances fund through a one-time deposit of \$45,000 into an interest bearing account at such time as the decision to create a QCB mitigation site is approved. The dollar amounts presented in this section reflect anticipated costs as of the implementation date of this Plan. If SDG&E creates a QCB mitigation bank (either at the Refuge or in a new location) more than five years after initial implementation of the Plan, the costs (and commensurate contribution by SDG&E) will be reevaluated and must be approved by the Service. This contribution would be in addition to any endowment monies established for "regular" maintenance and monitoring activities associated with the in perpetuity operation of the QCB mitigation site as outlined in the Service approved monitoring and management plan used to establish the site. SDG&E will make the principal and interest available to the QCB site manager for use at the mitigation site in the event that a Changed Circumstance occurs. Any funds remaining in the account at the end of the term of the Section 10(a) Permit will be refunded to SDG&E.

4.2 Unforeseen Circumstances

4.2.1 No Surprises Rule

Unforeseen Circumstances are discussed in the Department of the Interior's "Habitat Conservation Plan Assurances ('No Surprises') Final Rule," issued February 23, 1998 (Federal Register vol. 63, no.35). Pursuant to the provisions of the "No Surprises Policy," in the event Unforeseen Circumstances affect a species covered by this Plan, the Permittee will not be required to provide additional mitigation which requires the commitment of additional lands, additional compensation, or additional restrictions on lands or other natural resources released for development use. Should Unforeseen Circumstances arise, changes will be limited to modifications within conserved habitat areas, or the Plan's operating conservation program for the covered species, and will maintain the original terms of the Plan to the maximum extent possible. The assurances contained in the "No Surprises" regulation apply only if the permittee has complied with their obligations under the HCP.

4.2.2 Definition of Unforeseen Circumstances and Relevant Factors

For purposes of this Plan "Unforeseen Circumstances" (defined in 50 C.F.R. Section 17.3) means changes in circumstances affecting the QCB or geographic area covered by the Plan that could not reasonably have been anticipated by Plan developers and the Service at the time of the conservation plan's negotiation and development, and that result in a substantial and adverse change in the status of the QCB.

Pursuant to the "No Surprises" rule at 50 C.F.R. 17.22(b)(5)(iii)(C)(2003), the Service has the burden of demonstrating that Unforeseen Circumstances exist, using the best scientific and commercial data available. The findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the QCB. The Service will consider, but not be limited to, the following factors:

- The size of the current range of the QCB;
- The percentage of the QCB range adversely affected by the Plan;
- The percentage of QCB range that has been conserved by the Plan;
- The ecological significance of that portion of the QCB range affected by the Plan;
- The level of knowledge about the QCB and the degree of specificity of the QCB's conservation program under the Plan; and
- Whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the QCB in the wild.

If the Service or SDG&E becomes aware of the existence of a potential Unforeseen Circumstance, each shall immediately notify the other of the existence of a potential Unforeseen Circumstance. Except where there is a substantial threat of imminent, significant adverse impacts to QCB, the Service will provide SDG&E thirty (30) calendar days notice of a proposed written finding of Unforeseen Circumstances prior to adopting the finding, during which time the Service will meet with SDG&E to discuss the proposed finding, to provide SDG&E with an opportunity to submit information to rebut or propose amendments to the proposed finding, and to consider any proposed changes to the operating conservation program. During the time necessary to determine the nature and extent of any additional or modified mitigation, SDG&E will avoid contributing to appreciably reducing the likelihood of the survival and recovery of the QCB. Any

revised provisions arising from Unforeseen Circumstances that could potentially affect energy services will require the Service to collaborate with the California Public Utilities Commission (CPUC) and the Federal Energy Regulatory Commission (FERC) prior to implementation.

4.2.3 Effects of Unforeseen Circumstances on Take Authorization

Notwithstanding the limits on conservation and mitigation measures identified above, the Permit for this Plan may be revoked if the Service determines that continuation of the SDG&E's activities would be inconsistent with this section of the Plan. Nothing in this Plan shall preclude the Service and any Federal, State, local or Tribal government agency, or a private entity, from taking additional actions at their own expense to protect or conserve the QCB. The existence of Unforeseen Circumstances does not authorize SDG&E to violate any Federal, State or local laws, ordinances, regulations or policies, including but not limited to the requirements of the CPUC and FERC.

4.3 Amendment Process

4.3.1 Minor Amendments

The Service or SDG&E may propose minor modifications to the Plan by providing written notice to the other party. Such notice shall include a statement of the reason for the proposed modification and an analysis of its environmental effects, including its effects on operations under the Plan and on QCB. Minor amendments are permissible without amending the underlying section 10(a)(1)(B) permit provided that the Service determines that the changes do not: (1) cause additional take of QCB that was not analyzed in connection with the original HCP; (2) result in operations under the Plan that are significantly different from those analyzed in connection with the original Plan; or (3) have adverse effects on the environment that are new or significantly different from those analyzed in connection with the original Plan.

4.3.2 Formal Amendments

Amendments that do not fit the definition of a minor amendment will be processed as formal amendments in accordance with all applicable legal requirements, including but not limited to the Federal Endangered Species Act, the National Environmental Policy Act, and the Service's permit regulations. Formal permit amendments require written notification to the Service and the same justification and supporting information for compliance with a standard incidental take permit application, including conservation planning requirements and compliance with issuance criteria.

When the Service or SDG&E believes that a formal amendment to the Plan is required, consultation with the Service will include the Service's Carlsbad and California/Nevada Operations Offices. SDG&E will prepare the appropriate documentation for submission to the Service. The documentation will include a description of the event or activity and an assessment of its impacts. The amendment will describe changes to the mitigation measures to ensure that QCB is appropriately protected.

4.4 Permit Renewal or Extension

The permit may be renewed or extended beyond the initial 50-year timeframe with the approval of the Service. The request to renew or extend the permit must be submitted in writing by SDG&E and reference the permit number; certify that all statements and information in the original application are still correct or include a list of changes; and provide specific information concerning what take has occurred under the existing permit and what portions of the project are still to be completed. The request must be made to the Service's Carlsbad Fish and Wildlife Office at least 30 days prior to the permit's expiration date. As long as the request is received within 30 days prior to the permit expiration date, the permit shall remain valid while the renewal or extension is being processed. The renewal or extension may be approved in writing by the Field Supervisor of the Carlsbad Fish and Wildlife Office. Changes to the Plan that would qualify as a formal amendment will be handled in accordance with section 6.2.

4.5 Permit Suspension

In the event of a material violation of this Plan or of the section 10(a) permit for which SDG&E is responsible, and which the Service believes is a valid ground for permit suspension, and except where, in the reasonable opinion of the Service, the alleged violation involved imminent danger to a significant extent to species not covered under the plan, the Service shall provide SDG&E with written notice by certified or registered mail of its proposed suspension of the section 10(a) permit and of the nature and extent of the violation and of any required corrective measures to preserve the proper functioning of the Plan and maintain the take authorization in full force and effect, and of SDG&E's right to object to the proposed suspension. SDG&E shall have forty-five (45) days from the date of the notice of proposed suspension to file written objections, setting forth its response to such notice of suspension and/or to any of the required corrective measures. Such response shall set forth any factual or legal basis SDG&E may have for requesting the Service rescind all or any part of such notice of violation or to delete or modify any of the required corrective measures. If SDG&E timely responds and requests that the Service rescind all or any part of a notice of violation or its required corrective measures,

within thirty (30) days of such response, the Service shall provide SDG&E with a written determination whether all or any part of such notice shall be rescinded or otherwise modified whether or not its required corrective measures will be modified or setting forth their basis for denying SDG&E's request.

If SDG&E fails to timely commence implementation of corrective measures or to diligently pursue the same within fifteen (15) days after the Service issues its determination that such measures are required, the Service may, in accordance with the procedures provided in 50 CFR §§13.27 and 13.28 take action to suspend or revoke the section 10(a)(1)(B) permit, subject to SDG&E's right to seek reconsideration and appeal of such determination pursuant to 50 CFR §13.29.

In the event the Service suspends the section 10(a) permit the Service shall, as soon as possible but no later than ten (10) days after such suspension, confer with SDG&E concerning how the violation that led to the suspension can be remedied. At the conclusion of any such conference, the Service shall determine the specific actions necessary to effectively redress the violation. In making this determination the Service shall consider the requirement of the Act or regulations issued thereunder, the conservation needs of the covered species, the terms of the section 10(a) permit and any comments or recommendations received during the meet and confer process.

Upon full performance of such necessary actions, the Service shall immediately reinstate the section 10(a) permit. It is the intent of the Service and SDG&E that in the event of any suspension of the section 10(a) permit all parties shall act expeditiously to cooperatively reinstate the same.

The Service agrees that it will not revoke or terminate the section 10(a) permit for violation of this Plan or section 10(a) permit unless the Service has provided SDG&E with written notice of the violation, and of the required corrective action, and SDG&E has failed to take appropriate remedial action within the time periods provided in accordance with this section, or the Service determines that (a) such violation cannot be effectively redressed by other remedies or enforcement action, and (b) revocation or termination is required to fulfill a responsibility of the Service under the Act.

5.0 OTHER MEASURES

Section 10(a)(2)(A)(iv) of the Act states that an HCP must specify other measures that the Director may require as being necessary or appropriate for purposes of the plan. This HCP qualifies as a "Low-Effect" HCP for which the development of an Implementing Agreement is not required. No other measures that the Director may require have been identified for this HCP.

6.0 ALTERNATIVES TO THE PROPOSED ACTION CONSIDERED

6.1 No Action Alternative

An alternative to this Plan is the No Action alternative. Under the No Action alternative, no permit would be issued. This would mean that SDG&E activities located in QCB habitat would remain subject to "take" prohibitions of the Act, and SDG&E would need to avoid take of QCB. Complete avoidance of impacts will not be possible for some of SDG&E's activities. As such, SDG&E would be required to obtain incidental take permits for those activities with unavoidable impacts. This process would occur on a project-by-project basis, but without a set of comprehensive conservation measures in advance. The result would be that SDG&E would only mitigate for impacts to occupied QCB habitat. This approach has the potential to miss or to inadequately examine conservation issues and measures which may be too ill defined, unrecognized or vague to enable a clear and meaningful impact analysis or to articulate the needed mitigation measures.

6.2 Project-by-project Alternative

The other alternative considered was a project-by-project approach to permitting that still relied on the operational protocols identified in this Plan as the standard set of measures to be used for individual permitting. Like the No Action alternative, this alternative would not address QCB incidental take permitting at a programmatic level. Under this alternative, SDG&E's activities occurring in QCB habitat would remain subject to the "take" prohibitions and permitting under the Act. Although utilizing the comprehensive operational protocols for all activities would avoid the application of haphazard conservation measures, this type of permitting for individual activities that disturb minor amounts of habitat is much too inefficient and cumbersome. This alternative would also result in an unnecessary economic burden on SDG&E.

The proposed Plan addresses QCB from a habitat basis at a programmatic level, and therefore provides more comprehensive conservation. In addition, the Plan provides SDG&E with long-term predictability concerning the nature of its operations for which incidental takings are permitted, avoiding potential facility-compromising delays.

7.0 DEFINITIONS

Activities

The term activities shall mean all current and future activities of SDG&E, arising out of or in any way connected with the siting, (including any site assessment, surveying, testing, or planning), design, installation, construction, use, maintenance, repair and removal of Facilities within the Plan Area, or any activities associated with the acquisition of property rights in relation thereto. A total of 33 acres of QCB habitat modification as a result of temporary or permanent activities is covered by the Plan.

Changed Circumstances

Changed Circumstances are defined under the Federal "No Surprises" rule as changes in circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by plan developers and the Service and that can be planned for (e.g., the listing of a new species, or a fire or other natural catastrophic event in areas prone to such events).

Changed Circumstances, and the actions to be taken for Changed Circumstances, are defined in Section 4.0 of this Plan. Planned responses will not include any action beyond those provided for under Section 4.0, nor for any event not identified as a Changed Circumstance in Section 4.0.

Emergency Non-Deferrable Activities

Emergency Non-Deferrable Activities are those activities undertaken when imminent threat to the safety and reliability of the electric and gas transmission and distribution system exists. Examples of emergency situations include but are not limited to situations such as cracked poles, scoured tower footings, downed lines, highly stressed supports, rusted anchor lines or braces, cracked insulators, lines or insulators abused by vandalism, exposed pipelines, broken pipes/gas lines, damage caused by landslides, fire, flood, etc.

Emergency Non-Deferrable Activities include but are not limited to those activities that will be required to correct the emergency, including but not limited to: driving on roads, checking equipment and facility failure, general repairs to Facilities resulting from damage/vandalism/fire, helicopter surveillance for the purpose of inspection, setting poles, installing wire and/or equipment, ferrying workers, digging pole and/or anchor holes with a mechanized auger or by hand, driving off road to gain access to poles, equipment, or wire for installation or removal, dragging wire through brush for installation or removal, and grading for emergency access, etc.

Facilities

The term Facilities shall include each of the following facilities which are a part of SDG&E's operations as a public utility, whether owned or operated by SDG&E:

(a) Existing electric power generating plants, of whatever nature, including, but not limited to, steam electric and nuclear electric generating plants, and all related buildings, structures, fixtures, improvements, land and water uses, equipment, machinery, easements, licenses, franchises and other rights-of-way.

(b) Electric transmission systems and distribution systems, whether above or below ground, including, but not limited to, all related towers, poles, transformers, anchor lines, anchors, vaults, manholes, and access roads, together with any other related fixtures, equipment, machinery, improvements, and operational accouterments and appurtenances.

(c) Electrical substations, including all related buildings, structures, land uses, access roads, poles, towers, electric lines, anchor lines, anchors, pads, electric lines, transformers, switches, together with all other related improvements, fixtures, equipment, machinery, accouterments and appurtenances.

(d) Telecommunication systems, including all related buildings, structures, land uses, access roads, towers, poles, antennae, vaults, lines, switches, and all other related fixtures, equipment, machinery, improvements, and accouterments, and appurtenances.

(e) Natural gas compressor and regulator stations, transmission pipelines, and distribution systems, including, but not limited to, all related buildings, structures, pipes, valves, engines, compressors, vaults, manholes, odorant systems, and all other related equipment, machinery, fixtures, improvements, and operational accouterments, and appurtenances.

(f) Other facilities, including, but not limited to, communication or other service facilities, above and below ground such as, but not limited to, fiber optics links, fuel lines, water pipes, pipes or conduit of whatever nature, antennae, or lines of any kind, together with any related vaults, manholes, poles, towers, fixtures, structures, land uses, access roads, improvements, equipment machinery, and operational accouterments and appurtenances, whether owned or operated by SDG&E, and which are compatible with and comprised of a similar nature to the Facilities enumerated in subparagraphs (a) through (e) above.

(g) Future Facilities owned or operated by SDG&E, including those described in subparagraphs (b) through (f) above, as a public utility, within the meaning of California Public Utilities Code, Section 216, as the same may be configured and constituted from time to time, and all property rights in land, now or hereafter vested in SDG&E, upon, under, in or over which such Facilities are located.

This Plan does not cover expansions of electric generating capacity or major expansions of electric or gas transmission systems beyond those described herein. This Plan does cover impacts to QCB or QCB habitat within the boundaries of the Plan Area associated with: 1) new electrical transmission line facilities; 2) electrical interconnections with other utilities that do not project more than 30 miles outside of SDG&E's service territory boundary; 3) new gas transmission line facilities not exceeding both 30" in diameter and

20 miles in length (but including the natural gas transmission line between Rainbow and Santee); 4) new electric substations and gas regulator stations with habitat impacts under 20 acres; and 5) new gas compressor stations with habitat impacts under 10 acres.

Mapped Areas

Mapped Areas are illustrated in Figure 3 (as approved by the Service), and are based on the 2003 Recovery Plan for the QCB (QCB Recovery Plan) and data collection since 1990. According to the QCB Recovery Plan, sightings of QCB since the 1990s are considered extant. Earlier sightings without post 1990 backup are considered historical. There was a drought in the 1980s where QCB could not be located anywhere for several years. Pre-1990 sightings are historic because the populations have not been located again despite intensive searches in some areas. The 1990 date and system for categorizing QCB sightings was established by the map in Mattoni et al. 1997.

The Mapped Areas will be updated annually. As new QCB sightings are documented, a 1km radius circle will be placed around each new QCB sighting and included in the Mapped Area. Although the new QCB sighting and the area within the 1km radius circle may not be contiguous with the existing Mapped Area (depicted in Figure 3), the new sighting and area within the 1km radius circle will be considered part of the Mapped Area. Subsequently, the Service will update the Mapped Area (by December 1 of each year) based on the 1km radius for each sighting and provide this updated Mapped Area to SDG&E. This buffer will be slightly modified to coincide with prominent features such as roads, waterways, or ridgelines to facilitate delineation in the field. Clusters of sightings may be consolidated in a manner that specifically benefits QCB. The Service will be responsible for updating the Mapped Areas and providing the updated information to SDG&E by December 1 of each year, for use the following year.

Occupied QCB Habitat

Occupied QCB Habitat is defined in this Plan as Suitable Habitat (as defined below) that is inside the Mapped Areas and within 300 meters of a known QCB occurrence (within two years of the observation). Also, Suitable Habitat inside Mapped Areas may be considered Occupied by SDG&E in lieu of conducting surveys.

Plan Area

The area which is subject to the application of this Plan (see Figure 1).

Periodic Non-Deferrable Activities

Periodic Non-Deferrable Activities include activities that are critical to the reliability and safety of the electric and natural gas systems and must be undertaken on a periodic or occasional basis and which are not deferrable to another time of year (e.g., pole brushing, insulator washing, tree trimming, road re-grading, pole inspections, etc).

QCB Host Plants

QCB Host Plants include: (1) dot seed plantain (*Plantago erecta*), wooly plantain (*Plantago patagonica*), white snapdragon (*Antirrhinum coulterianum*), thread-leaved birds beak (*Cordylanthus rigidus*); (2) any other species of *Plantago* native to Southern

California (e.g., *Plantago insularis*); and (3) purple owl's clover (*Castilleja exserta*). Additional plant species may be added to those previously mentioned if their suitability as a larval host plant has been formally documented in the field in a survey report prepared by a Service-certified QCB biologist and provided to SDG&E in a timely manner.

Suitable QCB Habitat

Suitable QCB Habitat is defined in this Plan as shrub communities, such as coastal sage scrub, chaparral, and desert scrub, with 50 percent shrub cover or less, and the potential to support dot-seed plantain and other larval host plants. Areas that meet the shrub cover standard are excluded if the ground cover vegetation is disturbed and/or covered by understory vegetation to the extent that larval host plants do not grow. Areas of solid rock substrate and the surfaces of solidly compacted access roads which are not likely to support vegetation are also excluded. All areas of vernal pool complexes are included as Suitable QCB Habitat regardless of upland vegetation surrounding the vernal pools. Areas meeting the 50 percent shrub cover with QCB Host Plants, native herbaceous species, cryptobiotic crusts, or the potential to support any of these elements are included as Suitable QCB Habitat. Also included in Suitable QCB Habitat for this Plan are all native grasslands and non-native grasslands that show evidence of potential to support larval host plants. Evidence for a potential to support larval host plants included presence of native grasses, native wildflowers, and cryptobiotic crusts.

Unoccupied QCB Habitat

For purposes of this Plan, Unoccupied QCB Habitat are those areas outside of the Mapped Areas (as depicted in Figure 3), and those portions of the Mapped Areas that are in Suitable Habitat that have been determined through current (within two years) protocol surveys to have no QCB.

Work Area

A Work Area is an area directly affected by an activity. Work areas may include, but not be limited to work pads, areas adjacent to the Facility being installed or repaired, access routes, pull sites, and laydown and storage areas.

8.0 REFERENCES

- Ballmer, Greg, David Hawks, Ken Osborne, and Gordon Pratt. 1998. The Quino checkerspot butterfly *Euphydryas editha quino*. Unpublished Report.
- Brown, J. 1991. Sensitive and Declining Butterfly Species (Insecta: Lepidoptera) in San Diego County, California. Dudek and Associates, Encinitas, California.
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Murphy, D.D., and R.R. White. 1984. Rainfall, Resources, and Dispersal in Southern populations of *Euphydryas editha* (Lepidoptera: Nymphalidae). Pan-Pacific Entomologist 60:350-355.

United States Fish and Wildlife Service (USFWS). 1997. Endangered and threatened wildlife and plants: Determination of endangered status for the Laguna Mountains skipper and Quino checkerspot butterfly. Federal Register 62:2313-2322. January 6, 1997.

United States Fish and Wildlife Service (USFWS). 2000. Quino Checkerspot Butterfly Year 2000 Survey Protocol.

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9.0 APPENDIX A: 1995 Subregional Plan Protocols

7.1 Operational Protocols

Operational protocols represent an environmentally sensitive approach to traditional utility construction, maintenance and repair Activities recognizing that slight adjustments in construction techniques can yield major benefits for the environment. The appropriate Operational Protocols for each individual project will be determined and documented by the Environmental Surveyor. The information regarding the qualifications and responsibilities of the environmental surveyor is contained in Appendix B. The following mitigation measures shall be adhered to by SDG&E.

7.1.1 General Behavior for All Field Personnel

1. Vehicles must be kept on access roads. A 15 mile-per-hour speed limit shall be observed on dirt access roads to allow reptile species to disperse. Vehicles must be turned around in established or designated areas only.
2. No wildlife, including rattlesnakes, may be harmed, except to protect life and limb.
3. Firearms shall be prohibited on the rights-of-way except for those used by security personnel.
4. Feeding of wildlife is not allowed.
5. SDG&E personnel are not allowed to bring pets on the rights-of-way in order to minimize harassment or killing of wildlife and to prevent the introduction of destructive domestic animal diseases to native wildlife populations.
6. Parking or driving underneath oak trees is not allowed in order to protect root structures except in established traffic areas.

7. Plant or wildlife species may not be collected for pets or any other reason.
8. Littering is not allowed. SDG&E shall not deposit or leave any food or waste on the rights-of-way or adjacent property.
9. Wild Fires shall be prevented or minimized by exercising care when driving and by not parking vehicles where catalytic converters can ignite dry vegetation. In times of high fire hazard, it may be necessary for trucks to carry water and shovels, or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention methods shall be used during grinding and welding to prevent or minimize the potential for fire. Care should be exhibited when smoking in natural habitats.
10. Field crews shall refer environmental issues including wildlife relocation, dead or sick wildlife, hazardous waste, or questions about avoiding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may need to be brought in by Environmental Surveyor for assistance with wildlife relocations.

7.1.2 Training

11. All SDG&E personnel working within the project area shall participate in an employee training program conducted by SDG&E, with annual updates. The program will consist of a brief discussion of endangered species biology and the legal protections afforded to Covered Species; a discussion of the biology of the Covered Species protected under this Subregional Plan; the habitat requirements of these Covered Species; their status under the Endangered Species Acts; measures being taken for the protection of Covered Species and their habitats under this Subregional Plan; and a review of the Operational Protocols. A fact sheet conveying this information will also be distributed to all employees working in the project area.
12. Designated SDG&E staff will conduct selected reviews of SDG&E operations. Any proposed modifications to Operational Protocols, procedures or conditions will be promptly provided to CDFG and USFWS for their review and input for required permit or Subregional Plan amendments.

7.1.3 Preactivity Studies

13. The Environmental Surveyor shall conduct preactivity studies for all activities occurring off of access roads in natural areas. The scope of these studies is included in Appendix A. The Environmental Surveyor will complete a preactivity study form contained in Appendix A, including recommendations for review by a biologist and construction monitoring as appropriate. Biologists should be called in when there is the potential for unavoidable impacts to Covered Species. The forms are for information only, and will not require CDFG or USFWS approval. These forms shall be faxed to CDFG and USFWS, along with phone notification, who will reply within 5 working days, indicating if they would like to review the project and/or suggest recommendations for post project monitoring. If a biologist is required, he/she will be contacted concurrent to notification to CDFG and USFWS. SDG&E's project may proceed during this time if necessary, in compliance with the recommendations of the biologist (For narrow endemic species see mitigation IV following Table 3.1). USFWS survey protocols performed by qualified biologists will be required for new projects which are defined as projects requiring CEQA review.

In those situations where the Environmental Surveyor cannot make a definitive species

identification, an on-call biologist will be brought in. When the biologist is called, he or she will be contacted concurrently with CDFG and USFWS. The biologist will make the determination of the species in question and recommend avoidance or mitigation approaches to the Environmental Surveyor and a decision will be made. In those situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required. It is expected that the typical USFWS search protocols will not be utilized in most situations due to the Plan's avoidance priority. Background information necessary to complete the annual report shall be collected on the preactivity study form and used by SDG&E to prepare the annual report.

14. In order to ensure that habitats are not inadvertently impacted, the Environmental Surveyor shall determine the extent of habitat and flag boundaries of habitats which must be avoided. When necessary, the Environmental Surveyor should also demark appropriate equipment laydown areas, vehicle turn around areas, and pads for placement of large construction equipment such as cranes, bucket trucks, augers, etc. When appropriate, the Environmental Surveyor shall make office and/or field presentations to field staff to review and become familiar with natural resources to be protected on a project specific basis.
15. SDG&E will maintain a library of rare plant locations known to SDG&E occurring within easements and fee owned properties. "Known" means a verified population, either extant or documented using record data. Information on known sites may come from a variety of record data sources including local agency Habitat Conservation Plans, pre-activity surveys, or biological surveys conducted for environmental compliance on a project site (e.g. initial study), but there is no requirement for development of original biological data. Plant inventories shall be consulted as part of pre-activity survey procedures.

7.1.4 Maintenance, Repair and Construction of Facilities

16. Maintenance, repair and construction Activities shall be designed and implemented to minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from accelerated sedimentation, and to reduce maintenance and repair costs.
17. Routine maintenance of all Facilities includes visual inspections on a regular basis, conducted from vehicles driven on the access roads where possible. If it is necessary to inspect areas which cannot be seen from the roads, the inspection shall be done on foot, or from the air.
18. When the view of a gas transmission line marker becomes obscured by vegetation on a regular basis requiring repeated habitat removal, consideration shall be given to the replacement of markers with taller versions.
19. Erosion will be minimized on access roads and other locations primarily with water bars. The water bars are mounds of soil shaped to direct flow and prevent erosion.
20. Hydrologic impacts will be minimized through the use of state-of-the-art technical design and construction techniques to minimize ponding, eliminate flood hazards, and avoid erosion and siltation into any creeks, streams, rivers, or bodies of water by use of Best Management Practices.

21. When siting new facilities, every effort will be made to cross the wetland habitat perpendicular to the watercourse, spanning the watercourse to minimize the amount of disturbance to riparian areas (See Figure 4).
22. Gas and other facilities cross streambeds and require maintenance and repair. During such times water may be temporarily diverted as long as after disturbance natural drainage patterns are restored to minimize the impact of the disturbance and help to reestablish or enhance the native habitat. Erosion control during construction in the form of intermittent check dams and culverts should also be considered to prevent alteration to natural drainage patterns and prevent siltation.
23. Impacts to wetlands shall be minimized by avoiding pushing soil or brush into washes or ravines.
24. During work on facilities, all trucks, tools, and equipment should be kept on existing access roads or cleared areas, to the extent possible.
25. Environmental Surveyor must approve of activity prior to working in sensitive areas where disturbance to habitat may be unavoidable.
26. Insulator washing is allowed from access roads if other applicable protocols are followed.
27. Brush clearing around facilities for fire protection shall not be conducted from March through August without prior approval by the Environmental Surveyor. The Environmental Surveyor will make sure that the habitat contains no active nests, burrows, or dens prior to clearing.
28. In the event SDG&E identifies a covered species of plant within a 10' radius around power poles, which is the area required to be cleared for fire protection purposes, SDG&E shall notify USFWS (for ESA listed plants), and CDFG (for CESA listed plants), in writing, of the plant's identity and location and of the proposed Activity, which will result in a Take of such plant. Notification will occur ten (10) working days prior to such Activity, during which time USFWS or CDFG may remove such plant(s). If neither USFWS or CDFG have removed such plant(s) within the ten (10) working days following the notice, SDG&E may proceed to complete its fire clearing and cause a Take of such plant(s).

When fire clearing is necessary in instances other than around power poles, and the potential for impacts to Covered Species exists, SDG&E will follow the preactivity study and notification procedures in Operational Protocol number 13.

29. Wire stringing is allowed year round in sensitive habitats if conductor is not allowed to drag on ground or in brush and vehicles remain on access roads.
30. Maintenance of cut and fill slopes shall consist primarily of erosion repair. In situations where revegetation would improve the success of erosion control, planting or seeding with native hydroseed mix may be done on slopes.
31. Spoils created during maintenance operations shall be disposed of only on previously disturbed areas designated by the Environmental Surveyor or used immediately to fill eroded areas. Cleared vegetation shall be hauled off the rights-of-way to a permitted disposal location.

32. Within 6 months of Plan approval, environmentally sensitive tree trimming locations will be identified in the tree trim computer data base system utilized by tree trim contractors. (This data base also tracks the date of each tree trim, type of tree, where threatening dogs reside, etc.). The Environmental Surveyor should be contacted to perform a preactivity survey when trimming is planned in environmentally sensitive areas. Whenever possible, trees in environmentally sensitive areas (determined by CDFG and SDG&E) will be scheduled for trimming in the non-sensitive times.
33. No new Facilities and Activities shall be planned which disturb vernal pools, their watersheds, or impact their natural regeneration. Continued historic maintenance of existing infrastructure utilizing existing access roads is allowed to continue in areas containing vernal pool habitat. New construction of overhead infrastructure which spans vernal pool habitats is allowed as long as the placement of facilities or the associated construction activities in no way impact the vernal pools.
34. If any previously unidentified dens, burrows, or plants are located on any project site after the preactivity survey, the Environmental Surveyor shall be contacted. Environmental Surveyor will determine how to best avoid or minimize impacting the resource by considering such methods as project or work plan redevelopment, equipment placement or construction method modification, seasonal/time of day limitations, etc...
35. The Environmental Surveyor shall conduct monitoring as recommended in the preactivity survey report. At completion of work, the Environmental Surveyor shall check to verify compliance, including observing that flagged areas have been avoided and that reclamation has been properly implemented. Also at completion of work, the Environmental Surveyor is responsible for removing all habitat flagging from the construction site.
36. The Environmental Surveyor shall conduct checks on mowing procedures, to ensure that mowing is limited to a 12-foot wide area on straight portions of the road (slightly wider on radius turns), and that the mowing height is no less than 4 inches.
37. Supplies or equipment where wildlife could hide (e.g., pipes, culverts, pole holes) shall be inspected prior to moving or working on them to reduce the potential for injury to wildlife. Supplies or equipment that cannot be inspected or from which animals could not be removed shall be capped or otherwise covered at the end of each work day. Old piping or other supplies that have been left open, shall not be capped until inspected and any species found in it allowed to escape. Ramping shall be provided in open trenches when necessary. If an animal is found entrapped in supplies or equipment, such as a pipe section, the supplies or equipment shall be avoided and the animal(s) left to leave on its own accord, except as otherwise authorized by CDFG.
38. All steep-walled trenches or excavations used during construction shall be inspected twice daily (early morning and evening) to protect against wildlife entrapment. If wildlife are located in the trench or excavation, the Environmental Surveyor shall be called immediately to remove them if they cannot escape unimpeded.
39. Large amounts of fugitive dust could interfere with photosynthesis. Fugitive dust created during clearing, grading, earth-moving, excavation or other construction activities will be controlled by regular watering. At all times, fugitive dust emissions will be controlled by limiting on-site vehicle speed to 15 miles per hour.

40. Before using pesticides in areas where burrowing owls may be found, a pre-activity survey will be conducted.

7.1.5 Maintenance of access roads shall consist of:

41. Repair of erosion by grading, addition of fill, and compacting. In each case of repair, the total area of disturbance shall be minimized by careful access and use of appropriately sized equipment. Repairs shall be done after preactivity surveys conducted by the Environmental Surveyor and in accordance with the recommendations regarding construction monitoring and relevant protocols. Consideration should be given to source of erosion problem, when source is within control of SDG&E.
42. Vegetation control through grading should be used only where the vegetation obscures the inspection of facilities, access may be entirely lost, or the threat of Facility failure or fire hazard exists. The graded access road area should not exceed 12'-wide on straight portions (radius turns may be slightly wider) (See Figure 23).
43. Mowing habitat can be an effective method for protecting the vegetative understory while at the same time creating access to a work area. Mowing should be used when permanent access is not required since, with time, total revegetation is expected. If mowing is in response to a permanent access need, but the alternative of grading is undesirable because of downstream siltation potential, it should be recognized that periodic mowing will be necessary to maintain permanent access.
44. Maintenance work on access roads should not expand the existing road bed (See Figure 23).
45. Material for filling in road ruts should never be obtained from the sides of the road which contain habitat without approval from Environmental Surveyor.

7.1.6 Construction of new access roads shall comply with the following:

46. SDG&E access roads will be designed and constructed according to the *SDG&E Guide for Encroachment on Transmission Rights-of-Way (4/91)*.
47. Access roads will be made available to managers of the regional preserve system subject to coordination with SDG&E.
48. New access roads shall be designed to be placed in previously disturbed areas and areas which require the least amount of grading in sensitive areas during construction whenever possible (See Figure 5). Preference shall be given to the use of stub roads rather than linking facilities tangentially.
49. SDG&E will consider providing access control on access roads leading into the regional preserve system where such control provides benefit to sensitive resources.
50. New access road construction is allowed year round. Every effort shall be made to avoid constructing roads during the nesting season. During the nesting season, the presence or absence of nesting species shall be determined by a biologist and appropriate avoidance and minimization recommendations followed.

7.1.7 Construction and Maintenance of Access Roads Through Streambeds

51. Construction of new access roads through streambeds requires a Streambed Alteration Agreement from CDFG and/or consultation with the Army Corps of Engineers.
52. Maintenance or construction vehicle access through shallow creeks or streams is allowed. However, no filling for access purposes in waterways is allowed without the installation of appropriately sized culverts. The use of geotextile matting should be considered when it would protect wetland species.
53. Staging/storage areas for equipment and materials shall be located outside of riparian areas. (See Figure 23).

7.1.8 Survey Work

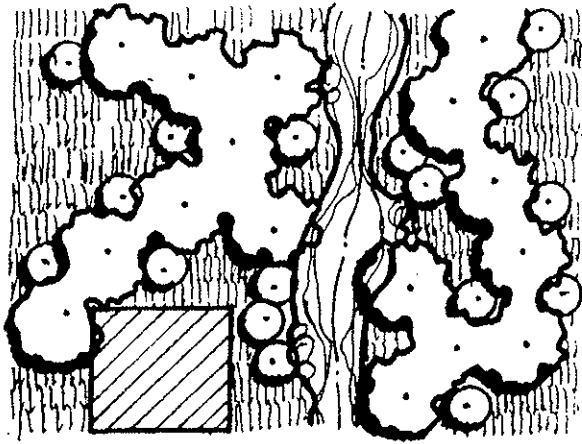
54. Brush clearing for foot paths or line-of-sight cutting is not allowed from March through August in sensitive habitats without prior approval from the Environmental Surveyor, who will ensure that activity does not adversely affect a sensitive species.
55. SDG&E survey personnel must keep vehicles on existing access roads. No clearing of brush for panel point placement is allowed from March through August without prior approval from the Environmental Surveyor.
56. Hiking off roads or paths for survey data collection is allowed year round so long as other protocols are met.

7.1.9 Emergency Repairs

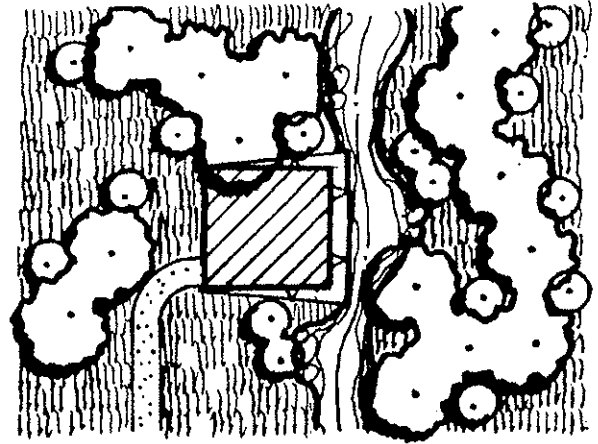
57. During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.
58. Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continued to be followed to fullest extent possible.
59. Once the emergency has stabilized, any unavoidable environmental damage will be reported to the Environmental Surveyor by the foreman. The Environmental Surveyor will develop a mitigation plan and ensure its implementation is consistent with this Subregional Plan.

7.1.10 Activities of Underlying Fee Owners

60. Most SDG&E rights-of-way are held in easement only. The activities of underlying fee owners cannot be controlled by SDG&E and are not covered by this Subregional Plan.
61. When sensitive habitat exists on either side of a utility right-of-way, SDG&E will not oppose underlying fee owners dedicating said property to conservation purposes. Underlying fee owners are expected to comply with applicable federal, state, and local regulations.

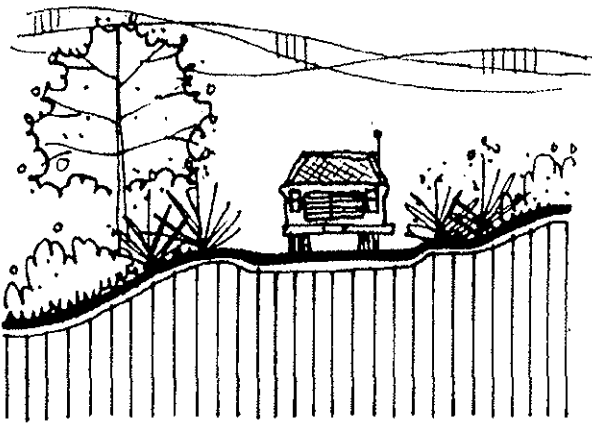


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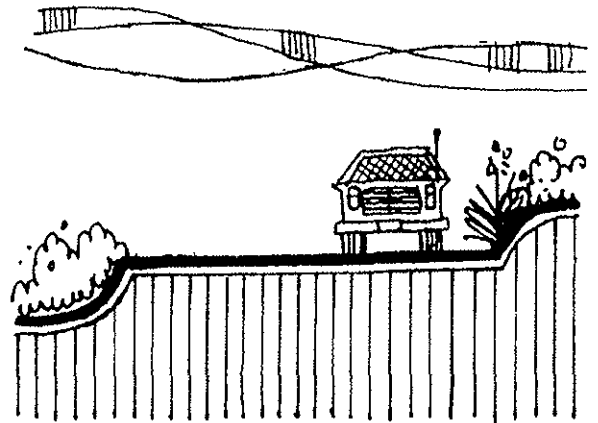


NOT THIS

CONSTRUCTION STAGING/STORAGE AREAS SHOULD BE LOCATED OUTSIDE OF STREAMS



THIS



NOT THIS

ACCESS ROAD MAINTENANCE SHOULD NOT EXPAND THE EXISTING ROAD BED

FIGURE

23

Operational Protocol Diagrams

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Subregional Natural Community Conservation Program

10.0 APPENDIX B: QCB Mitigation Fund Agreement



ADVISED NON-ENDOWMENT FUND AGREEMENT
for
SDG&E Quino Checkerspot Butterfly Mitigation Fund

THIS AGREEMENT is made and entered into on May 31, 2007 by and among THE SAN DIEGO FOUNDATION ("SDF"), **San Diego Gas & Electric Company** ("Donor") and the United States Fish and Wildlife Service ("USFWS").

1. NAME OF THE FUND

Donor transfers irrevocably to SDF the initial sum of Two Hundred Fifty Thousand Dollars (\$250,000) to establish in SDF the **SDG&E Quino Checkerspot Butterfly Mitigation Fund** (the "Fund"). SDF may receive additional irrevocable gifts of property including money, acceptable to SDF from time to time from Donor and from any other source to be added to the Fund, all subject to the provisions hereof.

2. PURPOSE

Subject to the limitations of paragraph 4 below, the purpose of the Fund shall be to mitigate adverse impacts to the Quino Checkerspot butterfly (Quino) from SDG&E operations and maintenance activities, including new facilities construction, as addressed in SDG&E's Quino Checkerspot Butterfly Habitat Conservation Plan.

3. INVESTMENT OF FUNDS

SDF shall have all powers necessary or desirable to carry out the purposes of the Fund, including, but not limited to, the power to retain, invest and reinvest the Fund in any manner within the "prudent person" standard and the power to commingle the assets of the Fund with those of other funds for investment purposes, subject however, to the requirements of Sections 5231 and 5240 of the California Corporations Code. If the Fund Advisory Committee has a reasonable basis to believe that SDF has not complied with the foregoing "prudent person" standard, then the Fund Advisory Committee shall have the right to request an accounting and thereafter to terminate this Agreement with a prompt distribution of the remaining assets in the Fund as recommended by the Fund Advisory Committee (defined in paragraph 5).

4. DISTRIBUTION

Subject to paragraph 6, earnings allocated by SDF to the Fund shall be distributed exclusively for charitable, scientific, literary or educational purposes or to organizations of the type to which an individual taxpayer may make deductible charitable contributions, gifts, and bequests under the income, gift and estate tax provisions of the Internal Revenue Code of 1986, as amended, and of the Revenue and Taxation Code of California, in all cases consistent with the purpose set forth in paragraph 2 above. It is intended by the foregoing that at the time a distribution is made from the Fund, the distribution must be made for a charitable, scientific, literary or educational purpose as described in, or to an organization which is described in, Sections 170(c)(1) or (2), of the Internal Revenue Code of 1986, as amended, and Section 17201 of the Revenue and Taxation Code of California and consistent with the purpose set forth in paragraph 2 above. Distributions from the Fund shall be within the purposes and procedures of SDF as contained in its Articles of Incorporation and its Bylaws.

5. RECOMMENDATIONS FOR DISTRIBUTION

- a. The Fund shall have an Advisory Committee which shall consist of two individuals; one from SDG&E and one from USFWS, at all times the Fund is in existence. The USFWS representative will serve as the Fund Advisory Committee Chair. The Chair shall be the only person who has the authority to communicate the desires of the Fund Advisory Committee to SDF, and shall be the "Fund Advisor." The SDG&E representative shall be a non-voting member of the Fund Advisory Committee and may not serve as the Chair. The function of the Fund Advisory Committee shall be to advise the Board of Governors of SDF on appropriate distributions from the Fund. Upon the death or incapacity of any member of the Fund Advisory Committee, the affected entity (i.e., SDG&E or USFWS) shall designate a new representative. The function of the Fund Advisory Committee shall be to advise the Board of Governors of SDF on appropriate distributions from the Fund.
- b. Distributions from the Fund may be made from income and/or principal and shall be made at such times and in such amounts as may be determined by the Board of Governors, as directed by the Fund Advisory Committee. There shall be no requirement that income be distributed each year; income may be accumulated and added to principal. Consistent with the foregoing, distributions shall be made to such distributees of the type described in paragraph 4 as may be designated by SDF; provided, however, that the Fund Advisor may from time to time submit to SDF the names of distributees to which it is recommended that distributions be made, which distributees shall not be other than those described in paragraph 4. All recommendations from the Fund Advisor shall be solely advisory, and SDF may accept or reject them, applying reasonable standards and guidelines with regard thereto.

- c. SDF shall provide the Fund Advisory Committee quarterly statements which reflect contributions to the fund, earnings, fees, and distributions from the fund authorized and made by the Board of Governors.

6. CONTINUITY OF THE FUND

The Fund shall continue so long as assets are available in the Fund and the purposes in the Fund can be served by its continuation. If the Fund is terminated for either of the above reasons, SDF shall devote any remaining assets in the Fund (as directed by the Fund Advisory Committee) exclusively for charitable purposes that:

- a. are within the scope of the charitable purposes of SDF's Articles of Incorporation; and,
- b. most nearly approximate, in the good faith opinion of the Board of Governors, the original purpose of the Fund as described in paragraph 2 above.

SDF shall promptly notify the Fund Advisory Committee in writing of (i) the date and reason for termination of the Fund and (ii) the intended use of the remaining assets in the Fund.

7. NOT A SEPARATE TRUST

The Fund shall be subject to the Articles of Incorporation and Bylaws of SDF. All money and property in the Fund shall be assets of SDF, and not a separate trust, and shall be subject only to the control of SDF. Pursuant to Treasury Regulations, the Board of Governors of The San Diego Foundation has the power "to modify any restriction or condition on the distribution of funds for any specified charitable purpose or to any specified organization if, in the sole discretion of the Board of Governors, such restriction or condition becomes unnecessary, incapable of fulfillment, or inconsistent with the charitable needs of the community or area served." Treas. Reg. § 1.170A-9(e)(11)(v)(B) and (E).

8. COSTS OF THE FUND

It is understood and agreed that the Fund shall share a fair portion of the total administrative costs of SDF. The administrative cost annually charged against the Fund shall be determined in accordance with the then current Fee Policy identified by SDF as the fee structure applicable to Funds of this type. Any costs to SDF in accepting, transferring or managing funds donated to SDF for the Fund shall also be paid by the Fund.

9. ACCOUNTING

This Fund shall be accounted for separately and apart from other gifts to SDF. The SDF shall provide the Fund Advisory Committee a quarterly statement which reflects contributions to the fund, earnings, fees, and distributions from the fund authorized and made by the Board of Governors.

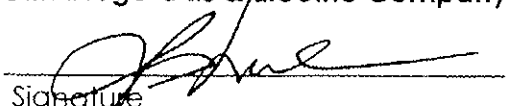
10. CHARITABLE DEDUCTIONS

It is intended by Donor and by SDF that federal gift, income and estate tax charitable deductions shall be allowed to Donor and to Donor's estate and that SDF shall continue to qualify as an organization described in Sections 170(b)(1)(A)(vi), 170(c), 2055(a), and 2522(a) of the Internal Revenue Code of 1986.

This entire Agreement shall be construed and applied so as to comply with the requirements of federal tax law for allowance of such charitable deductions and for such qualifications.

IN WITNESS WHEREOF, we execute this Agreement on June 27, 2007.

Donor: **San Diego Gas & Electric Company**


Signature

USFWS: **United States Fish and Wildlife Service**


Signature

Approved by the Board of Governors of The San Diego Foundation on _____.

By: Bruce A. Blalley
Chair, Board of Governors

Figures

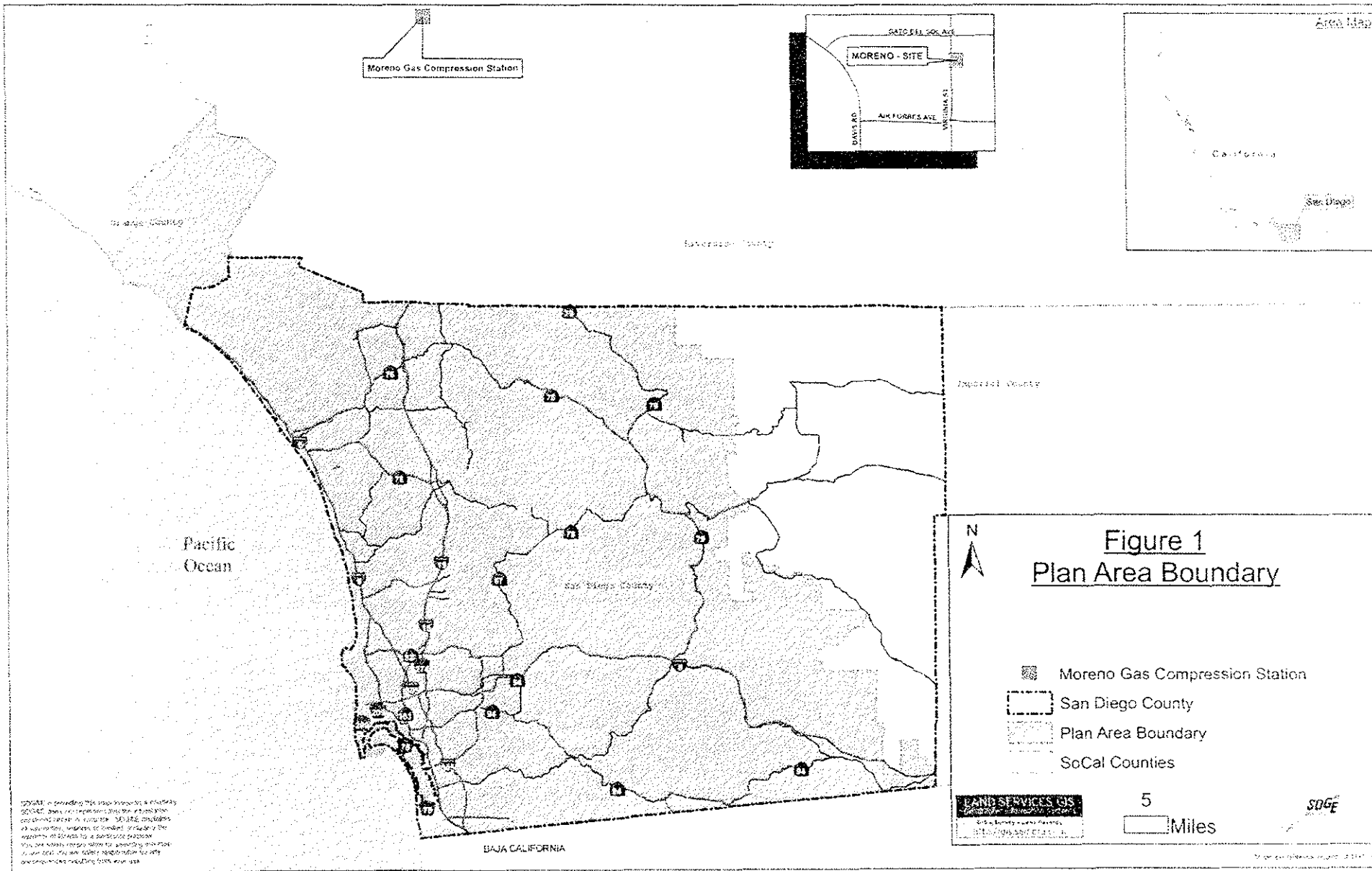






Figure 1
Plan Area Boundary

-  Moreno Gas Compression Station
-  San Diego County
-  Plan Area Boundary
-  SoCal Counties

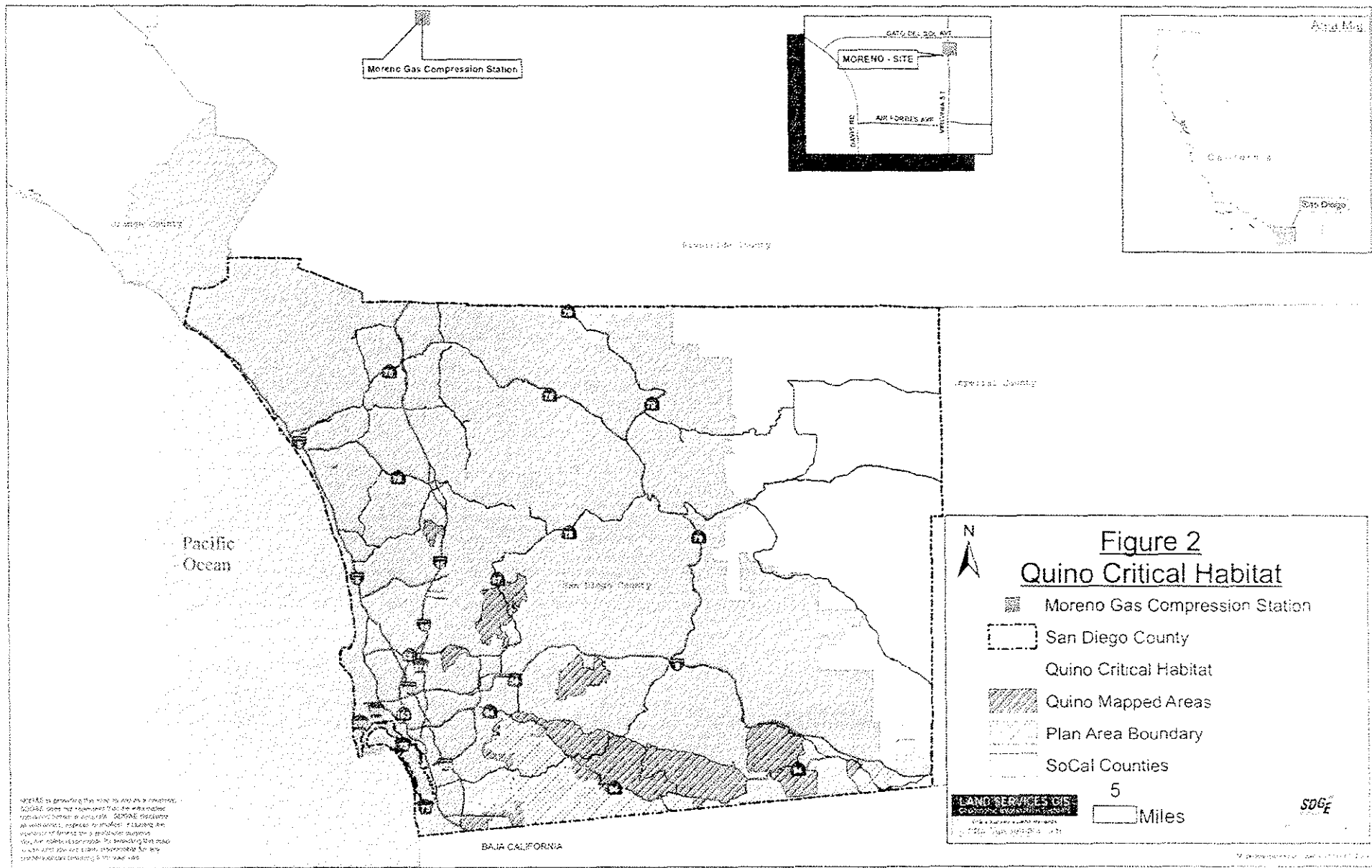


5
Miles

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Moreno Gas Compression Station

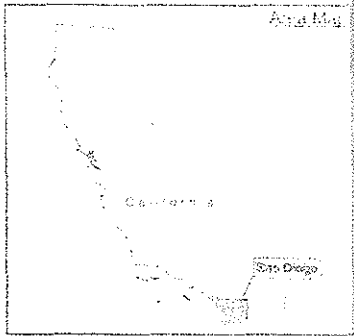
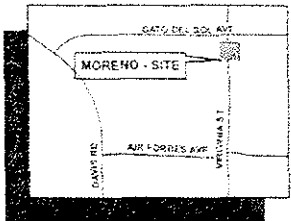








Figure 2
Quino Critical Habitat

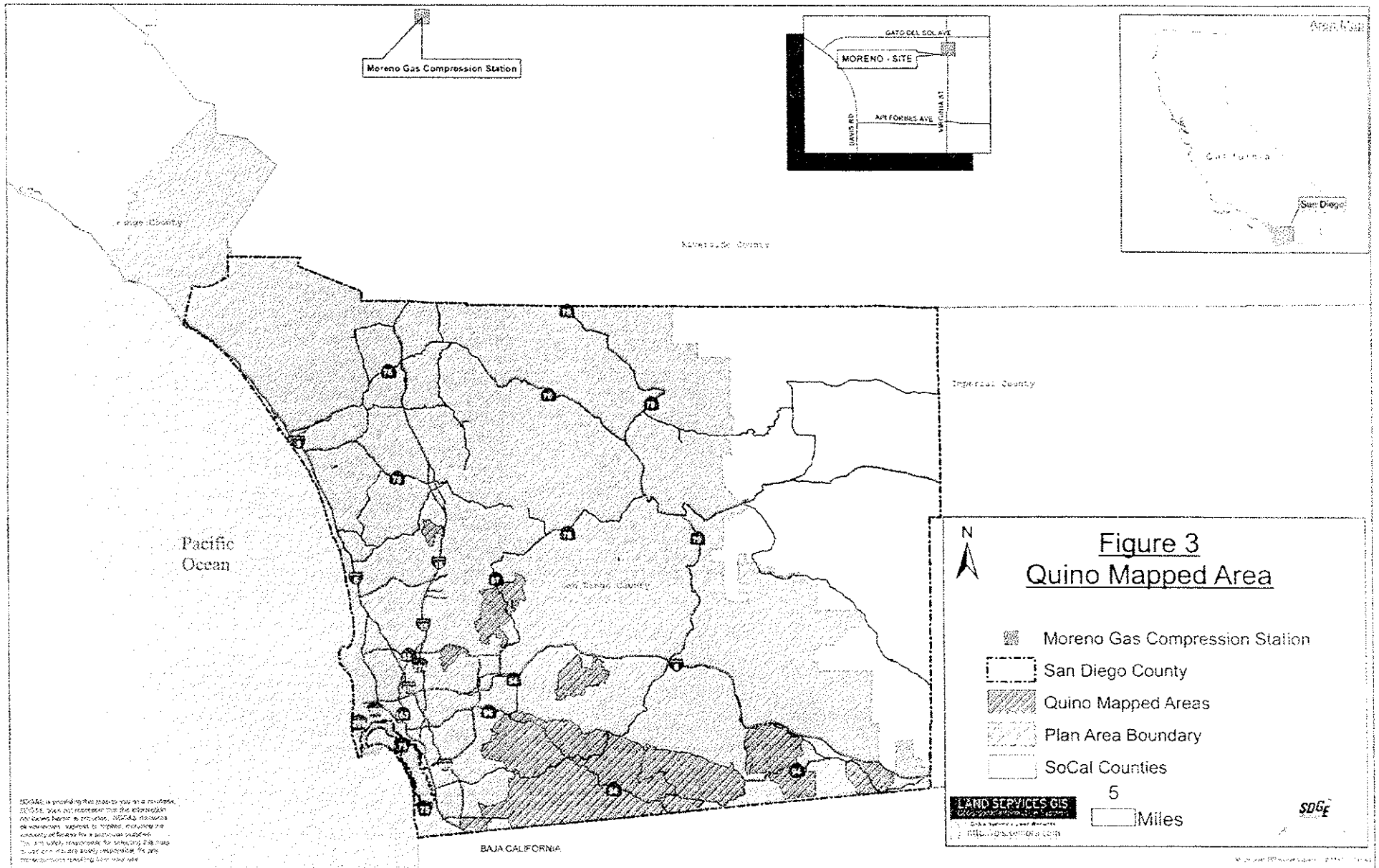


-  Moreno Gas Compression Station
 -  San Diego County
 -  Quino Critical Habitat
 -  Quino Mapped Areas
 -  Plan Area Boundary
 -  SoCal Counties
- 5 Miles

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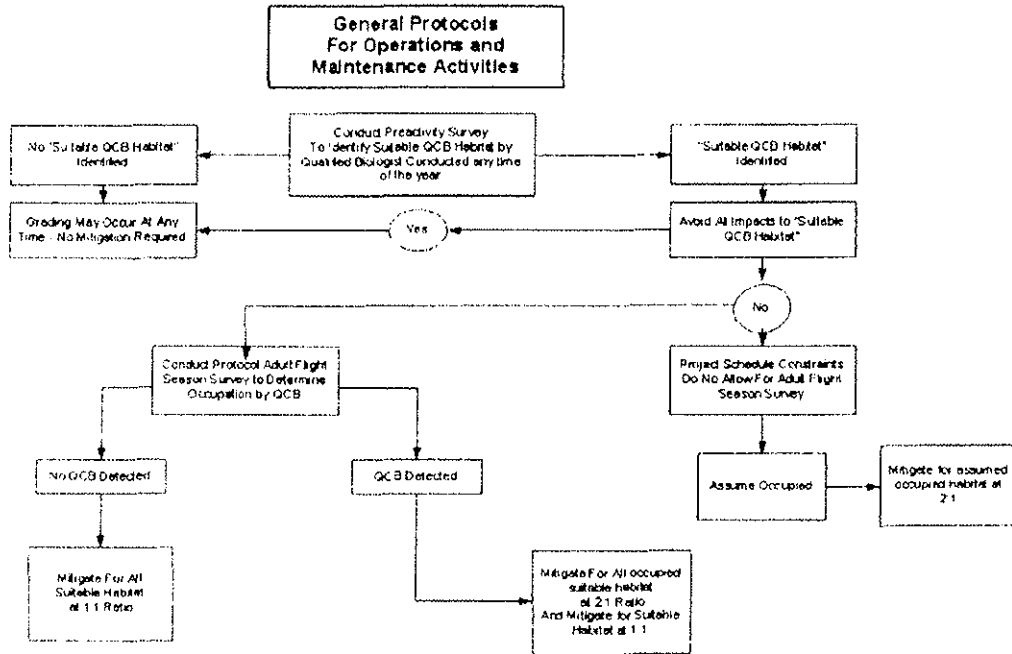
SDGE

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SDGE HCP QUINO PROTOCOLS WITHIN MAPPED AREA

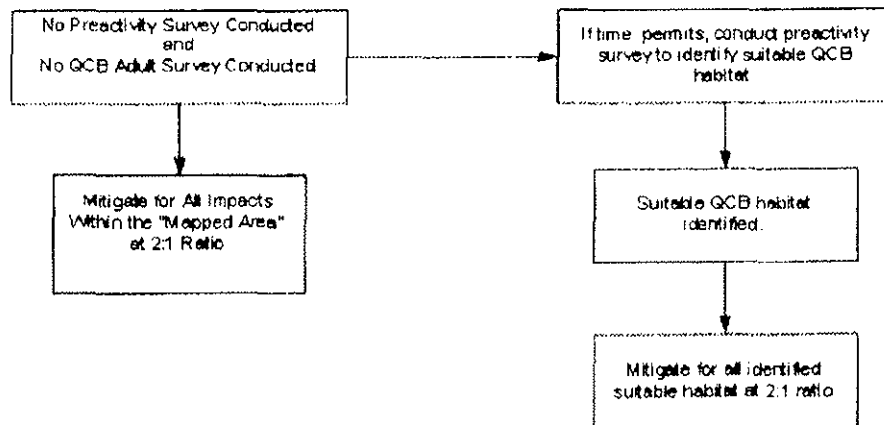
Figure 4



SDGE HCP QUINO PROTOCOLS WITHIN MAPPED AREA

Figure 5

**General Protocols for Operations
and Maintenance Activities for
Emergency and Non-Deferrable
Activities**



SDGE HCP QUINO PROTOCOLS WITHIN MAPPED AREA

Figure 6

Protocol for New Construction

