MINUTE ITEM
This Calendar Item No. 73 was approved as Minute Item No. 73 by the California State Lands Commission by a vote of 3 to 0 at its 6-14-99 meeting.

CALENDAR ITEM
73

A 73
S 38

PRC 8097

06/14/99
W 25004
J. Smith

GENERAL LEASE - NON-INCOME PRODUCING

LESSEE:
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, California 91770

AREA, LAND TYPE, AND LOCATION:
862 acres, more or less, of sovereign lands in the Pacific Ocean, near San Clemente, Orange County.

AUTHORIZED USE:
Construction and maintenance of an artificial kelp reef.

LEASE TERM:
Full operating life of San Onofre Nuclear Generating Station (SONGS) Units 2 and 3 plus seven years, not to exceed a maximum of 37 years, beginning August 1, 1999.

CONSIDERATION:
Minimum Annual Rent as follows: Year 1 - $20,400; Years 2-6 - $20,160 per annum; Year 7 - $135,585; Years 8-10 - $135,000 per annum; with the State reserving the right to fix a different rent periodically during the lease term, as provided in the lease.

SPECIFIC LEASE PROVISIONS:
Insurance:
$1,000,000 combined single limit coverage or an approved self-insurance program.

OTHER PERTINENT INFORMATION:
1. The applicant proposes to construct a 150-acre artificial kelp reef project in two phases as mitigation for operation of the SONGS Units 2 and 3. Such mitigation is required by the California Coastal Commission pursuant

to Coastal Development Permit 6-81-330. Phase I will involve the construction of a 22.4-acre experimental kelp reef test project that will be monitored for five years. If successful, Phase II will involve the design and construction of a minimum of 127.6 additional acres of reef. This may require additional environmental information. The applicant is required to manage the full mitigation reef for a period equivalent to the operating life of SONGS which is estimated to be approximately 37 years. The California Coastal Commission is responsible for monitoring the success of the full mitigation reef.

2. Although the proposed lease area encompasses a total of 862 acres the annual rent was calculated based on the actual area used for the project. During Phase I of the proposed project the Lessee will construct 22.4 acres of reef and will need 1.62 acres of temporary construction area for the 60-day construction period. The first year's rent is based on the area needed for the reef and the temporary construction area. Rent for years two through six of the lease is based on the actual area of the constructed experimental reef (22.4 acres). If the experimental reef is successful then the full project will be constructed, as Phase II, during year seven of the lease. Rent for year seven includes the actual area occupied by the proposed reef project (150 acres) and a temporary construction area of 0.65 acres for the 12-month construction period. This temporary construction area is smaller than that for the experimental reef because the construction method used is different. Rent for lease years eight through ten is based on the actual area occupied by the constructed reef (150 acres).

3. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (Title 14, California Code of Regulations, section 15025), the staff has prepared an EIR identified as CSLC EIR No. 685, State Clearinghouse No. 98031027. Such EIR was prepared and circulated for public review pursuant to the provisions of the CEQA. A Mitigation Monitoring Program has been prepared in conformance with the provisions of the CEQA (Public Resources Code section 21081.6), Exhibit D, attached hereto.

4. Findings made in conformance with the State CEQA Guidelines (Title 14, California Code of Regulations, section 15091) are contained in Exhibit C, attached hereto.

5. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code sections 6370, et seq. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

FURTHER APPROVALS REQUIRED:

United States Army Corps of Engineers; Regional Water Quality Control Board; California Coastal Commission; California State Lands Commission.

EXHIBITS:

A. Location And Site Map
B. Legal Description
C. CEQA Findings
D. Mitigation Monitoring Program

PERMIT STREAMLINING ACT DEADLINE:

March 22, 2000

RECOMMENDED ACTION:

IT IS RECOMMENDED THAT THE COMMISSION:

CEQA FINDING:

CERTIFY THAT AN EIR NO. 685, STATE CLEARINGHOUSE NO. 98031027, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.

ADOPT THE FINDINGS, MADE IN CONFORMANCE WITH TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15091, AS CONTAINED IN EXHIBIT C, ATTACHED HERETO.

ADOPT THE MITIGATION MONITORING PROGRAM, AS CONTAINED IN EXHIBIT D, ATTACHED HERETO.

DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

SIGNIFICANT LANDS INVENTORY FINDING:

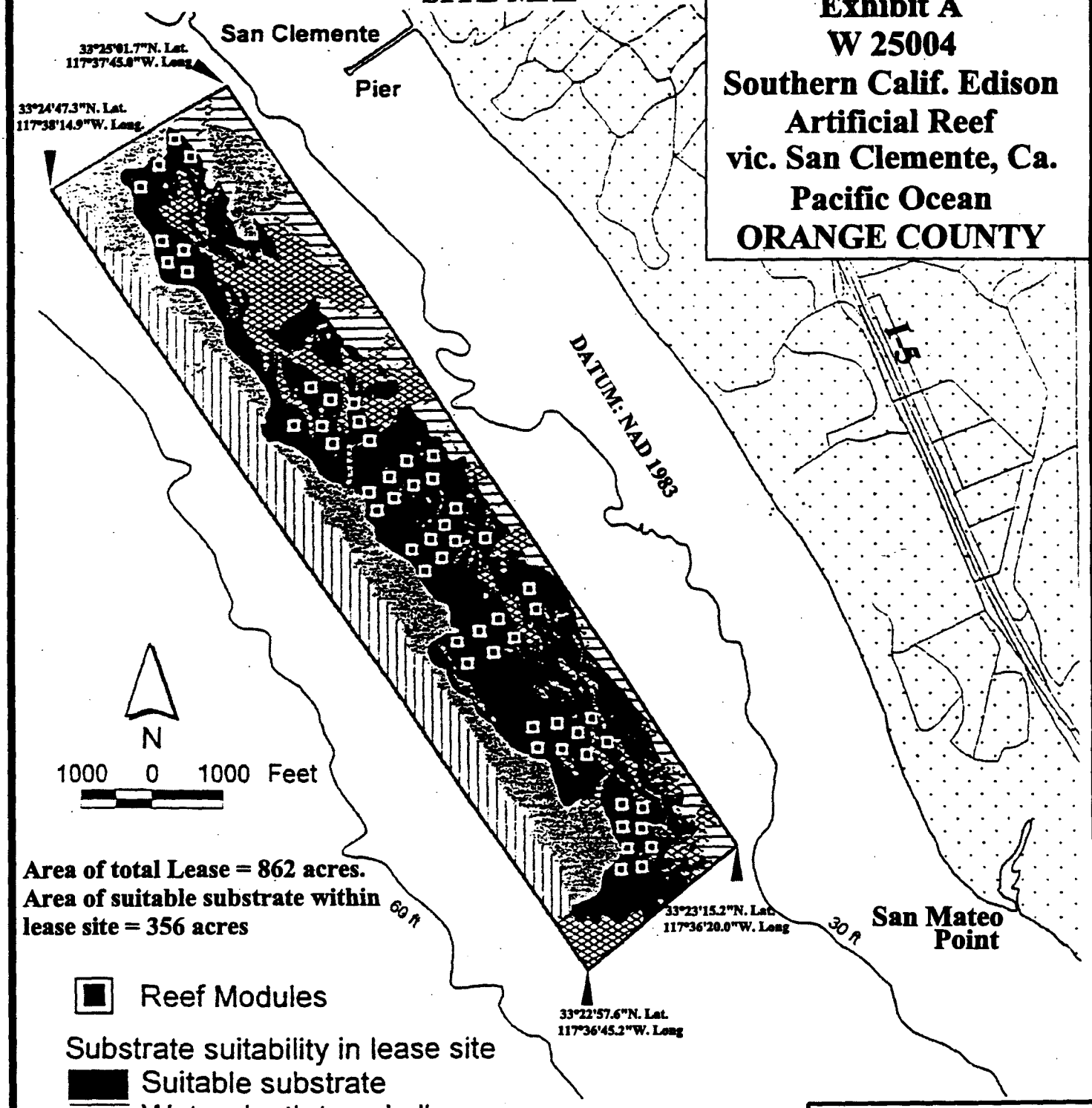
FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED BY THE COMMISSION FOR THE LAND PURSUANT TO PUBLIC RESOURCES CODE SECTIONS 6370, ET SEQ.

AUTHORIZATION:

AUTHORIZE ISSUANCE TO SOUTHERN CALIFORNIA EDISON COMPANY OF A GENERAL LEASE – NON-INCOME PRODUCING, BEGINNING AUGUST 1, 1999, FOR THE FULL OPERATING LIFE OF SONGS UNITS 2 AND 3 PLUS SEVEN YEARS NOT TO EXCEED A MAXIMUM TERM OF 37 YEARS, FOR CONSTRUCTION AND MAINTENANCE OF AN ARTIFICIAL KELP REEF ON THE LAND SHOWN ON EXHIBIT A ATTACHED AND BY THIS REFERENCE MADE A PART HEREOF; MINIMUM ANNUAL RENT AS FOLLOWS: MINIMUM ANNUAL RENT AS FOLLOWS: YEAR 1 - $20,400; YEARS 2-6 - $20,160 PER ANNUM; YEAR 7 - $135,585; YEARS 8-10 - $135,000 PER ANNUM; WITH THE STATE RESERVING THE RIGHT TO FIX A DIFFERENT RENT PERIODICALLY DURING THE LEASE TERM, AS PROVIDED IN THE LEASE; LIABILITY INSURANCE FOR COMBINED SINGLE LIMIT COVERAGE OF $1,000,000 OR AN APPROVED SELF-INSURANCE PROGRAM.

SITE MAP

Exhibit A
W 25004
Southern Calif. Edison
Artificial Reef
vic. San Clemente, Ca.
Pacific Ocean
ORANGE COUNTY



Proposed positions of experimental reef modules and substrate suitability within the SCE lease site offshore of San Clemente Ca.

This Exhibit is solely for purposes of generally defining the lease premises, and is not intended to be, nor shall it be construed as, a waiver of limitation of any state interest in the subject or any other property.

EXHIBIT B

W 25004
May 13, 1999

LEGAL DESCRIPTION

A parcel of submerged land in the Pacific Ocean in the vicinity of the city of San Clemente, and San Mateo Point, Orange County, California, more particularly described as follows:

A four (4) sided parcel of submerged land in the Pacific Ocean having the following North American Datum 1983 geographic coordinates:

1. Latitude 33° 25' 01.7" North, Longitude 117° 37' 45.0" West
2. Latitude 33° 23' 15.2" North, Longitude 117° 36' 20.0" West
3. Latitude 33° 22' 57.6" North, Longitude 117° 36' 45.2" West
4. Latitude 33° 24' 47.3" North, Longitude 117° 38' 14.9" West,

containing 862 acres, more or less.

END OF DESCRIPTION

RL;rl

EXHIBIT C
CEQA FINDINGS

FINDINGS REGARDING THE ENVIRONMENTAL EFFECTS OF THE CONSIDERATION OF A NEW LEASE FOR THE CONSTRUCTION AND MANAGEMENT OF AN EXPERIMENTAL ARTIFICIAL REEF ON STATE TIDE AND SUBMERGED LANDS NEAR SAN CLEMENTE, ORANGE COUNTY

INTRODUCTION

The findings made by the California State Lands Commission (CSLC), pursuant to Section 15901, Title 14, California Administrative Code, on the proposed Consideration of a New Lease for the Construction and Management of an Experimental Artificial Reef on State Tide and Submerged Lands near San Clemente, Orange County, California, are presented below. All significant impacts of the project identified in the Final Program Environmental Impact Report (Final PEIR) are included herein and organized according to the resource affected, e.g., air, geology, transportation, and so forth.

For each significant impact, a finding has been made as to one or more of the following as appropriate:

A. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

C. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final PEIR.

The findings are followed by a narrative of the facts supporting them. For all of the impacts, findings A and B described above have been made. Finding (B) appears because, although the CSLC is the California Environmental Quality Act (CEQA) Lead Agency, it has the jurisdiction over only a portion of the project and thus has limited power to require or enforce mitigation without such jurisdiction. Whenever Finding (B) occurs, agencies with jurisdiction have been specified. It is these agencies, within their respective spheres of influence, that would have the ultimate responsibilities to adopt, implement, and enforce the mitigation discussed within each type of potential impact that could result from project implementation. However, under adopted California statutory legislation (AB3180, CORTESE), the CEQA Lead Agency has the responsibility to ensure that mitigation measures contained in an EIR are effectively implemented.

For identification and discussions of significant impacts within the Final PEIR, significance was classified according to the following definitions:

- Class I - A significant adverse impact that cannot be mitigated to a level of insignificance.

- Class II - A significant adverse impact that can be mitigated to a level of insignificance.

PROJECT PROPONENT:

Southern California Edison Company for the owners of the San Onofre Nuclear Generating Station (SONGS), including also San Diego Gas and Electric Company, City of Anaheim and City of Riverside.

PROPOSED PROJECT:

This Final PEIR evaluates the environmental effects of the construction and management of an artificial reef developed in two phases. The California Coastal Commission (CCC) has required the owners of SONGS to carry out this project to mitigate for resource losses associated with operation of SONGS Units 2 and 3 at the nearby San Onofre Kelp bed (SOK). The requirements for mitigation are outlined in the SONGS Coastal Development Permit No. 6-81-330-A, as amended by the CCC in May 1997. The first phase would be a 22.4-acre experimental reef constructed of 56 quarry rock and recycled concrete modules (each 0.4-acre in size) that tests different materials, levels of coverage of the ocean bottom, treatments of kelp planting and the influence of location within the site. This experimental reef will be monitored for a five-year period. In six to seven years, a second phase of development would commence involving the design and construction of at least 127.6 additional acres of low-relief, artificial reef, supporting a total of 150 acres of sustainable, medium-to-high density kelp beds (defined as having a minimum of four plants per $100m^2$) and associated kelp bed biota. Only the experimental reef phase is being permitted at this time.

AGENCIES WITH JURISDICTION/RESPONSIBILITY TO MITIGATE:

South Coast Air Quality Management District (SCAQMD)
San Diego Air Pollution Control District (SDAPCD)
California Department of Parks and Recreation (CDPR)
California Coastal Commission (CCC)
City of San Clemente
City of San Diego
City of Los Angeles
City of Long Beach

AIR QUALITY: Daily and Quarterly Emissions Exceed Thresholds

Impact: Construction activities for the experimental reef would produce daily emissions of NOx and PM_{10}, and quarterly emissions of NOx that exceed the thresholds of significance.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (SCAQMD, SDAPCD).

Facts Supporting the Finding

Significant impacts to air quality result from the construction of the experimental reef project. The experimental reef involves the construction of 56 modules (0.4 acre each), which requires the placement of 17,640 tons of quarry rock and 13,860 tons of recycled concrete. The construction would be completed over 32 days. Under a worst-case construction scenario, the total estimated daily emissions for both PM_{10} and NOx exceed the thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD) in the *CEQA Handbook*. The PM_{10} emissions are almost 4 times more than the daily threshold and NOx emissions are almost 5 times more than the daily threshold.

Quarterly emissions were estimated for total construction emissions over 32 days (although some construction activities occur over only 16 days), which would occur within one quarter (a quarter is 78 working days). As a result, the quarterly emissions are also the total project emissions for the experimental reef. Quarterly emissions are estimated by multiplying daily emissions by either 16 days or 32 days for different components of the construction activities and then taking the sum. Estimated quarterly NOx emissions exceed the threshold of significance by 1.9 times, while PM_{10} quarterly emissions are not exceeded.

There are three different mitigation strategies for reducing these emissions to less-than-significant levels: 1) standard mitigation measures for construction related emissions recommended by the air districts; 2) purchasing or leasing emission offsets; and 3) changes in construction activities that reduce emissions. In the probable worst-case scenario that was used for the evaluation of impacts, virtually all PM_{10} emissions would be generated as fugitive road dust from trucks hauling reef materials from inland quarry rock and recycled concrete suppliers to the port. The problem of exceeding daily thresholds of significance is largely a function of transport distance and the number of truck trips per day. As a result the mitigation measures focus on adjusting these factors.

The largest contributors of NOx emissions are tugboats used for towing barges to the reef site. Significant NOx emissions also result from the use of a crane on a derrick barge with an assisting

tugboat. Mitigation measures are also focused on options for first reducing these emissions and then for purchasing offsets.

The significant daily NOx and PM_{10} emissions and quarterly NOx emissions resulting from construction of the experimental reef will be mitigated to a less-than-significant level by implementing a combination of standard mitigation measures, emissions offsets and/or changes in construction activities. Once the project proponent has awarded a construction contract for the experimental reef, the final mitigation measures will be negotiated with the project proponent, the CSLC and the appropriate air districts.

The Final PEIR presents an example of how the significant impacts could be mitigated for the experimental reef after implementing the following measures:

- *Standard Measures:*

1. Apply water sprays to the concrete piles and graveled areas at least twice daily. Water down quarry rock and conveyer belts if soil is visible. Increase the frequency of watering when wind speeds exceed 15 miles per hour (30 percent reduction of PM_{10} from unpaved areas).

2. Extend pavement from roads or access ways to concrete piles to remove at least three-quarters of the gap. Apply quality gravel to the remaining unpaved area so that vehicles and mobile equipment never maneuver on dirt (vehicle miles traveled on unpaved roads reduced by 75 percent).

3. Sweep streets manually or with water sweepers at the end of the workday if visible soil material is carried onto private or public paved roads. Reclaimed water shall be used, if available with the water sweepers (35 percent reduction of PM_{10} from paved roads).

4. Retard injection timing on diesel engines to two degrees Before Top Center (estimated ten percent reduction in NOx emissions).

5. Use high pressure injectors on diesel engines to reduce NOx emissions by approximately 40 percent (not applicable to tugboats).

- *Changes in Construction Activities:*

1. Ship concrete from the Port of Los Angeles or Long Beach.
2. Use concrete brokers located as close as possible to the port.
3. Load each concrete barge over a three-day period.
4. Use quarry rock from Catalina Island.

In this example, significant impacts from PM_{10} emissions are reduced to a less-than-significant level on a daily basis. In addition, the NOx emissions are reduced by over 50 percent for this component of construction. Rock obtained at Catalina Island would require a minimal amount of trucking.

Under this scenario, shorter shipping distances from Catalina Island (2.5 hours less) and Ports of Los Angeles/Long Beach (2.1 hours less) would reduce the NOx emissions. The emissions for one barge from Catalina Island would be 232.08 lbs/day and for one barge from Ports of Los Angeles/Long Beach emissions would be 238.49 lbs/day (versus the 272.10 lbs/day from Port of San Diego). While this represents approximately a 15 percent reduction in NOx emissions, these would still exceed the threshold of significance. A final mitigation measure could be implemented involving:

- ***Purchase or lease of NOx emission offset credits.***

The combination of available mitigation measures will reduce significant impacts to a less-than-significant level.

GEOLOGY: Movement of Building Materials onto Beaches or into Shallow Surf Zone

Impact: Rock or concrete materials washing onto the beach or into the shallow surf zone would alter the natural landforms and aesthetic resources and would be considered a significant impact.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (City of San Clemente, CDPR, CCC).

Facts Supporting the Finding

The potential for the concrete and quarry rock from the reef to be washed ashore was addressed through a review of existing information (Elwany et al. 1998). There is a potential for the reef building materials to be moved during extreme storm events, particularly if attached kelp creates a degree of buoyancy.

Emery and Tschudy (1941, cited in Elwany et al. 1998) surveyed an area about 0.8 mile in length, north and south of La Jolla, inspecting the beaches for the presence of rocks, washed up on the beach, with kelp attached. They found a total of 93 kelp "holdfasts," of which 17 had pebbles attached, and seven had rocks attached. The largest rock found was 15 inches long and weighed 13 pounds.

It should be noted that the materials to be used in building the reef, both concrete and quarry rock will be substantially larger than 15 inches long and 13 pounds in weight, although some smaller rock will likely be mixed in with the preferred larger sizes. It is also possible that smaller pieces of material could break off as it is placed in the ocean.

This information suggests that the smaller rocks and pieces of concrete associated with the experimental and mitigation reefs could be washed up on the beaches adjacent to the lease area and into the surf zone during typical storm events. Although the information appears to alleviate an immediate concern that the materials used in the artificial reefs might readily move onto the beach, no conclusive evidence precludes the possibility that substantial rock or concrete might be moved onshore during an extreme storm event. There are no standards that apply to this potential effect of the proposed project. However, rock or concrete washing up on area beaches and the shallow surf would conflict with several beach protection goals, objectives, and policies contained in the *Orange County General Plan* and the *City of San Clemente General Plan.* These include the goal of maintaining the visual character of the beach area, the objectives of minimizing the disruption of natural landforms and preserving aesthetic resources; and the policy to protect the unique variety of scenic landforms. Therefore, this would be considered a significant impact.

The experimental reef will be monitored for the movement of construction material during storm events. The monitoring will be on a biweekly basis from the months of November through March and monthly during the rest of the year. The monitoring visits will be coordinated to occur immediately after any large storm events (by the next day). Any recycled concrete or quarry rock from the experimental or mitigation reefs, which is found on the beaches or shallow surf, would be removed by the project proponent. This would reduce impacts to a less-than-significant level.

TRANSPORTATION: Construction Truck Traffic on Local Roadways

Impacts: Construction truck traffic would exceed significance thresholds for level of service on local roadways in both Los Angeles and San Diego during peak hours.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (Cities of San Diego, Los Angeles, Long Beach).

Facts Supporting the Finding

Los Angeles/Long Beach Area. During the p.m. peak hour (4:00 to 6:00 p.m.), all but six of the Los Angeles/Long Beach area study intersections operate at acceptable or better levels of service (LOS). The project construction traffic during the p.m. peak hour would reduce the LOS at two intersections, Ocean Boulevard and Atlantic Avenue, and Ocean Boulevard and Cherry Avenue, to unacceptable levels. This is considered a significant impact.

With the exception of p.m. peak hour traffic on northbound I-710 between Pacific Coast Highway and Willow Street, all Los Angeles/Long Beach area freeway segments considered are currently operating at acceptable or better levels of service. The addition of experimental reef

construction traffic would alter the level of service during the a.m. peak hour on southbound I-710 between Pacific Coast Highway and Willow Street from LOS D to LOS E. This is considered a significant impact.

San Diego Area. With the exception of a.m. peak hour traffic on northbound I-5 between Palm Avenue and 24th Street and p.m. peak hour (7:00 to 9:00 a.m.) traffic on the same segment of southbound I-5, all project study area freeways considered are currently operating at acceptable or better levels of service. The addition of experimental reef construction traffic would alter the level of service during the a.m. peak hour on northbound I-5 between L and J Streets from LOS E to LOS F. This exacerbation of an existing deficiency on I-5 is considered a significant impact.

The project proponent and all project contractors will restrict truck trips to off-peak travel hours (9:00 a.m. to 4:00 p.m.). The rescheduling of truck traffic to off-peak travel hours ensures that construction-related truck trips would not exacerbate existing, or cause new, capacity deficiencies on study area roadways. This mitigation would reduce the impact to a less-than-significant level.

HAZARDS: Movement of Building Materials onto Beaches or into Shallow Surf Zone

Impact: Rock or concrete materials washing onto the beach or into the shallow surf zone could create health hazards and would be considered a significant impact.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (City of San Clemente, CDPR, CCC).

Facts Supporting the Finding

The experimental reef and mitigation reef may have an impact on hazards by the presence of artificial reef materials offshore of San Clemente. The experimental reef has the potential to introduce quarry rock and concrete onto the beaches or into the surf zone nearest to the lease site. Kelp plants attached to rock or concrete would increase the buoyancy of the reef material and possible movement during large storm events. The rock or concrete could present a hazard to beach users. Large wave events have been observed to lift and move entire boulders with kelp plants attached at least several hundred feet, including onto the beach (Dailey et al. 1993). Observations on local beaches from a 1941 study showed that pebbles and small rocks have been washed ashore under these conditions (Emery and Tschudy 1941; Elwany et al. 1998). However, in this study the largest rocks observed onshore with kelp holdfasts attached weighed just 13 pounds.

According to Elwany et al. (1998), the transport of concrete or quarry rock from the lease area to the beach or surf zone would be unlikely. This conclusion appears to be supported by the personal experience of the Mission Beach Maintenance Manager, who has not found any artificial reef material along the beaches adjacent to the CDFG Mission Beach artificial reef, constructed of recycled concrete (Simmons 1998). In concept, however, large wave events could result in the transport of some kelp and reef material onshore and into the surf zone. Furthermore, the City of San Clemente has experienced problems periodically with large rocks washing onshore or into the shallow surf after major storm events (Hughes 1997a).

Concrete and quarry rocks are not natural components of the beach environment, and the presence of concrete pieces on the shoreline would potentially affect the safety of the beach environment. People walking on the beach could be injured by an unexpected block of concrete or rock. People wading, swimming, or surfing could be injured and become incapacitated in the water, leading to drowning. This is considered a significant impact.

The experimental reef will be monitored for the movement of construction material during storm events. The monitoring will be on a biweekly basis from the months of November through March and monthly during the rest of the year. The monitoring visits will be coordinated to occur immediately after any large storm events (by the next day). Any recycled concrete or quarry rock from the experimental or mitigation reefs, which is found on the beaches or shallow surf, would be removed by the project proponent. This would reduce impacts to a less-than-significant level.

NOISE: Construction Truck Traffic

Impacts: Construction truck traffic would exceed significance thresholds for noise levels in Los Angeles and San Diego for residential and commercial zones.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (Cities of San Diego, Los Angeles, Long Beach).

Facts Supporting the Finding

The noise created by project trucks is subject to maximum noise emission limits set by the Motor Vehicle Code. Among other things, the Motor Vehicle Code requires the trucks to be equipped with an adequate muffler to prevent excessive noise. Nevertheless, the short duration increases in noise associated with passing project trucks have the potential to conflict with residential land uses in the County of Los Angeles, County of San Diego, and City of San Diego, particularly during nighttime hours.

The use of project trucks within residential and commercial zones would conflict with the applicable noise control ordinances for these zones. The conflict would be particularly substantial during the nighttime, when more restrictive thresholds apply. The use of truck routes within residential and commercial zones would create noise levels in conflict with the County of Los Angeles, County of San Diego, and City of San Diego noise control ordinances. This is considered a significant impact.

Contractors will be directed to avoid the use of routes within areas zoned for residential and commercial uses. In the event such routes cannot be avoided, the contractor will be directed to avoid use of these routes during the weekday hours of 7 p.m. to 7 a.m., and all day Sunday. This will reduce this impact to a less-than-significant level.

PUBLIC SERVICES: Movement of Building Materials onto Beaches or into Shallow Surf Zone

Impact: Rock or concrete materials washing onto the beach or into the shallow surf zone could create a hazard and the need for additional public services, which would be considered a significant impact.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (City of San Clemente, CDPR, CCC).

Facts Supporting the Finding

There is a very small chance some rocks or pieces of concrete used to construct the experimental reef could wash onshore or into the surf zone because of added buoyancy from attached kelp plants. The reef construction materials are intended to be large rocks and pieces of concrete, however some smaller fragments could result from handling. These fragments are likely to be dispersed and buried before kelp can attach and grow on them. The remaining larger rocks and concrete pieces would remain stable and are unlikely to wash onshore or into the surf zone.

Concrete and quarry rocks are not natural components of the beach environment, and the presence of concrete pieces on the shoreline would potentially affect the safety of the beach environment. People walking on the beach could be injured by an unexpected block of concrete or rock. People wading, swimming, or surfing could be injured and become incapacitated in the water, leading to drowning. This is considered a significant impact.

The experimental reef will be monitored for the movement of construction material during storm events. The monitoring will be on a biweekly basis from the months of November through March and monthly during the rest of the year. The monitoring visits will be coordinated to occur immediately after any large storm events (by the next day). Any recycled concrete or

quarry rock from the experimental or mitigation reefs, which is found on the beaches or shallow surf, would be removed by the project proponent. This would reduce impacts to a less-than-significant level.

RECREATION: Movement of Building Materials onto Beaches or into Shallow Surf Zone

Impact: Rock or concrete materials washing onto the beach or into the shallow surf zone could create a hazard and creates conflicts with recreation plans and policies, which would be considered a significant impact.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (City of San Clemente, CDPR, CCC).

Facts Supporting the Finding

There is a very small chance some rocks or pieces of concrete used to construct the experimental reef could wash onshore or into the surf zone because of added buoyancy from attached kelp plants. The reef construction materials are intended to be large rocks and pieces of concrete, however some smaller fragments could result from handling. These fragments are likely to be dispersed and buried before kelp can attach and grow on them. The remaining larger rocks and concrete pieces would remain stable and are unlikely to wash onshore or into the surf zone.

Concrete and quarry rocks are not natural components of the beach environment. The presence of quarry rocks or concrete would conflict with general goals and objectives of applicable recreation plans and policies. This could also discourage the use of beaches in the area for recreation. In addition, the presence of concrete pieces on the shoreline would potentially affect the safety of the beach environment. People walking on the beach could be injured by an unexpected block of concrete or rock. People wading, swimming, or surfing could be injured and become incapacitated in the water, leading to drowning. This is considered a significant impact.

The experimental reef will be monitored for the movement of construction material during storm events. The monitoring will be on a biweekly basis from the months of November through March and monthly during the rest of the year. The monitoring visits will be coordinated to occur immediately after any large storm events (by the next day). The beach monitoring would track the number of complaints from beach users or nearby residents and businesses due to rocks or concrete on the beaches or in the shallow surf zone. Any recycled concrete or quarry rock from the experimental or mitigation reefs, which is found on the beaches or shallow surf, would be removed by the project proponent. This would reduce impacts to a less-than-significant level.

SOCIOECONOMICS: Construction of the Experimental Reef

Impact: Construction of the experimental reef could affect recreational sportfishing operators by restricting use within the project area.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (CCC).

Facts Supporting the Finding

The construction phase of the experimental reef (between May 1 and September 30) could potentially impact recreational sportfishing operators by restricting use within the project area during the 32 days of construction. In accordance with Coast Guard safety regulations, the construction site would be marked with buoys to limit access. However, there are numerous alternative fishing sites that could be utilized during the construction period. A local sportfishing excursion boat operator indicated that notification of construction activities, including barge traffic, would assist in planning daily excursions to avoid conflicts. The interference of construction with recreational fishing businesses is considered a potentially significant impact for the experimental reef.

Recreational fishing businesses that conduct operations in the project area will be notified of project-related activities two weeks prior to the onset of construction. Notification shall include a map of the project site, hours and duration of operation, and the predicted path of barge travel into and out of the construction site.

The notification of recreational fishing operators detailed above will allow operators to adequately plan for alternative fishing sites in advance of arrival at the construction site. This would limit any economic losses related to time lost by searching for alternative sites while conducting sportfishing operations. The implementation of this mitigation measure will reduce the impacts associated with both the experimental reef and the mitigation reef to less-than-significant levels.

Impact: Construction of the experimental reef could affect commercial fishing activities by excluding fishermen from proven grounds or destroying equipment.

Finding:

A. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environment effect as identified in the Final PEIR.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency (CCC).

Facts Supporting the Finding

The construction of both the experimental reef and mitigation reef is planned to occur between May 1 and September 30, which is outside of the season for commercial lobster fishing in the project lease area. This represents mitigation that has been incorporated into the project description. There could be disruptions to commercial fishing activities for sea urchins and crabs during the construction of the reefs, as these species are fished year-round. The experimental reef would only take 32 days to construct, but the mitigation reef could take anywhere from two to four construction seasons to complete. The exclusion of commercial fishermen from a proven fishing ground during construction could impact their livelihood if they did not have an alternate site to fish during that period. In addition, if fishing equipment was on the ocean floor during construction, it could be destroyed by the placement of reef materials. This is a potentially significant impact for both the experimental reef and the mitigation reef.

As incorporated into the project description, construction activities will be limited to the period between May 1 and September 30, to avoid the commercial lobster fishing season. These mitigation measures which were incorporated into the project description were as a result of meetings and consultations with affected fishermen. In addition, commercial fishermen that conduct operations in the project area shall be notified of project-related activities two weeks prior to the onset of construction. Notification shall include a map of the project site, hours and duration of operation, and the predicted path of barge travel into and out of the construction site.

The notification of commercial fishermen would allow for them to select alternative urchin and crab fishing sites and to collect any fishing equipment, such as crab pots, from the project area prior to the onset of construction. This would lessen any economic losses associated with both the experimental reef and the mitigation reef to a less-than-significant level.

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Section 2. Socioeconomics				
Recreational Fishing Businesses – Experimental and Mitigation Reefs				
The construction phases for both the experimental reef and the mitigation reef could potentially impact recreational sportfishing operators by restricting use within the project area during construction.	Recreational fishing businesses that conduct operations in the project area shall be notified of project-related activities two weeks prior to the onset of construction. Notification shall include a map of the project site, hours and duration of operation, and the predicted path of barge travel into and out of the construction site.	Two weeks prior to onset of construction of the experimental and mitigation reefs.	Project proponent to implement/monitoring by CSLC/CCC.	
Commercial Fishing Activities – Experimental and Mitigation Reefs				
The construction of both the experimental reef and mitigation reef in the project lease area is planned to occur between May 1 and September 30, which is outside of the commercial lobster fishing season. However, there could be disruptions to commercial fishing activities for sea urchins and crabs during the construction, as these species are fished year-round.	Commercial fishermen that conduct operations in the project area shall be notified of project-related activities two weeks prior to the onset of construction. Notification shall include a map of the project site, hours and duration of operation, and the predicted path of barge travel into and out of the construction site.	Two weeks prior to onset of construction of the experimental and mitigation reefs.	Project proponent to implement/monitoring by CSLC/CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Commercial Fishing Sites – Experimental Reef				
There is concern that proposed project activities would place rock or concrete material on existing hard substrate and kelp bed resources, which could impact known fishing sites. However, the experimental reef would cover only 22.4 acres of the 356-acre project site/862-acre lease site, allowing flexibility in the choice of module locations, and the use of a crane would allow a fairly high level of precision in placing the material. The SONGS permit conditions clearly state that no rock or concrete material is to be placed on existing hard substrate or kelp bed resources.	Commercial fishermen that utilize the project area shall be consulted prior to the location of the 22.4-acre experimental reef. During consultations, proven fishing grounds shall be identified so that they can be avoided, if possible, during the construction of the mitigation reef.	Prior to the location of the experimental reef.	Project proponent to implement/monitoring by CSLC/CCC.	
Commercial Fishing Sites – Mitigation Reef				
Permit conditions for the mitigation reef specifically state that reef material will not be placed on existing hard substrate or kelp beds. However, the placement of material over 127.6 to 277.6 acres increases the possibility of some of these resources being accidentally covered by reef material. Accidental coverage of hard substrate or kelp forest could reduce suitable habitat for target species.	Commercial fishermen that utilize the project area shall be consulted prior to finalization of the location for the 127.6-acre mitigation reef. During consultations, proven fishing grounds shall be identified so that they can be avoided, if possible, during the construction of the mitigation reef.	Prior to finalization of the mitigation reef location.	Project proponent to implement/monitoring by CSLC/CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Section 3. Geology				
Movement of Reef Building Materials onto Beaches – Experimental and Mitigation Reefs				
There is a potential for the reef building materials to be moved during extreme storm events, particularly if the attached kelp creates a degree of buoyancy. The smaller rocks and pieces of concrete associated with the experimental and mitigation reefs could be washed up on the beach or into the shallow surf zone adjacent to the lease area during typical storm events. No conclusive evidence precludes the possibility that substantial rock or concrete might be moved ashore during an extreme storm event.	Both the experimental and mitigation reef will be monitored for movement of construction material during storm events. The monitoring will be on a biweekly basis from November through March and monthly during the rest of the year, consistent with the program outlined under the public services section. Any recycled concrete or quarry rock from the reefs, which is found on the beaches or shallow surf zone will be removed by the project proponent.	Experimental Reef: Ongoing for the five year monitoring after construction of the experimental reef, on a biweekly basis from November through March and on a monthly basis during the other months. Mitigation Reef: Ongoing for five years or as long as needed after construction of the mitigation reef is completed, or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches or into the shallow surf zone on a biweekly basis from November through March and on a monthly basis during the other months.	Project proponent, to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC. Project proponent to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Section 4. Air Quality				
Experimental Reef Construction Emissions	*Combination of Following Possible Mitigation Measures*	*Final Mitigation Package to be Negotiated Once the Construction Contractor has been Selected*	*Project Proponents and Contractors, CCC, CSLC, and Air Districts*	
The combined construction activities for the 22.4-acre experimental reef would produce daily emissions of NOx and PM_{10} that exceed the thresholds of significance. Quarterly NOx emissions would also exceed the threshold of significance.	*Standard Mitigation Measures* : *1. Reducing PM_{10} Emissions.* • Apply water sprays to the concrete piles and graveled areas at least twice daily. Water down quarry rock and conveyer belts if soil is visible. Increase the frequency of watering when wind speeds exceed 15 miles per hour. • Extend pavement from roads or access ways to concrete piles to remove at least three-quarters of the gap. Apply quality gravel to the remaining unpaved area so that vehicles and mobile equipment never maneuver on dirt. • Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.	Measures to be applied prior to or during project construction.	Project proponent and contractor to implement/monitoring by CCC, CSLC, and Air Districts.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Experimental Reef Construction Emissions (cont.)	• Plan routes and schedules for truck trips that reduce trip times and slowdowns. • Sweep streets manually or with water sweepers at the end of the workday if visible soil material is carried onto private or public paved roads. Reclaimed water shall be used, if available with the water sweepers (35 percent reduction of PM_{10} from paved roads). • Keep traffic speeds on unpaved roads and access ways to 15 mph or slower. • Pave a dirt road or lot that is currently generating PM_{10} emissions, which is unrelated to the proposed project but in the vicinity of the truck hauling operations. 2. *Reducing to NOx Emissions.* • Instruct truck drivers to not idle their engines for more than two minutes (except when caught in traffic). Spot checks shall be periodically performed as part of the Mitigation Monitoring Program to verify success. • Implement a trip reduction strategy to achieve a 1.5 AVR (average vehicle ridership) for construction employees. • Retard injection timing on diesel engines to two degrees Before Top Center. • Use high pressure injectors on diesel engines to reduce NOx emissions by approximately 40 percent.			

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Experimental Reef Construction Emissions (cont.)	• Retrofit tugboats used on the project with CAT 3606 series high efficiency diesel engines or other engine retrofit technologies currently being tested. 3. *Purchase Emission Offsets* • Purchase or lease NOx emission offset credits for project related emissions for the length of the construction period. *Potential Changes in Construction:* • Finding reef material sources closer to the ports • Obtaining quarry rock from Catalina Island where minimal trucking is required • Taking more time to load barges • Obtaining recycled concrete closer to the project site • Obtaining quarry rock closer to the project site	Measures to be applied prior to or during project construction.	Project proponent and contractor to implement/monitoring by CCC, CSLC.	
Mitigation Reef Construction Emissions	*Combination of Following Possible Mitigation Measures*	*Final Mitigation Package to be Negotiated Once the Construction Contractor has been Selected*	*Project Proponents and Contractors, CCC, CSLC, and Air Districts*	
The combined construction activities for any of the mitigation reef build out scenarios (either 127.6-acre or 277.6-acre with all concrete or all rock at 67%) would produce daily emissions of NOx and PM_{10} that exceed the thresholds of	*Standard Mitigation Measures* *All of those measures listed above for the experimental reef.*	Measures to be applied prior to or during project construction.	Project proponent and contractor to implement/monitoring by CCC, CSLC and Air Districts.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Mitigation Reef Construction Emissions (cont.)				
significance. In addition, the quarterly emissions for NOx and PM_{10} would also exceed the thresholds of significance. Looking at the breakdown of emissions by the type of construction activity helps identify mitigation opportunities: PM_{10} emissions for the truck loading, hauling, and barge loading activities would be the same on a daily basis as for the experimental reef and would substantially exceed the daily threshold of significance. In addition, the mitigation reef emissions would also exceed the PM_{10} quarterly threshold for significance due to the longer periods of construction with the different scenarios. Daily NOx emissions for tugboat shipping would substantially exceed the daily threshold of significance. In addition, the mitigation reef emissions would also exceed the NOx quarterly threshold for significance due to the longer periods of construction.	*Potential Changes in Construction*: • Finding reef material sources closer to the ports • Obtaining quarry rock from Catalina Island where minimal trucking is required • Taking more time to load barges • Obtaining recycled concrete closer to the project site • Obtaining quarry rock closer to the project site • Using less building material to construct the reef • Using concrete instead of quarry rock to construct the mitigation reef • Taking more time to construct the project • Using less building material to construct the reef • Using concrete instead of quarry rock to construct the mitigation reef Using the live boating method of off-loading	Measures to be applied prior to or during project construction.	Project proponent and contractor to implement/monitoring by CCC, CSLC, and Air Districts.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Mitigation Reef Construction Emissions (continued)				
The barge off-loading element of the mitigation reef would produce daily emissions that are the same as for the experimental reef. In addition, the mitigation reef construction would result in quarterly NOx emissions that exceed the threshold of significance.				
Section 5. Transportation				
Experimental Reef Construction				
Intersection Levels of Service Los Angeles/Long Beach Area. Project construction traffic during the p.m. peak hour would reduce the LOS at two intersections, Ocean Boulevard and Atlantic Avenue, and Ocean Boulevard and Cherry Avenue, to unacceptable levels.	The project proponent and all project contractors shall restrict truck trips to off-peak travel hours (9:00 a.m. to 4:00 p.m.).	Ongoing during any experimental reef construction activities in the Los Angeles/Long Beach area.	Project proponent and project contractors, with monitoring by CSLC/CCC.	
Freeway Operations Los Angeles/Long Beach Area. The addition of experimental reef construction traffic would alter the level of service during the a.m. peak hour on southbound I-710 between Pacific Coast Highway and Willow Street from LOS D to LOS E.	The project proponent and all project contractors shall restrict truck trips to off-peak travel hours (9:00 a.m. to 4:00 p.m.).	Ongoing during any experimental reef construction activities in the San Diego area.	Project proponent and project contractors, with monitoring by CSLC/CCC.	

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Experimental Reef Construction (continued)				
Freeway Operations - San Diego Area. The addition of experimental reef construction traffic would alter the level of service during the a.m. peak hour on northbound I-5 between L and J Streets from LOS E to LOS F.	The project proponent and all project contractors shall restrict truck trips to off-peak travel hours (9:00 a.m. to 4:00 p.m.).	Ongoing during any construction activities in the San Diego area.	Project proponent and project contractors to implement/monitoring by CSLC/CCC.	
Mitigation Reef Construction				
Intersection Levels of Service Los Angeles/Long Beach Area. Project construction traffic during the p.m. peak hour would reduce the LOS at two intersections, Ocean Boulevard and Atlantic Avenue, and Ocean Boulevard and Cherry Avenue, to unacceptable levels.	The project proponent and all project contractors shall restrict truck trips to off-peak travel hours (9:00 a.m. to 4:00 p.m.).	Ongoing during any construction activities in the Los Angeles/Long Beach area.	Project proponent and project contractors to implement/monitoring by CSLC/CCC.	
Freeway Operations Los Angeles/Long Beach Area. The addition of experimental reef construction traffic would alter the level of service during the a.m. peak hour on southbound I-710 between Pacific Coast Highway and Willow Street from LOS D to LOS E.	The project proponent and all project contractors shall restrict truck trips to off-peak travel hours (9:00 a.m. to 4:00 p.m.).	Ongoing during any construction activities in the Los Angeles/Long Beach area.	Project proponent and project contractors to implement/monitoring by CSLC/CCC.	
Freeway Operations San Diego Area. The addition of experimental reef construction traffic would alter the level of service during the a.m. peak hour on northbound I-5 between L and J Streets from LOS E to LOS F.	The project proponent and all project contractors shall restrict truck trips to off-peak travel hours (9:00 a.m. to 4:00 p.m.).	Ongoing during any construction activities in the San Diego area.	Project proponent and project contractors to implement/monitoring by CSLC/CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Section 6. Biological Resources				
Existing Kelp Forest Community				
Experimental and Mitigation Reefs				
Nutrients and Plankton Supply. The kelp forests associated with the experimental reef and the mitigation reef could adversely affect the supply of nutrients and plankton to the San Mateo kelp forest community, which could result in damage to the existing kelp forest.	During the experimental reef phase of the project, conduct research to determine effects of the kelp forest perimeter on the supply of nutrients and plankton to, and the rates of nutrient uptake in, the interior portion of the kelp forest. The research shall be conducted in natural kelp forests similar in size and kelp density to the proposed mitigation kelp reef and during periods when nutrient stress of kelp plants would be likely. If the research suggests that the mitigation reef, as currently planned, would adversely affect the San Mateo kelp forest, then the location of the mitigation reef would be shifted north to avoid these effects. If the scientific research results indicate that the mitigation reef would have no adverse effect on the San Mateo kelp forest, no further mitigation would be required.	During five year monitoring period for experimental reef.	Project proponent to implement/monitoring by CCC.	
Section 8. Hazards				
Health Hazards				
The experimental and mitigation reefs have the potential to introduce quarry rock and concrete onto the beaches and into the shallow surf zone nearest the lease site. In concept, large wave events could result in the transport of some kelp and reef material onshore. Concrete and	Both the experimental and mitigation reef will be monitored for movement of construction material during storm events. The monitoring will be on a biweekly basis from November through March and monthly during the rest	<u>Experimental Reef</u> Ongoing for five years after construction of the experimental reef, on a biweekly basis from	Project proponent to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Health Hazards (continued)				
quarry rocks are not natural components of the beach environment, and the presence of concrete pieces on the shoreline would potentially affect the safety of the beach environment. People walking on the beach could be injured by an unexpected block of concrete or rock. People wading, swimming, or surfing could be injured and become incapacitated in the water, leading to drowning.	of the year, consistent with the program outlined under the public services section. Any recycled concrete or quarry rock from the reefs, which is found on the beaches or in the shallow surf will be removed by the project proponent.	November through March and on a monthly basis during the other months. Mitigation Reef. Ongoing for five years or as long as needed after construction of the mitigation reef is completed, or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches or shallow surf zone, on a biweekly basis from November through March and on a monthly basis during the other months.		

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Section 9. Noise				
Construction Noise				
Truck Routes. The use of project trucks within residential and commercial zones would conflict with the applicable noise control ordinances for these zones. The conflict would be particularly substantial during the nighttime, when more restrictive thresholds apply. The use of truck routes within residential and commercial zones would create noise levels in conflict with the County of Los Angeles, County of San Diego, and City of San Diego noise control ordinances. This is considered a significant impact.	Contractors will be directed to avoid the use of routes within areas zoned for residential and commercial uses. In the event such routes cannot be avoided, the contractor will be directed to avoid use of these routes during the weekday hours of 7 p.m. to 7 a.m., and all day Sunday.	Ongoing during project construction activities.	Project proponent and contractors to implement/monitoring by CSLC/CCC.	
Section 10. Public Services and Utilities				
Offshore Emergency Response				
Reef Construction. The need for offshore emergency response services could occur during the construction of the experimental reef and mitigation reef. Available Orange County Harbor Patrol emergency response services would be adequate to handle any problems during the construction phase, and the construction would not create any problems for the Harbor Patrol in carrying out their duties. In addition, it is expected that current Coast Guard emergency services would be adequate for any problems that might occur.	The Harbor Patrol requested that they be notified when the construction plans and schedule for the experimental reef are finalized. The Harbor Patrol will be given notification two weeks prior to when construction activities are beginning for both the experimental and mitigation reefs.	Two weeks prior to initiation of experimental reef construction activities and two weeks prior to initiation of mitigation reef construction activities.	Project proponent to implement/monitoring by CSLC/CCC.	

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Kelp and Beach Maintenance				
Experimental Reef. The 22.4-acre experimental artificial reef could potentially add twice the current amount of persistent kelp bed to the project area. The additional kelp wrack washing on shore from the experimental reef represents a relatively small increase in kelp wrack and is not likely to increase the need for clean up services. There is a very small chance some small rocks or pieces of concrete used to construct the experimental reef could wash onshore or into the shallow surf zone because of the added buoyancy from attached kelp plants.	A monitoring program will be initiated upon the construction of the experimental reef and continued for the following five years to determine the amount of kelp wrack currently washing onto the beaches. Because the City of San Clemente and CDPR do not collect data on the amount of kelp washing onto beaches currently, monitoring would establish a baseline. The monitoring of the experimental reef should also observe whether concrete or quarry rock are moved toward the beach during strong wave events. This monitoring would make it easier to compare changes due to the experimental reef or to the subsequent build out of the mitigation reef, as outlined below. The beach monitoring would be done on a bi-weekly basis throughout the months of November through March and on a monthly basis during the other months. The monitoring visits would be coordinated to occur immediately after any large storm events (by the next day). The beach monitoring would include: 1) observations of the amount of kelp wrack on the beach (cubic yards and/or percentage coverage); 2) tracking beach clean up schedules and costs (including disposal); and 3) tracking the number of complaints from beach users or nearby residents and businesses due to kelp or rocks/concrete on the beaches. The movement of the concrete and quarry rock would be monitored as a component of the larger performance monitoring effort.	Ongoing for five years after construction of the experimental reef, on a biweekly basis from November through March and on a monthly basis during the other months.	Project proponent, to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Kelp and Beach Maintenance (continued)				
Mitigation Reef. If a significant increase in the amount of kelp wrack reaching the beaches occurs, there could be a need for additional public services to clean up the kelp. The full mitigation reef with 150 acres of medium-to-high density kelp bed could increase the amount of kelp washing onshore annually by up to 3,000 yd^3, primarily between the months of November through February. There is a small chance some small rocks or pieces of concrete used to construct the experimental reef could wash onshore because of the added buoyancy from attached kelp plants.	Due to uncertainty regarding the amount, frequency and location of increased kelp washing onshore, kelp on the beaches shall be monitored as part of the experimental reef (as discussed above) and the larger mitigation reef. Although rocks and concrete used in constructing the reef are not likely to wash onshore or into the shallow surf, the monitoring program shall also observe this possibility. Monitoring shall be conducted for five years or as long as needed after construction of the mitigation reef is completed, or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches. This would be done on a bi-weekly basis throughout the months of November through March and on a monthly basis during the other months. The monitoring visits would be coordinated to occur immediately after any large storm events (by the next day). The monitoring would include: 1) observations of the amount of kelp wrack on the beach (cubic yards and/or percentage coverage) and of potential rocks/concrete; 2) tracking beach clean up schedules and costs (including disposal); and 3) tracking the number of complaints from beach users or nearby residents and businesses due to kelp and rocks/concrete on the beaches.	Ongoing for five years or as long as needed after construction of the mitigation reef is completed, or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches, on a biweekly basis from November through March and on a monthly basis during the other months.	Project proponent, with monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Kelp and Beach Maintenance (continued)	Based on the results during the monitoring period, it would be determined if additional clean up services are needed as a result of the artificial reef. This clean up would occur at any time it is determined it is necessary during monitoring. Possible mitigation includes the project proponents establishing a trust fund to pay for: 1) leasing or purchasing special equipment for clean up, or possibly to bury kelp in the sand; 2) additional personnel for beach clean up; and/or 3) landfill or other disposal costs for kelp and rocks/concrete removed. Based on the results of the monitoring, it would be determined if additional clean up services are needed as a result of the artificial reef. Mitigation would include the project proponents establishing a trust fund to pay for: (1) leasing or purchasing special equipment for clean up, or possibly to bury kelp in the sand; (2) additional personnel for beach clean up; and/or (3) land fill or other disposal costs for kelp and rocks/concrete removed.			
Section 11. Aesthetics				
Effects on Scenic Vistas or Scenic Highways				
Reef Construction. The presence of several barges 0.6 mile and farther offshore at the project site would not substantially alter the area's visual integrity as seen from any designated scenic routes or view corridors.	It is recommended that the project proponent conduct an educational outreach program to inform the public about the project and the construction activities. This would include notifying the media and residents about the type and duration of construction activities a	One month prior to initiation of reef construction activities and continuing throughout the construction period.	Project proponent, to implment/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Effects on Scenic Vistas or Scenic Highways (cont.)	month prior to beginning construction. Temporary notices would also be posted along the shore at the San Clemente Pier and near the mouth of San Mateo Creek.			
Demonstrable Negative Aesthetic Effects				
Reef Construction. The appearance of project-related barges operating approximately 0.6 mile offshore would resemble existing offshore vessel activities, which include commercial fishing and shipping, and U.S. military exercises. Consequently, project construction activities are not expected to diminish the project area's visual quality.	It is recommended that the project proponent conduct an educational outreach program to inform the public about the project and the construction activities. This would include notifying the media and residents about the type and duration of construction activities a month prior to beginning construction. Temporary notices would also be posted along the shore at the San Clemente Pier and near the mouth of San Mateo Creek.	One month prior to initiation of reef construction activities and continuing throughout the construction period.	Project proponent, to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	
Section 13. Recreation				
Effects of a Kelp Forest				
Mitigation Reef. The development of an additional 150 acres of medium-to-high density kelp forest within the lease area has the potential to substantially increase kelp wrack on the adjacent beaches by as much as 3,000 yd^3 per year. The additional kelp wrack on area beaches would adversely affect recreation if it discouraged use by the public.	Due to uncertainty regarding the amount, frequency and location of increased kelp washing onshore, kelp on the beaches shall be monitored as part of the experimental reef (as discussed above) and the larger mitigation reef. Although rocks and concrete used in constructing the reef are not likely to wash onshore or into the shallow surf, the monitoring program shall also observe this possibility. Monitoring shall be conducted for at least five years after construction of the	Ongoing for five years or as long as needed after construction of the mitigation reef is completed, or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches, on a	Project proponent, to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Effects of a Kelp Forest (cont.)	mitigation reef is completed or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches. This would be done on a bi-weekly basis throughout the months of November through March and on a monthly basis during the other months. The monitoring visits would be coordinated to occur immediately after any large storm events (by the next day). The monitoring would include: 1) observations of the amount of kelp wrack on the beach (cubic yards and/or percentage coverage) and of potential rocks/concrete; 2) tracking beach clean up schedules and costs (including disposal); and 3) tracking the number of complaints from beach users or nearby residents and businesses due to kelp and rocks/concrete on the beaches. Based on observations during monitoring, it would be determined if additional clean up services are needed as a result of the artificial reef. Clean up could begin at any time during this monitoring period as needed. Possible mitigation includes the project proponents establishing a trust fund to pay for: 1) leasing or purchasing special equipment for clean up, or possibly to bury kelp in the sand; 2) additional personnel for beach clean up; and/or 3) land-fill or other disposal costs for kelp and rocks/concrete removed.	biweekly basis from November through March and on a monthly basis during the other months.		

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Effects of a Kelp Forest (continued)				
	Based on the results of the monitoring, it would be determined whether additional clean up services are needed as a result of the experimental reef and mitigation reef. Mitigation would include the project proponents establishing a trust fund to pay for: (1) leasing or purchasing special equipment for clean up, or possibly to bury kelp in the sand; (2) additional personnel for beach clean up; and/or (3) land fill or other disposal costs for kelp removed.			
Effects of Reef Materials on the Beach				
The experimental reef and mitigation reef have the potential to introduce quarry rock and concrete onto the beaches or into the shallow surf zone nearest the lease site, which could present a hazard to beach users.	A monitoring program would be initiated upon the construction of the experimental reef and continued for the following five years to determine the amount of kelp wrack currently washing onto the beaches. Because the City of San Clemente and CDPR do not collect data on the amount of kelp on beaches, this monitoring would establish a baseline data base. The monitoring of the experimental reef would also observe whether concrete or quarry rock are moved toward the beach during strong wave events. This monitoring would make it easier to compare changes due to the experimental reef or to the subsequent build out of the mitigation reef, as outlined below. The beach	Experimental Reef. Ongoing for five years after construction of the experimental reef, on a biweekly basis from November through March and on a monthly basis during the other months.	Project proponent, to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Potential for Concrete and Quarry Rock to Wash Ashore (continued)	monitoring would be done on a bi-weekly basis throughout the months of November through March and on a monthly basis during the other months. The monitoring visits would be coordinated to occur immediately after any large storm events (by the next day). The beach monitoring would include: 1) observations of the amount of kelp wrack on the beach (cubic yards and/or percentage coverage); 2) tracking beach clean up schedules and costs (including disposal); and 3) tracking the number of complaints from beach users or nearby residents and businesses due to kelp or rocks/concrete on the beaches. The movement of the concrete and quarry rock from the artificial reef would be monitored as a component of the larger performance monitoring effort.	Mitigation Reef. Ongoing for five years or as long as needed after construction of the mitigation reef is completed, or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches, on a biweekly basis from November through March and on a monthly basis during the other months.		
Conflicts with Plans and Policies				
The creation of kelp wrack and the potential for concrete and quarry rock to be washed up on shore are two project effects that could conflict with the general goals and objectives of applicable plans and policies. Both excessive kelp wrack and the presence of concrete and rock could discourage the use of the ~~local~~ beaches for recreation.	The mitigation measures described above for kelp wrack and concrete and quarry rock washing ashore are also required to assure consistency with the existing applicable plans and policies.	Experimental Reef. Ongoing for five years after construction of the experimental reef, on a biweekly basis from November through March and on a monthly basis during the other months.	Project proponent, to implement/monitoring by City of San Clemente, CDPR, CSLC, and CCC.	

Mitigation Monitoring Plan (continued)

Environmental Impacts	Mitigation Measures	Timing	Implementation and Monitoring/ Enforcement Responsibility	Verification (Initial/Date)
Conflicts with Plans and Policies (continued)				
		Mitigation Reef. Ongoing for five years or as long as needed after construction of the mitigation reef is completed, or until a conclusion can be reached regarding the impacts of kelp and other materials washing onto the beaches, on a biweekly basis from November through March and on a monthly basis during the other months.		

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