4.7 BIOLOGICAL RESOURCES

Would the proposal result in impacts to:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Endangered, threatened, or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?	☐	☒	☐	☐
b) Locally designated species (e.g., heritage trees)?	☐	☒	☐	☐
c) Locally designated natural communities (e.g., oak forest, coastal habitat, etc.)?	☐	☐	☐	☒
d) Wetland habitat (e.g., marsh, riparian, and vernal pool)?	☐	☐	☐	☒
e) Wildlife dispersal or migration corridors?	☐	☐	☐	☒

This section analyzes potential impacts of the project on the existing biological resources found within and adjacent to SDG&E's tangible assets, consisting of the Encina and South Bay Power Plants, the 24th Street Terminal Refueling Facility, and the combustion turbines (CTs). Discussion of these biological resources and analysis of potential environmental impacts are based on available studies of regional biological resources, recent biological surveys, field reconnaissance to corroborate results of previous surveys, and project-specific survey efforts.

REGIONAL SETTING

All of the facilities proposed for sale by SDG&E are located within the southcoast subregion of southwestern California. This region extends approximately 490 miles, from Point Conception in the north to the Mexican border in the south, and inland to San Gorgonio Pass. The coastal topography of southern California is characterized by rugged mountain ranges in the east, declining sharply into steep bluffs, rocky shores, and sandy beaches in the west. A broad shelf known as the Southern California Bight dominates the marine topography. The Mediterranean climate of the region consists of hot, dry summers and cool, wet winters.

Prior to urbanization, the region supported a substantial diversity of ecosystems and a high level of endemism (i.e., species that only occur in this area). However, the most recent census statistics put roughly 17 million people—56 percent of California's population—in this southwestern 8 percent of the state. Urbanization and development have disrupted habitat boundaries and created remnant "islands" of native coastal sage scrub, coastal dune, chaparral, and forest habitats

scattered between urban land uses. Intensive development on the coastal plain has also resulted in the loss of approximately 90 percent of coastal wetlands. Most of the freshwater fish native to Southern California are rare, endangered, or extinct (Swift *et al,* 1993), while various aquatic reptiles and amphibians have been reduced in numbers or extirpated (Jennings and Hayes, 1994). The southwest ecoregion of California contains the highest number of endangered plants and birds of any region in the continental U.S. (Dobson *et al,* 1997). Numerous regional conservation efforts are underway to preserve the remaining wildlife and plant habitats.

These regional conservation efforts have been formalized into subregional and subarea comprehensive habitat and multiple species conservation plans proposed by local governments, local agencies, and private entities. Included among these plans are the Multiple Species Conservation Plan generated as part of San Diego's Clean Water Program; San Diego Association of Governments' (SANDAG's) Multiple Habitat Conservation Program; the South Orange County Subregional Natural Community Conservation Plan (NCCP); the Riverside County Habitat Conservation Plan; and the County of San Diego's Multiple Habitat Conservation and Open Space Plan. SDG&E has participated directly on all of these plans, including making financial contributions and, in 1995, preparing its own Subregional NCCP.

BIOLOGICAL RESOURCES REGULATORY CONTEXT

Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 USC 1533[c]). Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and determine whether the proposed project could have a potentially significant impact on such species. In addition, the U.S. Fish and Wildlife Service (USFWS) is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA, or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]).

The USFWS also publishes a list of candidates and other species of concern that receive "special attention" from federal agencies during environmental review, although they are not protected otherwise under the FESA. The candidate species are those for which the USFWS has sufficient biological information to support a proposal to list as threatened or endangered.

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Game (CDFG) has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code 2070). The CDFG also maintains a list of "candidate species," which are species that the CDFG has formally noticed as being under review for addition to the state's list of threatened or endangered species. The CDFG also maintains lists of "species of

special concern," which serve as "watch lists." Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFG encourages informal consultation on any proposed project that may impact a candidate species.

The Clean Water Act

The regulations and policies of various federal agencies (e.g., the U.S. Army Corps of Engineers [Corps], U.S. Department of Agriculture [USDA] Natural Resource Conservation Service [NRCS], U.S. Environmental Protection Agency [USEPA], USFWS, and National Marine Fisheries Service [NMFS]) mandate that the filling of wetlands be avoided unless it can be demonstrated that no practicable alternatives exist. The Corps has primary federal responsibility for administering regulations that concern waters and wetlands within a project site. In this regard, the Corps acts under one statutory authority, the Clean Water Act (Section 404), which governs specified activities in "waters of the United States," including wetlands. The Corps requires that a permit be obtained if a project proposes placing structures within navigable waters and/or alteration of waters of the United States below the ordinary high water mark in nontidal waters.

The state's authority in regulating activities in wetlands and waters at the site resides primarily with the CDFG and the appropriate Regional Water Quality Control Board (RWQCB). The CDFG provides comment on Corps permit actions under the Fish and Wildlife Coordination Act. CDFG is also authorized under the State Fish and Game Code Sections 1600-1607 to develop mitigation measures and enter into a Streambed Alteration Agreement with applicants that propose a project that would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including ephemeral streams. The appropriate RWQCB must certify that a Corps permit action meets state water quality objectives (Section 401, Clean Water Act).

Each facility that discharges wastewater must operate within the parameters of the facility's National Pollution Discharge Elimination System (NPDES) permit. The NPDES permits issued by the San Diego RWQCB for the Encina and South Bay Power Plants required that studies be conducted under Section 316(a) of the Clean Water Act to evaluate the potential adverse effects of the cooling water thermal discharge on the fish and invertebrate population inhabiting San Diego Bay. Furthermore, Section 316(b) of the act requires that studies be conducted to determine whether the location, design, construction, and capacity of the cooling water intake structures reflect the best technology available (BTA) for minimizing adverse environmental impacts.

LOCAL SETTING

As noted above, regional conservation efforts have been formalized into subregional and subarea comprehensive habitat and multiple species conservation plans; these conservation plans are entering their implementation phase. In 1995, SDG&E prepared its own Subregional Natural Community Conservation Plan (NCCP) to ensure implementation of appropriate avoidance, minimization, and mitigation measures for potential impacts to the 110 species covered by the NCCP from operations and maintenance activities at all of SDG&E's facilities. These avoidance and mitigation measures are reflected in the 61 operating protocols outlined in the plan (SDG&E, 1995a). An NCCP Implementation Agreement and CESA Memorandum of Understanding (SDG&E, 1995b) was signed the same year by the USFWS, CDFG, and SDG&E. The agreement provides SDG&E with a FESA Section 10(a) permit, which authorizes the incidental take of listed species. Incidental take is defined under FESA as the killing, harming, harassing, etc. of listed species while engaging in otherwise lawful activities.

ENCINA POWER PLANT

The Encina Power Plant is located in the City of Carlsbad, on the southwestern shore of Agua Hedionda Lagoon. Dating from pre-Hispanic times, the lagoon had succeeded to marsh behind the closed lagoon mouth prior to power plant construction in 1954. Plant construction necessitated dredging of the lagoon to provide an adequate supply of cooling water. The lagoon extends 1.7 miles inland and is up to 0.5 miles wide. It is transected by Carlsbad Boulevard (Highway 101) at the coastline, Atchison Topeka and Santa Fe railroad about 1,500 feet to the east, and Interstate 5 about 1,000 feet farther east. These roadbeds effectively divide the lagoon into three sections (referred to as the inner, middle, and outer lagoons), which total approximately 286 acres within the high-tide mark. The plant is situated along the southern shore of the middle and outer lagoons. It draws cooling water from the outer lagoon and discharges the heated water into a separate across-the-beach channel that empties directly into the ocean.

Biological resources on site are associated with Agua Hedionda Lagoon and the remnants of native shoreline habitats. Field reconnaissance surveys have mapped the extent of eelgrass and sensitive shoreline habitats and the status of birds, fish, and macroinvertebrates (MBC 1993; MEC, 1995). With the exception of a narrow band of native shoreline, habitats occurring adjacent to the lagoon are urban, non-vegetated disturbed, agricultural, and ruderal.

Rock revetment armors the channels between lagoons and also lines nearly the entire shoreline of the outer lagoon, which covers approximately 66 acres. The outer lagoon is otherwise dominated by open water, sandbar habitats, and aquaculture racks. The middle lagoon encompasses 23 acres and has narrow tidal flats along each shore, with scattered patches of pickleweed (*Salicornia virginica*) occurring above mean high water along the north and east shores. The inner lagoon occupies 197 acres and supports southern coastal salt marsh, brackish and freshwater marsh, and tidal flats.

Agua Hedionda Creek and Macario Canyon drain into the eastern end of the lagoon and support riparian scrub and woodland and brackish/freshwater marsh. These vegetative associations, and the seasonal ponds, salt pannes and intertidal flats, support foraging and loafing activities of migratory and resident populations of shorebirds, gulls, coots, and ducks. Nesting habitat for American avocets (*Recurvirostra americana*), black-necked stilts (*Himantopus mexicanus*), and the endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) and least Bell's vireo (*Vireo bellii pusillus*) also occurs in this area of the lagoon.

The lagoon supports extensive eelgrass (*Zostera marina*) beds throughout shallower areas. Eelgrass serves as important spawning and/or nursery habitat for a variety of marine species that make seasonal migrations into the lagoon. A total of 104 species of fish were reported during 1979 studies (SDG&E, 1997), with approximately 80 percent of the catch from nekton sampling represented by three species: topsmelt (*Atherinops affinis*), deepbody anchovy (*Anchoa* sp.), and slough anchovy (*Anchoa delicatissima*).

Offshore resources include three kelp stands located in the nearshore waters of the power plant. These are recognized in monitoring surveys as the Encina Power Plant kelp bed. The area and extent of this kelp bed varies both seasonally with the normal growth pattern of the kelp, and yearly depending on weather conditions. The kelp stands consist of dense giant kelp (*Macrocystis pyriferea*) and related algae, which serve as habitat for a variety of plants and animals. Much of the recreational fishing in the nearshore waters occurs in and immediately adjacent to kelp beds.

Cooling Water Studies

Thermal Effects Assessment — Section 316(a) Demonstration

Section 316(a) of the Clean Water Act requires compliance with state water quality standards for the discharge of thermal effluent. The RWQCB may, in accordance with Section 316(a) and other regulations (40 CFR 122), grant an exception to state Thermal Plan standards.

Due to their operation prior to the passage of Clean Water Act regulations, Units 1 through 4 of the Encina Power Plant are classified as an existing discharge to coastal waters, thus falling under less stringent Specific Water Quality Objectives than those applicable to Unit 5, a new discharge to coastal waters. In 1975, SDG&E requested an exception for Unit 5 to California's Thermal Plan, deviation from the USEPA's effluent guidelines, and acceptance of alternative, less stringent effluent limitations. SDG&E proposed alternative effluent limitations that would allow discharge from Unit 5 via the discharge channel used for Units 1 through 4.

In order to be granted this exception in its NPDES permit, SDG&E was required to conduct a Section 316(a) Demonstration study, which it submitted to the RWQCB in 1981 (SDG&E, 1981). A Supplemental 316(a) Summary Report was submitted in 1990 (SDG&E, 1990). These studies concluded that "no significant biological effects (and therefore no adverse impacts) have occurred due to thermal discharge from the Encina Power Plant" (SDG&E, 1990).

Based on a review of the above findings, the RWQCB and USEPA concluded that additional information was needed to determine if the thermal discharge from the Encina Power Plant would allow the propagation of a balanced, indigenous community and would ensure the protection of beneficial uses of the water. On this basis, Order 94-59 was issued in 1994 with special conditions requiring SDG&E to conduct specific additional studies to supplement its 316(a) Demonstration. These studies again concluded that "the balanced, indigenous community in nearshore intertidal, subtidal, and pelagic habitat has been and will continue to be protected and maintained under the current operating regime of Encina Power Plant Units 1 through 5" (EA, 1997a). The results of the studies were submitted to the RWQCB in 1997, but no ruling had been made by that agency at the time of publication of this document. However, throughout the past two decades of thermal effluent studies and RWQCB reviews, SDG&E has been allowed to operated Unit 5 in conjunction with, and under the same regulations as, Units 1 through 4, and continues to do so at this time.

Entrainment and Impingement — Section 316(b) Demonstration

Section 316(b) of the Clean Water Act requires that "…the location, design, construction, and capacity of cooling water intake structures reflect the best technology available (BTA) for minimizing adverse environmental impact." Currently, there are no regulations or agency guidelines on how to approach this section of the act. However, through a combination of prior agency determinations and scientific resource management practices, a generally accepted approach for determining compliance with this statute has evolved (EA, 1997b). This approach involves an initial investigation of whether adverse environmental impacts are occurring. The two primary impacts associated with cooling water intake are entrainment—the passage of small organisms (including fish eggs and larvae) through the intake screens and into the power plant's cooling process—and impingement, the entrapment of larger organisms against the screens resulting from the intake of water. If such effects are found to be occurring, a determination of the BTA for minimizing those impacts needs to be made.

SDG&E conducted the 316(b) entrainment studies in 1979 and 1980 as part of requirements for the NPDES permitting process, administered by the San Diego RWQCB. The results of these studies were submitted to the Regional Board in 1980. Based on agency review of the demonstration results, Order No. 94-59 (discussed above) also included special conditions requiring SDG&E to conduct additional studies to supplement its 316(b) Demonstration. These studies, conducted in 1994 and 1995, concluded that "the cooling water intake at Encina is not having an adverse environmental impact as defined under Section 316(b) of the Clean Water Act and, therefore, the existing intake should be designated as best technology available" (EA, 1997b).

Dredging

Background

Initial dredging occurred between 1952–1954, when 4 million cubic yards of sediment were removed to create a water area of over 250 acres with a mean depth of approximately 5 feet

below mean lower low water (MLLW) (USFWS, 1976). Two riprap-lined channels were completed in 1954. The main entrance channel to the lagoon (135 feet wide and over 300 feet long, with a maximum depth of 6 feet below MLLW) was constructed in the northwestern corner, and a smaller across-the-beach cooling water discharge channel was constructed at the southwestern corner. Sand has entered the lagoon at the rate of approximately 100,000-150,000 cubic yards per year. To insure an adequate supply of cooling water for the plant, it has been necessary to remove the sand deposits by dredging the outer lagoon at approximately two- to three-year intervals.

Outer Lagoon

In accordance with Section 404 of the 1972 Clean Water Act (33 USC 1344), SDG&E has been permitted, first under Corps Permit No. 80-160 issued in 1981 and subsequently under Permit No. 87-111-AA issued in 1987, to continue dredging the outer lagoon. In conjunction with issuing Permit 87-171, the Corps biological staff prepared an environmental assessment according to Section 404(b)(1) guidelines. The Corps findings anticipated changes in lagoon circulation, currents, and an increase in turbidity due to particulates suspended during removal of 200,000 to 500,000 cubic yards of lagoon sediments. The Corps issued the permit after incorporating comments from USFWS and CDFG, included as special conditions requiring mitigation for previous losses of eelgrass (*Zostera marina*) habitat and potential adverse impacts to grunion (*Leurethes tenuis*) and California least tern (*Sterna albifrons browni*). Since the original permit was issued, it has been amended six times in response to modification requests from the permitee (SDG&E). These amendments have extended the yearly dredging and discharge cycles and authorized increases in periodic and yearly dredging volumes.

The terms and conditions of Permit No. 87-111-AA and the permit modifications (which took effect between 1988 and 1996) will remain in full force upon sale of the Encina Power Plant. These terms limit the volume and timing of sand removal and discharge/disposal to mitigate for grunion spawning and least tern nesting. Potential adverse impacts to grunion spawning and eelgrass are further addressed through monitoring and reporting requirements.

Since 1996, the permitee has been mandated to "conduct grunion spawning monitoring at any affected discharge beaches" and submit a monitoring report to the Corps, NMFS, USFWS, and CDFG within 30 days following discharge. The permitee is required to immediately notify these agencies and cease discharge/disposal activity in the event spawning is observed.

Since 1987, permit conditions have required SDG&E to map and record the existing eelgrass beds prior to and following each dredging operation. Thirty days prior to and again upon completion of dredging, a large-scale base map delineating the length, width, and density of eelgrass beds must be submitted to the Corps, USFWS, NMFS, and CDFG. Additional conditions specify operations, notification, and revegetation parameters. Revegetation activities occurred in 1993, pursuant to construction of aquaculture facilities, and have been monitored since that time. These surveys (MBC, 1995, 1996, 1997), which map the distribution, areal

cover, and density of transplanted eelgrass compared to control areas, indicate that recovery is occurring successfully.

Middle and Inner Lagoons

Since construction of the power plant in 1954, the middle and inner lagoons have not been subject to maintenance dredging activities. In 1997, SDG&E was permitted to dredge sand that had encroached into the middle lagoon, thus restoring the tidal prism and ensuring an adequate supply of cooling water for the power plant. Corps Permit No. 95-20135-DZ authorizes both one-time and annual dredging of the middle lagoon, limiting discharge to a 1,100-foot-long by 200-foot-wide stretch of beach, south of the discharge jetty. In February 1998, the removal of 647,000 cubic yards of material from the inner lagoon was initiated; spoils were stored in constructed borrow pits and ultimately discharged to permitted areas of Carlsbad State Beach. The dredging project, which is to be completed by the spring of 1999, includes specific conservation measures that were identified by SDG&E to minimize unavoidable impacts to federally and/or state-listed species during dredging. These measures were identified in a Biological Assessment (Merkel, 1998) and Biological Opinion (USFWS #1-6-98-F-18, 1998) pursuant to Section 7 of the Endangered Species Act. A summary of these measures includes:

- Monitoring of habitat changes in the marshlands of the eastern end of the lagoon and calculation of any net loss of riparian-associated habitat will be conducted annually for a period of five years. Habitat changes shall be reported on or prior to November 1 of each year, along with an analysis of probable causative agents of change.

- Dredging will result in removal of approximately 9.3 acres of eelgrass that will be mitigated through compliance with the Southern California Eelgrass Mitigation Policy 1991 (NMFS, 1994), as amended.

- Cordgrass (*Spartina foliosa*) will be reintroduced to the eastern end of the lagoon near the mouth of Agua Hedionda Creek in a two-phased transplant. The first phase of transplanting shall occur within nine months of completion of the inner lagoon dredging and shall serve as a pilot planting to identify the optimal sites for a larger, second transplant, to be completed within 24 months of the completion of the inner lagoon dredging. The cordgrass reintroduction shall provide for a minimum of 1,500 cordgrass planting units. The cordgrass planting would provide compensatory habitat replacement for the potential loss of some of the cattail marsh habitat occupied by the pair of clapper rails in 1997. The cordgrass restoration must result in the establishment of no less than 0.5 acres within five years of completion of the inner lagoon dredging. Monitoring and reporting on the status of cordgrass shall be conducted annually for five years and reported on or prior to November 1 of each year.

- All in-water construction activities conducted between April 1 and September 15 shall be monitored for turbidity in order to assess potential impacts to California least tern and California brown pelican foraging areas. Surface turbidity shall be monitored at the startup of dredge operation and on a continual basis thereafter. A brief summary of the daily monitoring efforts shall be submitted to the Corps, USFWS, and CDFG every month. The monitoring report shall describe the date of monitoring efforts, weather and wind conditions, observations, and measurements made regarding turbidity levels. If dredging activities result in a surface turbidity plume extending more than 300 feet in any direction

from the dredge activities within the lagoon, or 2,000 feet from the point of discharge to the Pacific Ocean, and the surface turbidity persists longer than one hour, then SDG&E shall immediately modify dredging operations or use silt controls to meet these performance criteria. If turbidity criteria cannot be met then SDG&E shall suspend activities and the Corps and SDG&E shall consult with USFWS pursuant to Section 7 of FESA to explore alternative means and need for further measures to minimize adverse effects.

Special Status Species

California Least Tern

A summer resident of the southern and central California coast, the nearest nesting colonies of California least tern (*Sterna antillarum brownii*), a federal and state endangered species, occur at Batiquitos Lagoon, 4.2 miles to the south, and at the mouth of the Santa Margarita River, 7.4 miles to the north. In the past, tern nested on the salt panne at the eastern end of the inner lagoon (MEC, 1995). Off-road vehicular activities and predation led to nesting failures and the species has not reproduced in the lagoon since 1975 (Bradshaw *et al*, 1976). Any dredging activities would elevate turbidity levels and potentially adversely affect foraging opportunity or success for this species.

California Brown Pelican

A non-breeding resident of the California mainland coast, the California brown pelican (*Pelecanus occidentalis californicus*), a federal and state endangered species, has made a significant recovery from its formerly declining population levels, primarily due to the banning of the pesticide DDT in the U.S. This species has been observed to roost and loaf on the aquaculture racks in the outer lagoon (MEC, 1995). As with the least tern, dredging activities would elevate turbidity levels and potentially adversely affect foraging opportunity or success.

Light-footed Clapper Rail

A pair of light-footed clapper rail (*Rallus longirostris levipes*), a federal and state endangered species, was observed in previous studies (Merkel, 1998), 1,400 feet from the upper reach of normal higher high water. Dredging activities have the potential to reduce the overall abundance of cattail marsh habitat, but not within the vicinity of the clapper rail pair.

Western Snowy Plover

A common migrant and winter visitor and a fairly common breeding resident in San Diego County, the western snowy plover (*Charadrius alexandrinus nivosus*), a federal threatened and state species of special concern, has historically nested in the lagoon, but not in recent years. Long-term effects of dredging activities would be to expand the area and productivity of foraging grounds available for this species. No critical habitat has been designated for this species within the areas potentially affected by dredging activities.

Least Bell's Vireo

No critical habitat within the dredging influence area has been designated for the least Bell's vireo (*Vireo bellii pusillus*), a federal and state endangered species. The vireo is a known nesting summer resident within willow woodlands located approximately 1,800 feet upstream of the mean high water inundation area along Agua Hedionda Creek (Merkel, 1998) and has been reported within Macario Canyon.

Belding's Savannah Sparrow

A bird of middle marsh, pickleweed habitats, the Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), a state endangered species, is a resident breeder of the eastern end of the inner lagoon. Long-term effects of dredging are anticipated to be the enhancement of the quality and quantity of pickleweed.

California Gnatcatcher

The California gnatcatcher (*Polioptila californica*) is a state species of special concern, while a subspecies, the California coastal gnatcatcher (*Polioptila californica californica*), is a federal threatened species. The gnatcatcher is a resident within sage scrub habitat located to the north and east of the lagoon. The nearest nesting areas are located approximately 800 feet north of the lagoon along the south side of Park Drive.

SOUTH BAY POWER PLANT

The South Bay Power Plant is located on the southeastern shore of South San Diego Bay. Salt evaporation ponds are located 1,500 feet southwest of the plant site. The Chula Vista Wildlife Reserve, a small island-like area created from dredge deposits, is located west of the power plant properties, between the cooling water intake and discharge channels, and supports low-marsh vegetation, predominantly cordgrass (*Spartina foliosa*). A narrow strip of this salt marsh habitat occurs along the northwest edge of the site. Both the salt ponds and the reserve provide high-quality wildlife habitat. Tidal flats and marsh within 5,000 feet of the project site provide feeding and roosting habitat for various shore birds, rails, herons, and ducks, in contrast with the terrestrial habitats associated with the power plant properties for sale, which are developed or disturbed.

The fuel oil pipeline connecting the 24th Street Terminal with the South Bay Power Plant runs over the 316-acre Sweetwater Marsh National Wildlife Refuge. The marsh area provides critical habitat for the California least tern, the snowy plover, and the light-footed clapper rail. USFWS personnel have recently noticed that parts of this pipeline appear to be deteriorating and may not have the structural integrity to withstand an earthquake without rupturing (Rundle, 1998).

Cooling Water Studies

The following cooling water studies were conducted by SDG&E in compliance with Clean Water Act Sections 316(a) and (b), discussed above for the Encina Power Plant.

Thermal Effects Assessment – Section 316(a) Demonstration

Under the terms and conditions of the state Thermal Plan, cooling water discharges from South Bay Power Plant Units 1 through 4 were classified as existing discharges, making them subject to less stringent regulations than discharges initiated after the adoption of the plan. However, as SDG&E did not request exception for these units from Clean Water Act Section 316(a) pursuant to their existing discharge status, water quality standards for thermal discharge contained within the Thermal Plan have been incorporated into the plant's NPDES permits.

In 1972 and 1973, SDG&E conducted a thermal effects study as required by the Thermal Plan. The study concluded that the existing elevated-temperature wastes discharged from the South Bay Power Plant had caused no prior appreciable harm to the aquatic community of San Diego Bay nor to the beneficial uses of those waters. However, the study also concluded that the discharge had adverse effects on the benthic community within the discharge channel, which, for the purpose of the study, was not considered to be part of San Diego Bay. A subsequent USEPA data review of annual summer benthic studies conducted between 1977 and 1994 concluded that no appreciable long-term upward or downward trends in species diversity or abundance had occurred within the discharge channel. Finding SDG&E in compliance with thermal discharge requirements, the Regional Board issued an NPDES permit adopted under Order No. 85-09.

Since then, SDG&E has requested authorization from the Regional Board for a change in operations that would increase the amount of cooling water effluent at the South Bay plant. In response, the Regional Board issued a revised permit, CA0001368, in 1996 under Order No. 96-05. This order requires SDG&E to conduct further comprehensive effluent studies, which are currently being conducted.

Entrainment and Impingement — Section 316(b) Demonstration

In December 1980, SDG&E submitted the final results of the Section 316(b) Demonstration to the Regional Board. The study concluded that "the low and insignificant level of impact demonstrates that the existing South Bay Power Plant intake system represents the best technology available for this specific site to minimize adverse environmental impacts" (SDG&E, 1980). In 1993, the USEPA reviewed the demonstration and concurred with the results, deeming the South Bay Power Plant to be in compliance with Section 316(b). NPDES permit CA0001368 was issued under Order No. 96-05.

Special Status Species

California Least Tern

The Chula Vista Wildlife Reserve west of the power plant, the Sweetwater Marsh National Wildlife Reserve to the north, and the salt pond dikes to the south are known nesting sites for California least tern. SDG&E currently has an informal agreement with the Chula Vista Wildlife Reserve to control and limit access to the Chula Vista Wildlife Reserve's nesting sites.

California Brown Pelican

The pelican roosts along the dikes of the Chula Vista Wildlife Island and adjacent salt ponds, and also occurs at Sweetwater Marsh National Wildlife Refuge (Ford, 1994).

Light-footed Clapper Rail

This species is known to occur at Sweetwater Marsh National Wildlife Refuge (Ford, 1994).

Western Snowy Plover

The plover nests along the salt work dikes and utilizes the embankment leading to the Chula Vista Wildlife Island. This species is also known to occur at Sweetwater Marsh National Wildlife Refuge (Ford, 1994).

Peregrine Falcon

The peregrine falcon (*Falco peregrinus*), a federal endangered species currently being considered for downlisting to threatened status or delisting entirely from the endangered species list, has repeatedly been observed using parts of the South Bay Power Plant as perches for foraging on the Chula Vista Wildlife Reserve. The peregrine often feeds on the California least tern and the snowy plover.

Elegant Tern

The elegant tern (*Sterna elegans*), a state species of special concern, breeds at only two locations in the United States (USFWS, 1994), one of which is the diked area between the Chula Vista Wildlife Island and the salt ponds.

Green Sea Turtles

Green sea turtles (*Chelonia mydas*) are known to occur in San Diego Bay in general and within the cooling water discharge channel of the South Bay Power Plant in particular. The green sea turtle is a federal threatened species, with nesting populations along the Pacific coast of Mexico listed as endangered. Population estimates for San Diego Bay range from 50 to 72 turtles, the majority of which appear to be concentrated in the effluent channel (McDonald *et al*, 1994). Sea turtles typically require an ambient water temperature range of approximately 46 to 90 degrees Fahrenheit. Turtles have been observed in the effluent channel year-round, but tend to spend more time in the bay during summer months and to be attracted to the warmer waters of the channel during winter months (McDonald *et al*, 1994). However, the San Diego Bay colony appears to consist mainly of foraging juveniles (i.e., non-breeding). Therefore, the USFWS does not believe that protecting green sea turtles in this region would necessarily lead to increased populations (Rundle, 1998), as the San Diego Bay individuals would likely return to their original breeding grounds once mature.

Marine Mammals

Marine mammals such as harbor seals (*Phoca ditulina geronimensis*) and California sea lions (*Zalophus californianus*) occur in San Diego Bay. Both species usually prefer the deeper areas of the northern and central bay, but harbor seals have been observed near the cooling water discharge channel, possibly foraging on aquatic organisms attracted to the elevated water temperatures. All marine mammals are federally protected by the Marine Mammal Protection Act.

24TH STREET TERMINAL REFUELING FACILITY AND COMBUSTION TURBINES

The 24th Street Terminal and the various CT sites are generally located in highly developed urban areas and contain no sensitive biological resources. The two exceptions to this are the CTs at the Marine Corps (formerly Naval) Air Station Miramar and the former Naval Training Center. The Miramar Air Station property to the south of SDG&E's Miramar facility contains several vernal pools, which are known to contain sensitive species. The site is otherwise highly industrialized. The site of the Naval Training Center contains a nesting colony of endangered California least tern (*Sterna antillarum browni*). Protection of this colony has been addressed during the environmental review process for reuse of the training center.

CEQA GUIDELINES SECTION 15206

This section specifies that a project shall be deemed to be of statewide, regional, or areawide significance if it would substantially affect sensitive wildlife habitats including, but not limited to, riparian lands, wetlands, bays, estuaries, marshes, and habitats for rare and endangered species as defined by Fish and Game Code Section 903.

CEQA GUIDELINES SECTION 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a "candidate species" that has not yet been listed by either the USFWS or CDFG. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

For the purposes of this report, three criteria were used to determine impacts significance:

- Magnitude of the impact (e.g., substantial/not substantial)
- Uniqueness of the affected resource (rarity)

- Susceptibility of the affected resource to disturbance (sensitivity)

The evaluation of significance must consider the interrelationship of these three components. For example, a relatively small-magnitude impact (e.g., disturbing a nest) to a state or federally listed species would be considered significant because the species is at low population levels and is presumed to be susceptible to disturbance. Conversely, a common habitat such as Mixed Chaparral is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact (e.g., removal of extensive vegetation) would be required to result in a significant impact.

Impacts are generally considered less than significant if the habitats and species affected are common and widespread in the region and the state.

CHECKLIST ISSUES

a) ENDANGERED, THREATENED, AND RARE SPECIES

These species are defined for the purpose of this assessment to include species in the following categories, including those considered to meet CEQA Guidelines Section 15380 criteria as rare, threatened, or endangered: plants or animals listed or proposed for listing as rare, threatened, or endangered under the CESA or the FESA; plants included on lists 1A, 1B, and 2 of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (CNPS, 1994); animals designated by the CDFG as "species of special concern" or that have been designated as "protected" or "fully protected" by the state or federal government under law (e.g., the Bald Eagle Protection Act). Collectively, these species are also referred to as "special status" species.

Marine Organisms

South Bay

The mortality of sea turtles due to entrainment during cooling water intake is an issue of concern at the South Bay Power Plant. However, trawling studies conducted in 1992 and 1993 revealed no green sea turtles in the cooling water intake channel (Eckert, 1994), and no incidents of turtle entrainment have been reported to date. It is unlikely that such entrainment will occur in the future because the turtles appear to be attracted to the warm waters of the discharge channel (McDonald *et al,* 1994), which is physically separated from the intake channel by a jetty and peninsula.

Combined Issues

Marine organisms in the vicinity of the power plants are primarily impacted by the intake and discharge of ocean and bay water for the cooling of the Encina and South Bay Power Plants. Existing NPDES permits limit the volume, temperature, and constituent concentrations of the discharge. As NPDES permits are not directly transferable, new owners will have to apply to the

Regional Board for new permits. These new permits may involve no more than a name change (i.e., new owner(s) become permittee), but may also include new conditions.

Increased future power generation at either power plant could increase the volume of cooling water taken into the plants. The volume and/or temperature of cooling water discharge may also increase. However, both water intake and discharge would need to comply with existing or future NPDES permits. Therefore, the associated impacts would be less than significant.

Terrestrial Organisms

Encina

California least tern and western snowy plover require sandy beach habitat for nesting. Along the City of Carlsbad coastline, the prevailing direction of the offshore current during most of the year is north to south, a condition that has contributed to the erosion of beaches north of the Encina Power Plant that are known to support nesting activity. Under its current California Coastal Commission coastal development permit for dredging the Agua Hedionda Lagoon, SDG&E is required to place a total of 150,000 cubic yards of sand to the north of the lagoon inlet prior to Memorial Day, 1999 (California Coastal Commission, 1998).

South Bay

Access to California least tern nesting sites in the Chula Vista Wildlife Reserve is currently being controlled and limited by SDG&E under an informal agreement with the Chula Vista Wildlife Reserve. Failure by a new owner to implement similar access restrictions could potentially result in increased human disturbance of the terns, constituting a significant impact on that species.

Combined Issues

The NCCP described above provides SDG&E with a FESA Section 10(a) permit, which authorizes the incidental take of listed species if such take occurs during otherwise lawful activities. All of SDG&E's facilities are covered under this permit. Although SDG&E may assign its rights, interests, and/or obligations under the NCCP to a new owner, it does not have the power to assign its Section 10(a) permit to the new owner(s). The latter may obtain a new incidental take permit on the basis of the NCCP and Implementing Agreement upon satisfaction of the following requirements (SDG&E, 1995b):

- USFWS and CDFG approval.
- Filing of an application for an incidental take permit by the assignee.
- USFWS determination that the assignee is qualified to hold a permit.
- USFWS determination that SDG&E is in full compliance with its permits.

Should SDG&E *not* assign, in part or whole, its rights, interests, and/or obligations under the NCCP to a new purchaser, or should the new owner(s) not obtain a new incidental take permit, the new owner(s) would be subject to take prohibitions under FESA/CESA and subsequent

separate review of actions. Any unauthorized "take" of a listed species would constitute a significant impact.

In addition, SDG&E currently has access to in-house biological and regulatory experts familiar with individual sites and the unique context of environmental protection at power stations. Important species and habitats in the vicinity of the project sites could be threatened in the future if new owners were unaware of the presence and sensitivity of such biological resources. This could be a significant impact.

Mitigation Measures

4.7.a.1: Prior to the sale of any SDG&E facility, the new owner(s) will apply to the USFWS, CDFG, the RWQCB, and other agencies for the reissuance of all non-transferable permits (e.g., FESA Section 10(a), NPDES) that are applicable to that facility, and will agree in writing to the respective regulatory agencies to abide by the provisions and requirements of the current permits in the interim.

Monitoring Action:	SDG&E will submit copies to the CPUC of requests for reissuance of all pertinent permits from the respective regulatory agencies and a written commitment by the new owner(s) to abide by the existing permit conditions prior to reissuance.
Responsibility:	CPUC
Timing:	At least 30 days before the title transfer.

4.7.a.2: SDG&E shall assign, and the assignee shall accept through affidavit, the following permits and agreements: oil spill contingency plans, current dredging permits, and NCCPs.

Monitoring Action:	SDG&E will provide the CPUC with a list of transferable permits, as well as documentation that such permits will be successfully transferred concurrent with the transfer of title of the plant(s).
Responsibility:	CPUC
Timing:	At least five business days prior to transfer of title of the plant(s).

4.7.a.3: The new owner(s) of the South Bay Power Plant shall enter into a formal agreement with the Chula Vista Wildlife Reserve to limit access to California least tern nesting sites on the portions of the cooling water dike falling within the Chula Vista Wildlife Reserve.

Monitoring Action:	A copy of the agreement with the Chula Vista Wildlife Reserve regarding the Chula Vista Wildlife Reserve will be provided to the CPUC.
Responsibility:	CPUC
Timing:	At least five business days prior to transfer of title of the plant(s).

4.7.a.4: SDG&E shall provide each new owner with all available information on special status species and habitat, as well as training documents regarding biological resources at the respective facilities. This will assist new owners in knowing the location of special status

species and habitats, and in meeting their legal obligations regarding endangered, threatened, or rare species or their habitats.

Monitoring Action:	SDG&E will provide the CPUC mitigation monitor with disclosure forms signed by the new owner listing documents received to accomplish this condition.
Responsibility:	CPUC
Timing:	At least five business days prior to transfer of title of the plant(s)

Conclusion

With the incorporation of the above mitigation measures, the impact of the project on endangered, threatened, or rare species or habitat would be less than significant.

b) LOCALLY DESIGNATED SPECIES

These species are defined for the purpose of this assessment as those *not* meeting the CEQA Guidelines criteria described above but of other public concern, i.e., plants or animals that have been identified for local protection or concern.

Encina Power Plant

Disposal of dredge spoils south of the Encina Power Plant has the potential to adversely affect spawning success of grunion (*Leurethes tenuis*), a recreationally important fish species that spawns on sandy beaches within the vicinity of the plant. As a condition of a dredge-period extension permit issued April 10, 1996 by the Corps and the most recent California Coastal Commission permit, SDG&E is required to comply with a Grunion Protection Plan which establishes monitoring and reporting criteria for dredged material disposal during spawning season. Should the new owner(s) of the Encina Power Plant assume control of the facility prior to termination of the current dredging project in the spring of 1999, compliance with the Grunion Protection Plan will become the responsibility of the new owner(s). Failure to comply with the dredging permits and the Grunion Protection Plan would be a significant impact.

South Bay Power Plant

No locally designated species have been identified at this site.

Mitigation Measures

See Mitigation Measure 4.7.2

Conclusion

With implementation of the above mitigation measure, the impact of the project on locally designated species would be less than significant.

c) LOCALLY DESIGNATED NATURAL COMMUNITIES

Locally designated natural communities are classifications of native vegetation that are either protected or recommended for avoidance and protection by local ordinances and policies. In many cases, these natural communities are already protected by state and federal laws. Natural communities that are typically designated as sensitive within San Diego County include all wetland areas, drainages, vernal pools, streams, rivers, oak woodlands, coastal salt marsh, southern maritime chaparral, Diegan coastal sage scrub, intertidal zones, and beach areas.

Encina Power Plant

Sensitive habitats associated with Agua Hedionda Lagoon and the Pacific Ocean can be found in the vicinity of the Encina Power Plant. Impacts to these habitats are regulated by the federal government and the State of California through the USFWS, USEPA, the Corps, CDFG, and the RWQCB.

South Bay Power Plant

Sensitive habitats associated with South San Diego Bay occur in the vicinity of the South Bay Power Plant. Impacts to these habitats are regulated by the same agencies listed above.

Conclusion

No locally designated natural communities would be impacted by the project.

d) WETLAND HABITAT

Combined Issues

The Encina and South Bay facilities contain wetlands under the jurisdiction of the Corps, USFWS, and CDFG. These wetland habitats include nearshore subtidal, flat, and marsh vegetation communities that support kelp, eelgrass, and the species whose presence has been previously discussed. No new activities within jurisdictional wetlands are expected to result from the divestiture project. Therefore, wetland habitats would not be impacted.

Conclusion

No wetland habitats would be impacted by the project.

e) WILDLIFE DISPERSAL AND MIGRATION CORRIDORS

Combined Issues

Neither of the power plants, nor the combustion turbines and marine terminal, would be more obstructive to wildlife movements than is presently the case, given any reasonably foreseeable changes in operation or use of the sites.

Conclusion

Because the project would not adversely affect wildlife dispersal and migration corridors, related impacts would be less than significant.

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