

CALIFORNIA COASTAL COMMISSION

45 FREMONT STREET, SUITE 2000
 SAN FRANCISCO, CA 94105-2219
 VOICE AND TDD (415) 904-5200

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**Tu 24c****STAFF REPORT AND RECOMMENDATION****ON CONSISTENCY DETERMINATION**

Consistency Determination No.	CD-48-02
Staff:	MPD-SF
File Date:	6/26/2002
60 th Day:	8/25/2002
75 th Day:	9/9/2002
Commission Meeting:	8/6/2002

FEDERAL AGENCY: U.S. Navy**DEVELOPMENT LOCATION:** Daytona Beach, San Nicolas Island, Ventura County (Exhibit 1).**DEVELOPMENT DESCRIPTION:** Construct a new supply pier and associated facilities at San Nicolas Island (Exhibit 2)**SUBSTANTIVE FILE DOCUMENTS:** See page 14.**EXECUTIVE SUMMARY**

The Navy has submitted a consistency determination for the construction of a new supply pier and associated improvements at its existing barge landing site on the south side of San Nicolas Island. The project is needed to support various Navy testing and operations training activities on the 36,000 square mile Point Mugu Sea Range (which includes San Nicolas Island). To support these activities, the Navy requires bulk materials and supplies to be transported to San Nicolas Island and waste materials removed from the island. Currently, most materials and supplies are transported to San Nicolas Island by supply barges. Approximately 30 to 40 barge trips take place annually; the barges are generally loaded at either Port Hueneme or Long Beach Harbor and transported to San Nicolas Island via tug boat.

Under the current barge landing operation, delivery of supplies has been subject to delays of up to 10 weeks; 20 percent of the trips have been cancelled altogether due to ocean conditions. Reliable barge supply of San Nicolas Island is critical due to its remote location and the dynamic nature of the Sea Range's testing and training mission.

The project constitutes fill of open coastal waters, and San Nicolas Island provides important pinniped (including elephant seals and California sea lions) and sea otter habitat. The project is an allowable use for fill of open coastal waters as a coastal dependent facility. The project is the least damaging feasible alternative (including the No Project alternative) because it is proposed in an area historically disturbed by Navy use of the ramp for historic barging operations, because there are very few sandy beaches on San Nicolas Island of sufficient size to support these operations (the island is mostly rocky shoreline inappropriate for pier construction), because use of any other site would entail greater environmental damage on the island due to the need for additional roads in new areas. In addition, marine resources will benefit from the Navy's cessation of use of the historic ramp, which has involves disturbance to marine resources each time it is used (e.g., marine mammals need to be relocated during each temporary use). The Navy has a proven track record in temporarily and sensitively relocating pinnipeds during past barge landing operations, and the Navy will similarly relocate pinnipeds during the construction period to avoid temporary noise and disturbance impacts.

The Commission has historically determined that piles and shading for small and medium sized piers do not involve mitigation requirements for fill and shading impacts. The Navy has further agreed to provide erosion controls and water quality protection measures during construction. With these measures, the project is consistent with the marine resources, ocean fill, and water quality policies (Sections 30230, 30231, 30232, and 30233(a)) of the Coastal Act.

Measures have been included to avoid effects on seabirds and terrestrial species of concern (including western snowy plovers, island night lizards, and San Nicolas Island foxes), and the project is consistent with the environmentally sensitive habitat policy (Section 30240) of the Coastal Act). The project will not affect public access and recreation policies and is consistent with Sections 30210-30212 of the Coastal Act. Archaeological resources on the island will not be affected.

STAFF SUMMARY AND RECOMMENDATION:

I. Project Description. The Navy proposes to construct a new supply pier and make associated improvements at its existing barge landing site on the south side of San Nicolas Island (Exhibits 1 and 2). The project is needed to support various Navy testing and operations training activities on the 36,000 square mile Point Mugu Sea Range (Exhibit 3). To support these activities, the Navy requires bulk materials and supplies to be transported to San Nicolas Island and waste materials removed from the island. Currently, most materials and supplies are transported to San Nicolas Island by supply barges. Approximately 30 to 40 barge trips

take place annually; the barges are generally loaded at either Port Hueneme or Long Beach Harbor and transported to San Nicolas Island via tug boat. Materials shipped include heavy equipment (missiles, targets, launchers, military hardware), fuel trucks, construction supplies, and other items not feasibly transported via aircraft. Barge operations have been ongoing at San Nicolas Island since 1943.

The island does not currently have a pier. Supply barges anchor to a landing ramp for off-loading and on-loading. The barge landings are typically conducted every other week to coincide with the high tide and the early morning hours (when wind and swell activity is relatively calm). Barge landing success using the ramp is limited by surf, tides, and weather. Landings have been delayed for up to 10 weeks waiting for favorable and safe conditions.

The landings also involve various safety issues due to unpredictable sea states, the requirement to use multiple high-tension cable tie-downs, and the speed at which barges need to be off-loaded to assure the barge is not stranded after the high tide. Historically, broken high-tension cables and equipment damage have injured personnel and resulted in loss of barge contents. Further, the current barge landing area is in a pinniped "haul out" area where, for six months each year, northern elephant seals and California sea lions haul out (Exhibits 4-5). Pinniped populations have increased drastically at San Nicolas Island since barge landings began in 1976, changing the once little used Daytona Beach into a heavily used haul out site. The unreliable nature of the current landing system (weather and tides) as well as potential issues with the pinnipeds have prompted development of a proposal to construct a supply pier at San Nicolas Island for safer and more reliable off-loading and on-loading of materials.

The proposed pier construction (Exhibit 2) involves five components: 1) constructing a temporary landing ramp; 2) demolition of existing landing ramp, structures and facilities; 3) construction of a new pier; 4) construction of support facilities, including an operations building, transit shed, and a staging/parking area; and 5) demolition of the temporary landing ramp. The Navy elaborates:

Temporary Landing Ramp

As the proposed pier would be constructed on top of the current barge landing ramp, an alternate temporary barge landing ramp would be constructed 200 feet east of the current ramp. The temporary ramp will allow for routine barge deliveries to occur while the pier is under construction. The new landing ramp would consist of two sections of metal pontoons anchored to the beach in much the same manner as the current pontoon sections. The current staging area would be expanded by about 2500 square feet to provide access to the temporary landing ramp.

Facility Demolition

Steel pontoon sections that make up the current landing ramp would be removed to make way for the placement of the pier structure. In addition some existing facilities would be demolished in order to provide a facility complex that would adequately support the proposed supply pier. This involves demolition of a transit shed, office trailer, a storage shed, as well as the paved parking area. All demolition debris would be removed from the island and either recycled or disposed of at an approved landfill.

Supply Pier Construction

The supply pier would be composed of a main pier with an elevating ramp to facilitate off-loading of barges of varying heights and at fluctuating tide levels (Figure 2). The length of the pier (including ramp) is about 460 feet (140 m). The total deck area (including ramp) will be roughly 15,000 square feet (1395 m²) supported by numerous pilings. Pilings would be drilled into the bedrock which lies from 1 to 4 feet below the ocean floor. Five mooring dolphins would be constructed at various strategic locations at the end of the ramp and to the side of the barge to enable docking of diversified barges. No dredging would be required for construction of the pier.

Construction is tentatively scheduled to begin in 2003. Once construction begins, completion of the project would take approximately 12 months. Construction of the supply pier would begin with piles being drilled into the bedrock, with deck construction started as soon as enough piles are in place. Shore facility construction would start and finish within the same general time frame as pier construction.

Support Facilities Construction

The proposed supply pier would require construction of appropriate onshore supporting facilities. They include:

- (1) Two new buildings: (1) a transit shed to house operations equipment (9,688 square feet; 900 m²) and, (2) an operations building (1,787 square feet; 166 m²) with office space and restrooms.*
- (2) A 27,986 square foot (2,600 m²), asphalt staging/parking area to replace the current asphalt staging area. This area would include a containment area for parking tanker trucks which haul hazardous materials on/off the island.*
- (3) Installation of new utility distribution lines (water, sewer, electrical, and communications); connecting from existing utility systems.*

Demolish Temporary Landing Ramp

Once the new construction is completed, the temporary landing ramp installed at the beginning of the project would be removed. All demolition debris would be removed from the island and either recycled or disposed of at an approved landfill.

II. Federal Agency's Consistency Determination. The Navy has determined the project consistent to the maximum extent practicable with the California Coastal Management Program.

III. Staff Recommendation. The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission concur with consistency determination CD-48-02 that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP).

STAFF RECOMMENDATION:

Staff recommends a YES vote on the motion. Passage of this motion will result in an agreement with the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

RESOLUTION TO CONCUR WITH CONSISTENCY DETERMINATION:

The Commission hereby **concurs** with consistency determination CD-48-02 by the U.S. Navy, on the grounds that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the CCMP.

IV. Findings and Declarations. The Commission finds and declares as follows:

A. Marine Resources. The Coastal Act provides:

Section 30230. *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231. *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water*

discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30232. *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Section 30233(a). *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to... [among other uses]:*

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

San Nicolas Island currently provides significant pinniped habitat, and pinniped populations have been increasing on the island in recent years. It is the second largest elephant seal rookery and hauling grounds in San California, with a 1995 population of 23,000 elephant seals (and which has increased at a rate averaging approximately 15%/year since 1988. The island contained 78,000-88,000 California sea lions in 1995; sea lion rates are also increasing (at 21.4%/yr. from 1983-1995). Both species actively use the project site (the barge landing area). Harbor seals also haul out on the island, and sea otters forage offshore if the island; however neither of these species frequent the project site. (See Exhibits 4-6 for pinniped and fissiped (sea otter) distribution maps.)

The Navy has taken steps to attempt to exclude pinnipeds from the barge landing area, including construction of concrete barriers and fencing, and has scheduled beach landing operations outside pinniped pupping seasons. During pupping seasons the Navy uses a semi-permanent off-loading ramp, installed in 1998, to offload supplies. Despite these improvements, some numbers of pinnipeds still circumvent the barriers and attain access to the barge landing area. Through these operations, and the need for continued temporary relocation of pinnipeds, the Navy has successfully established procedures for temporarily relocating pinniped when necessary for its operations, without harm to individual animals. (See Exhibit 8: "Report of Pinniped Displacement Activities at the San Nicolas Island Barge Landing Area, December 2000 – July 2001.")

In its consistency determination and Environmental Assessment (EA) for the proposed project, the Navy analyzes water quality impacts, marine mammals and other marine resources, seabird, and terrestrial biological impacts, including noise impacts from construction activities.

The Navy states:

Under the proposed action, marine resources would be adequately maintained. All of the identified impacts would be temporary and less than significant, and biological productivity of coastal waters would be maintained. Potential effects to individual marine-related resources (i.e., water quality, marine biology, fish, marine mammals, terrestrial biology, and threatened and endangered species) are discussed below.

A - Water Quality

Implementation of the proposed action would involve disturbances to water resources within the marine environment. An increase in the suspension of sand and silt within the coastal waters of Daytona Beach would occur due to the installation of pilings into the ocean floor and other shoreline construction. These impacts would be short-term in duration and not significant. The proposed action would not cause a significant adverse impact on water quality in the coastal zone.

During associated facilities construction, an increase in sedimentation and erosion could occur in site specific areas and have a temporary impact on the marine environment; however, standard erosion control measures would reduce potential impacts. Upon completion of construction, no adverse impacts would occur and there would be no long-term impacts to marine resources on and in the vicinity of Daytona Beach.

B - Marine Biology

Construction of a supply pier would affect littoral and sublittoral organisms. Pier construction would produce limited biotic damage due to the small number of organisms inhabiting the area. The Daytona Beach intertidal area consists of an exposed sandy beach that is sparsely inhabited by such organisms. The organisms that do inhabit this area, however, have adapted to sand movement; further, they are either mobile, or they grow rapidly, reproduce massively, and disperse widely to take advantage of small, temporary patches of survivable conditions. This means that the few organisms that may be affected during construction would quickly be replaced as a result of natural ecological patterns.

Sand displacement is most severe during winter storms and most indigenous organisms have been able to adapt. If sand movement removes these organisms from their burrows, they would simply swim or crawl a short distance and re-bury themselves. Since organisms have been able to adapt to turbidity accompanying winter storms, temporary increases in turbidity associated with construction of a supply pier (i.e., work boat propellers and the driving of pilings) would have no significant impact on the adapted organisms of the littoral and sublittoral zones.

...

D - Marine Mammals

The proposed pier would be constructed on the eastern end of Daytona Beach. Daytona Beach is a haul-out and breeding site for northern elephant seals and California sea lions during several months of the year. As part of the pier construction, Navy environmental personnel would displace pinnipeds from the construction site as necessary for the safety of the marine mammals and construction workers. Temporary barriers would be used, when feasible, to keep the displaced seals from re-entering the area. This effort will greatly minimize the potential for pinnipeds to be affected by construction equipment. The only other potential source of impacts to marine mammals would be from noise generated as part of the construction.

Mathematical modeling and information from the acoustic and marine mammal literature were used to estimate the impacts of proposed pier construction activities on marine mammals (see Appendix A for a more complete discussion of potential impacts). The activities analyzed are pile driving operations, and sounds from smaller construction machinery used in the site preparation and installation of the pier. Most likely the pilings would not be pounded into place, rather holes would be drilled and the pilings fitted into the holes with grout. This method would be much quieter, but since the final method has not been determined, pile driving has been used in this analysis as a worst case scenario.

Marine mammal behavioral reactions to a sound are difficult to predict. Reaction to sound, if any, depends on species, state of maturity, experience of the animal, current activity, reproductive state, time of day, weather, and many other factors. An animal that reacts in one way one day may not react in a similar manner to the same stimulus on another day.

If a marine mammal does react to a sound by changing its behavior or moving a small distance, the impacts of this change may be less than significant to the individual marine mammal, the stock, and the species as a whole. On the other hand, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period of time, impacts on the mammals could be significant.

Behavioral Changes (such as feeding, breeding, vocalization, migration)

It is very likely that pinnipeds will exhibit little or no change in their behavior patterns when exposed to construction sounds from the pier construction; this may be particularly true after the operations have continued for several weeks and the animals become habituated to the sounds and sights of the construction activities. Many pinnipeds seem unresponsive to any but the strongest sound. Transient sounds, or sudden changes in the levels of a sound or the direction of a moving sound source might elicit a disturbance reaction from a marine mammal nearest to the pier site. It is likely that these reactions will be transitory.

Masking Effects

Sounds from activities associated with pier construction will be of a wide variety of types, ranging from impulsive and repeated sounds (e.g., pile-driving) through intermittent sounds like propeller noise during vessel maneuvering, to continuous sounds such as might be produced by operating machinery on the pier itself. All of these sounds have the capability to reduce a marine mammal's ability to hear other sounds, of lower level, in their environment. Any anthropogenic sound whose received level (near an animal) is above the ambient noise level has the potential to limit the ability of the animal to hear faint sound signals from other sources, especially if the frequencies of the masking noise and the sound signal are similar.

Pier construction is proposed to occur in a surf zone area, where it is expected that natural ambient noise conditions will be greater than in oceanic areas. Except at distances within hundreds of meters of the pile driver sound source, it is unlikely that the sounds from pier construction will be sufficient to cause significant masking of marine mammal underwater hearing.

The continuous sounds produced during pier construction operations (e.g., electrical generators, diesel engines on shore-based construction equipment) are of such relatively low intensity—particularly after they propagate through the water surface—that it is unlikely they will cause any masking, except perhaps within tens of meters of the pier, for pinnipeds with their heads above water.

Hearing Impairment Effects

Northern elephant seals and California sea lions would be encountered regularly around the proposed pier site. It is these mammals that are most likely to be found near the Daytona Beach pier due to their curious nature and apparent indifference to most manmade noises. Given the characteristics of the types of sound produced at the Daytona Beach Site during pier construction it is highly unlikely that any marine mammal would suffer temporary, much less permanent, hearing impairment.

Potential Impacts From Airborne Noise

For the types of equipment that might be used during site preparation and construction at the proposed pier site, the expected in-air sounds do not reach levels high enough to produce Temporary Threshold Shift (TTS) or Permanent Threshold Shift (PTS) in pinnipeds—particularly as these animals are not going to be close to the sound sources. The expected attenuation of airborne sounds will result in reduced received sound levels such that behavioral effects are more likely than physiological effects.

Since the construction activities will continue for one year it is likely that the pinnipeds near the construction site will become habituated to these sounds. Pinnipeds that haul out in the Daytona Beach area for extended periods, or that return to haul-out sites regularly over the proposed construction project, may be exposed to construction sounds more than once. However, given the nature of the planned activities, and the fact that most of the pinnipeds that occupy this area have prior experience with large equipment operations and other human activities, it is likely that much habituation will occur.

The proposal does not involve dredging; however the proposed pier piles are considered "fill" under the Coastal Act and must be examined for consistency with Section 30233 of the Coastal Act. Under Section 30233(a), filling of open coastal waters is limited to those cases where the proposed project is an allowable use, where there is no feasible less environmentally damaging alternative, and where mitigation measures are provided to minimize environmental impacts. The Commission has historically found Navy and Coast Guard piers in open coastal waters and estuaries (such as San Diego Bay, Bodega Bay, etc.) to be allowable uses as coastal dependent facilities. Thus, the Commission finds the proposed project an allowable under Section 30233(a)(1).

The Commission finds that the project is the least damaging feasible alternative (including the No Project alternative) because: (1) it is proposed in an area historically disturbed by Navy use of the ramp for historic barging operations; (2) no creosote will be involved in the pilings (they will be concrete); (3) there are very few sandy beaches on San Nicolas Island of sufficient size to support these operations (the island is mostly rocky shoreline inappropriate for pier construction), and use of any other site would entail greater environmental damage on the island due to the need for additional roads in new areas; and (4) marine resources will benefit from the Navy's cessation of use of the historic ramp, which has involves disturbance to marine resources each time it is used (e.g., marine mammals need to be relocated during each temporary use). In addition, the Navy has agreed to coordinate erosion controls (construction-related water quality protection measures) with the Commission staff, prior to commencement of construction. The Navy has also agreed that pile driving (the noisiest construction method) is not its preferred alternative, and that if it intends to proceed with that option, it will provide the Commission staff with a justification for its use (again, prior to construction). Concerning mitigation for fill impacts, the Commission has historically determined that piles and shading for small and medium sized piers do not involve mitigation requirements for fill and shading impacts.

Based on the above discussion, the Commission concludes that, with the avoidance and mitigation measures incorporated into the project (see next section for complete list of measures), the proposed pier construction will avoid adverse effects on pinniped habitat, marine resources, or water quality at San Nicolas Island or offshore waters. The Commission therefore finds the project consistent with the ocean fill, marine resources, and water quality protection policies (Sections 30230, 30231, and 30232) of the Coastal Act.

B. Environmentally Sensitive Habitat. The Coastal Act provides:

Section 30240. *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Seabird and terrestrial species of concern at San Nicolas Island include western snowy plovers, island night lizards, and San Nicolas Island foxes. The Navy has analyzed impacts to these species; the Navy's consistency determination states:

E - Terrestrial Biology

The proposed project would result in direct and indirect impacts to terrestrial biological resources. Direct impacts may be short-term or long-term, occurring when biological resources are altered or lost during the course of project implementation. Indirect impacts occur when project-related activities affect biological resources in a manner other than a direct loss of the resource (e.g., when important habitat areas are affected).

Habitats

Construction of a supply pier at Daytona Beach would temporarily impact the surrounding beach area and hill slopes adjacent to the staging areas. These impacts would not be significant as the impact area at the beach is devoid of natural vegetation and already has a history of disturbance from grading activities, paving, and facilities establishment.

Indirect impacts on the coastal scrub community adjacent to Daytona Beach could occur as a result of supply pier construction. Coastal scrub may be impacted by the introduction of non-native exotic plants through the offloading of construction equipment, sand, gravel, and other supplies. Often these invasive plants can outcompete native plants and cause substantial changes (decreased diversity) to the native plant community. These potential indirect impacts would be mitigated by following the recommended mitigation measures (see Special Procedures below).

Listed Plant Species

*No federally listed plant species occur on San Nicolas Island. The state listed San Nicolas Island buckwheat (*Eriogonum grande* var. *timorum*) is known to occur*

adjacent to the pier site. Potential indirect impacts would be minimized or avoided by following mitigation measures for indirect impacts on habitats. Impacts on this listed species are considered less than significant.

Wildlife Species

Supply pier construction would impact wildlife through elevated levels of noise, disturbance, and human activity. There is also the potential for fuel and chemical spills that can harm wildlife, an increased number of roadkills from increased vehicle traffic, and increased turbidity of nearshore waters making foraging more difficult. Wildlife species not native to the island (e.g., ground squirrels and snakes) could be introduced through transport of equipment and supplies. Vector species (e.g., rats) could be accidentally introduced. These non-native species could adversely affect species native to the island through predation, competition, and the introduction of disease. Following is an assessment of impacts on sensitive wildlife species at Daytona Beach.

Facilities to be demolished may be used as habitat by the federally listed island night lizard; especially the storage sheds and staging area. Prior to demolition, lizards would be relocated under provisions of the SNI Biological Opinion (USFWS 2001).

Federally listed Western snowy plovers occur at Daytona Beach but do not nest within the proposed construction area. Foraging behavior of snowy plovers can be affected by noise and human activity. However, the closest nesting area is over 300 meters away from the site and this distance would provide a buffer. This nesting area is not utilized every year. A programmatic Biological Opinion (BO), addressing all activities on San Nicolas Island, has recently been rendered by the USFWS (2001). The BO addresses impacts to federally listed species and their critical habitat by all on-going and reasonably foreseeable activities. The BO specifically includes measures relating to construction of the pier:

If western snowy plover nests are discovered within 1,200 feet of the proposed pier location during construction, the Navy will halt its activities and contact the Service to develop actions to avoid adverse effects.

San Nicolas Island foxes could be killed as a result of increased vehicle activity at the project site and along the access road. This species could also be disturbed by human activity and noise generated by supply pier construction. As a result, this species could temporarily avoid denning and breeding in the vicinity of Daytona Beach. Based on densities for the habitat types monitored this year the density of foxes is probably less than 5 foxes per square mile. At these densities only one or two foxes might be affected by the proposed project. These impacts would not be significant as current barge operations have been conducted for many years at Daytona Beach and impacts would

be short-term. The Navy has taken extensive measures to reduce impacts to island foxes: speed limits around the island have been reduced, road sides are mowed on a regular basis, and a driver education program has been in place for years.

There is a potential for supply pier construction to result in the introduction or enhancement of existing populations of exotic or non-endemic animal species. These impacts could be significant but can be mitigated to below a level of significance by following the recommended mitigation measures (see Special Procedures below).

The Navy has coordinated with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service concerning protection of marine mammals (see previous section) and other species of concern. Mitigation measures incorporated into the project include:

- All construction personnel will attend a mandatory "environmental briefing." Federal legislation and Navy regulations regarding protected species and cultural sites are emphasized, along with the importance of honoring environmental closure areas.
- Pinnipeds would be cleared from the construction zone by the Navy in accordance with 50 C.F.R. 216.22.
- Island night lizards inhabiting structures to be demolished, will be captured and relocated.
- Habitat for relocated island night lizards will be created by planting appropriate cover in barren areas adjacent to occupied habitat.
- If western snowy plover nests are discovered within 1,200 feet of the proposed pier location during construction, the Navy will halt its activities and contact the Fish and Wildlife Service to develop actions to avoid adverse effects.
- Staging areas for temporary storage of equipment and materials will be located where surveys have shown that island night lizard densities are low.
- All construction equipment, vehicles, and supplies will be thoroughly cleaned and inspected prior to shipment to San Nicolas Island to reduce the potential for introduction of non-native species.
- A spraying program of carefully controlled spot applications of approved and appropriate herbicides shall be used to eliminate weeds and non-native plant species introduced during supply pier construction.
- Archaeological resource sites CA-SNI-38 and CA-SNI-71 are a short distance from the staging area and shall be marked and avoided during construction.
- A qualified archaeologist shall be present during staging area demolition and utility trenching to determine the significance of any resources that may be uncovered.
- The construction contract will include a requirement to suspend work in the event of a discovery of archaeological materials. If subsequent avoidance is not possible, the Navy will initiate consultation in accordance with Section 106 of the NHPA.
- Structures slated for demolition shall be surveyed for the presence of asbestos and lead-based paint to allow for appropriate abatement and/or disposal methods to be implemented.

The Commission agrees with the that with these measures, the proposed activity will not adversely affect environmentally sensitive habitat. The Commission concludes that with these avoidance and mitigation measures, the proposed is consistent with Section 30240 of the Coastal Act.

C. Public Access and Recreation. Sections 30210 through 30212 of the Coastal Act provides for the maximization of public access, except where “It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources....” (Section 30212).

The Navy states:

San Nicolas Island is Navy-owned property where public access is strictly controlled for security reasons and to safeguard against potential hazards associated with military operations. There is no public access to San Nicolas Island and the only recreational opportunities available are for DoD employees and contractors working on the island. The proposed action would not result in any change of public access to San Nicolas Island or surrounding waters.

The proposed pier is located in an area where public access is not allowed for military security reasons. The Commission has historically determined that projects located within restricted military areas that do not generate access burdens do not entail the need for public access provisions. Therefore, the Commission finds that that the proposed pier construction project at San Nicolas Island will not adversely affect public access and recreation and is consistent with the public access and recreation policies (Sections 30210, 30211, and 30212) of the Coastal Act).

V. SUBSTANTIVE FILE DOCUMENTS:

1. Consistency Determination CD-2-00, Navy, Point Mugu Sea Range testing and training activities on the Point Mugu Sea Range, (including modernization of facilities on San Nicolas Island).
2. Analysis of Marine Mammal Impacts From Pier Construction at San Nicolas Island, LGL Ltd., for U.S. Navy, June 2002.
3. Report of Pinniped Displacement Activities at the San Nicolas Island Barge Landing Area, December 2000 – July 2001, U.S. Navy.

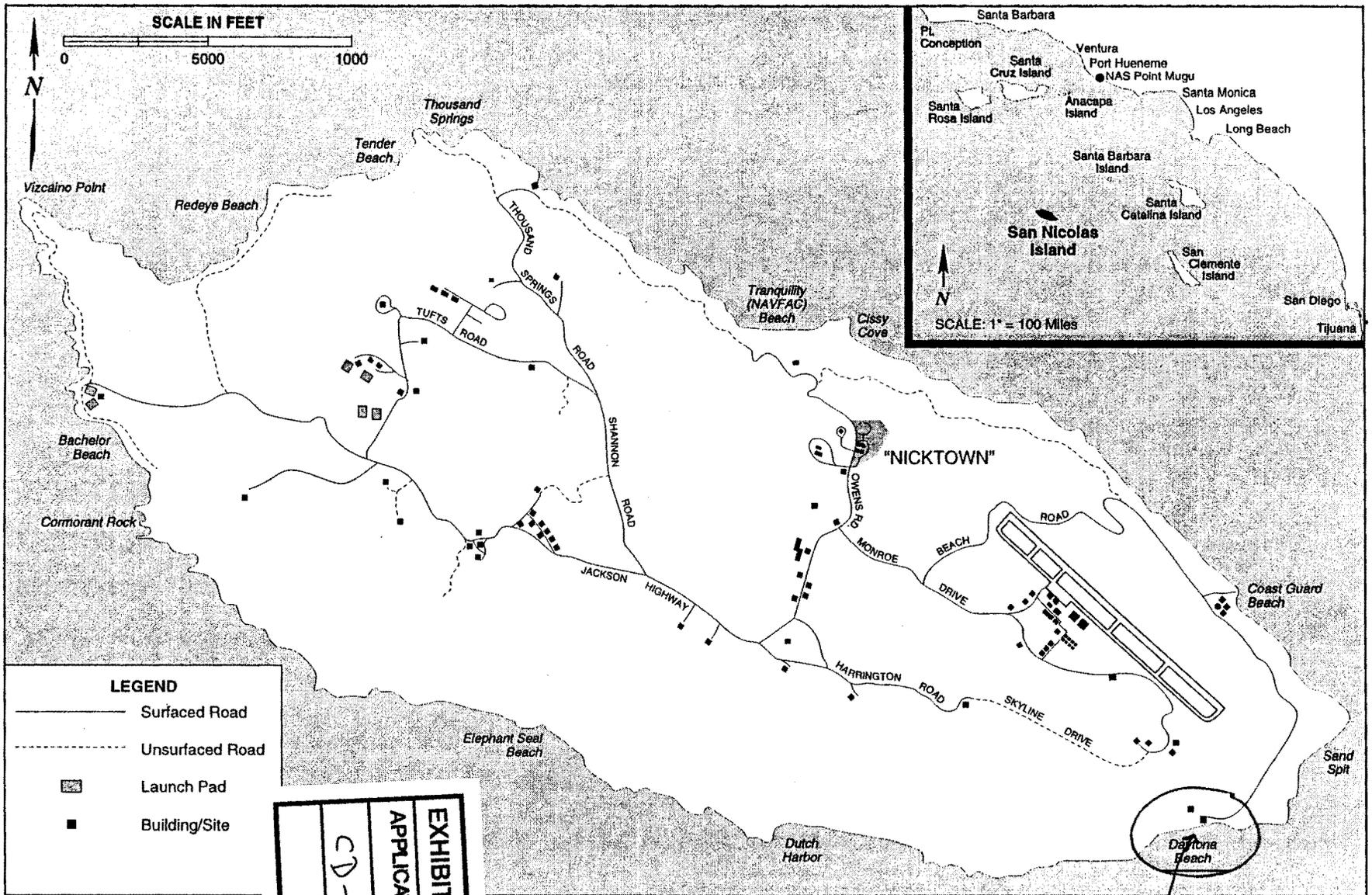


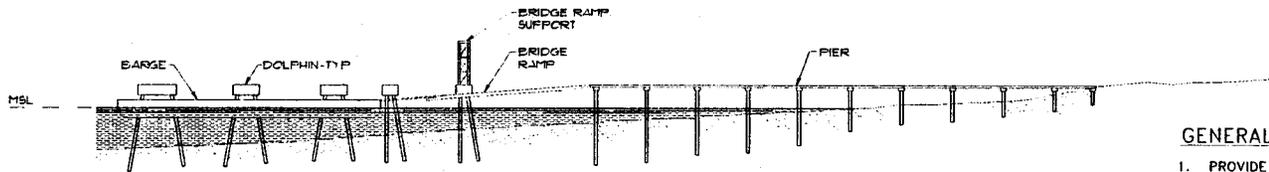
EXHIBIT NO.	1
APPLICATION NO.	CD-48-02

Regional Location of San Nicolas Island

PROJECT SITE

FIGURE 1

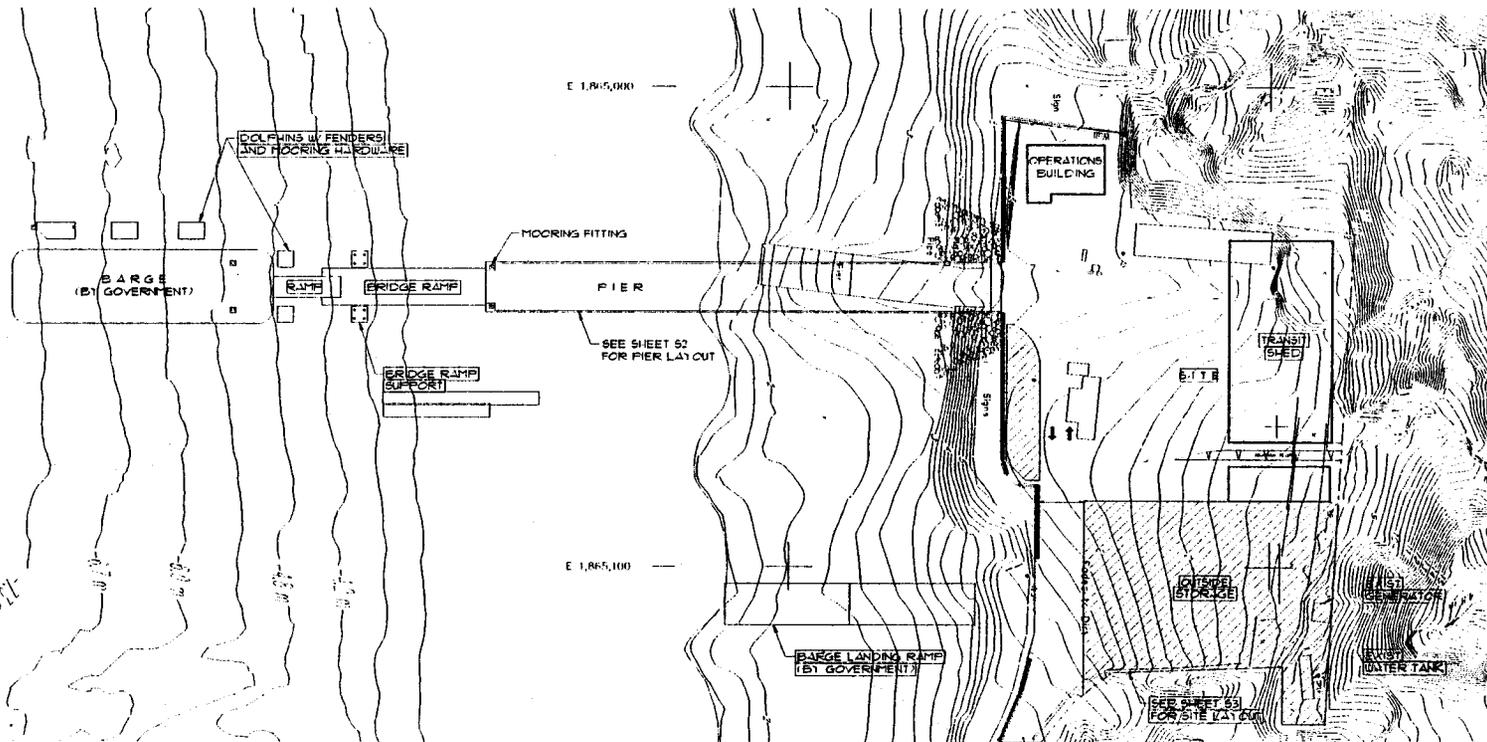




ELEVATION

GENERAL COMMENTS

1. PROVIDE SUPPLY PIER FACILITY WITH CAR ROLL-ON/ROLL-OFF CAPABILITY
2. PROVIDE SITE IMPROVEMENTS AND FACILITY BUILDINGS AS SPECIFIED



GENERAL PLAN



NOTES:

1. ALL ELEVATIONS ARE REFERENCED TO MLLW AND ARE SHOWN IN METERS
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS
3. PRESCRIPTIVE REQUIREMENTS ARE SHOWN IN BOLD TEXT

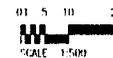


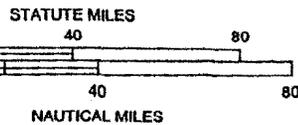
EXHIBIT NO. 2
APPLICATION NO.
CD-48-02

SCHEDULE 4 FACILITIES MINIMISE

GENERAL PLAN & ELEVATION

ES-2

PACIFIC OCEAN



LEGEND

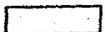
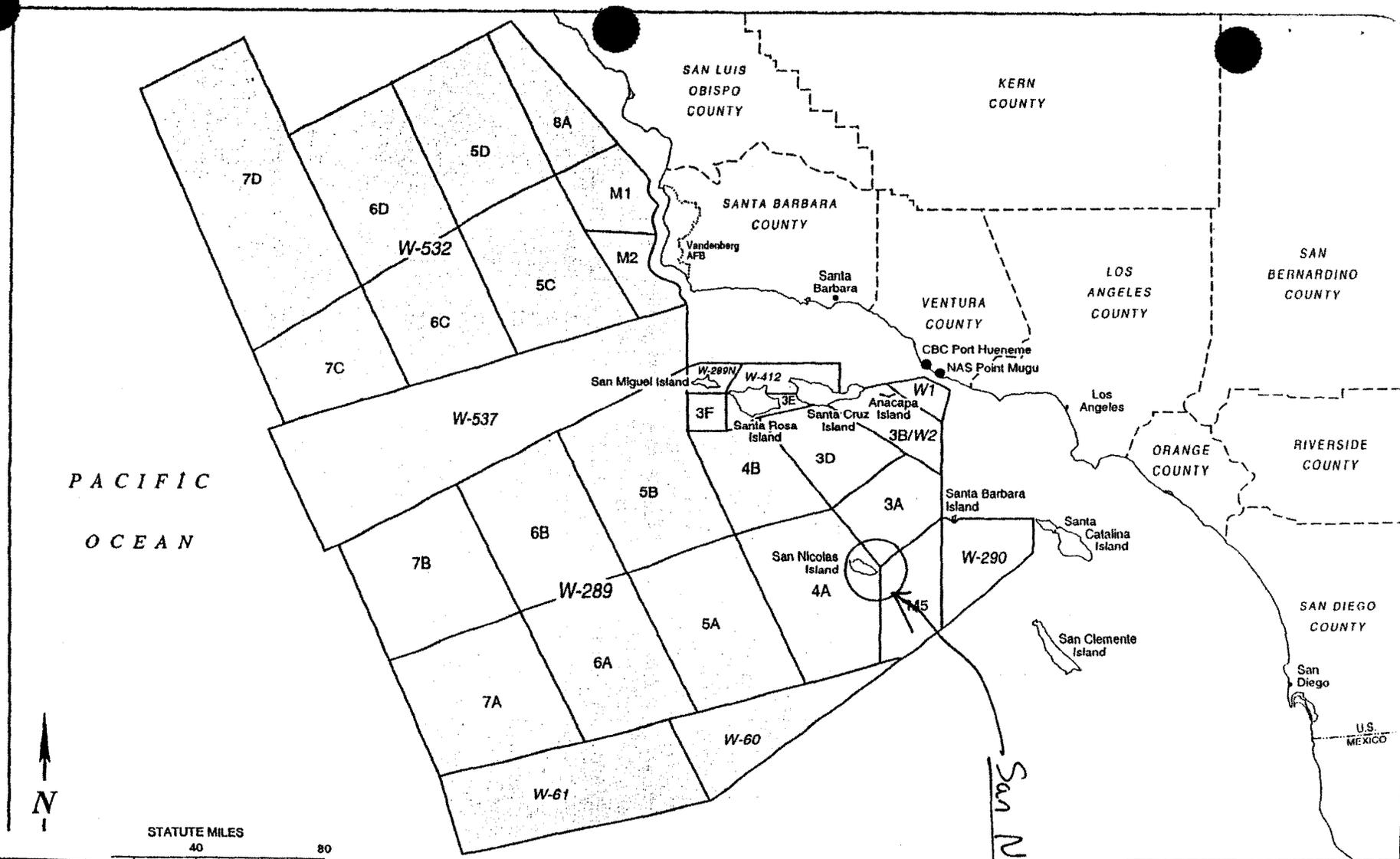
 Point Mugu Sea Range

EXHIBIT NO. 3
APPLICATION NO.
CD-48-02

Figure ES-1
Point Mugu Sea Range



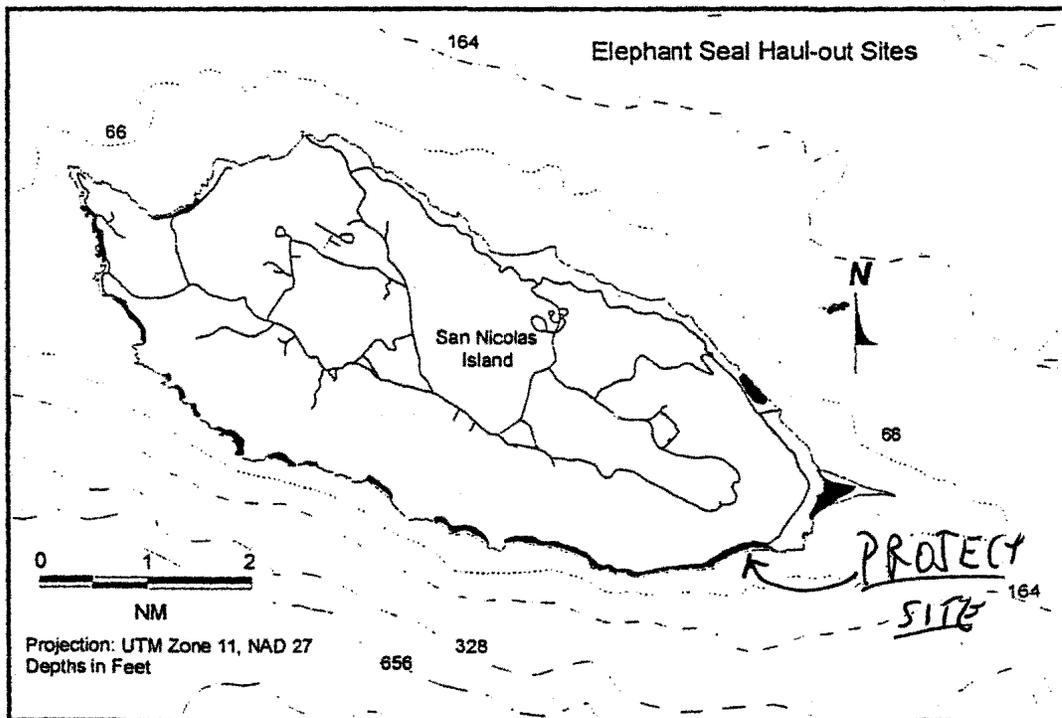
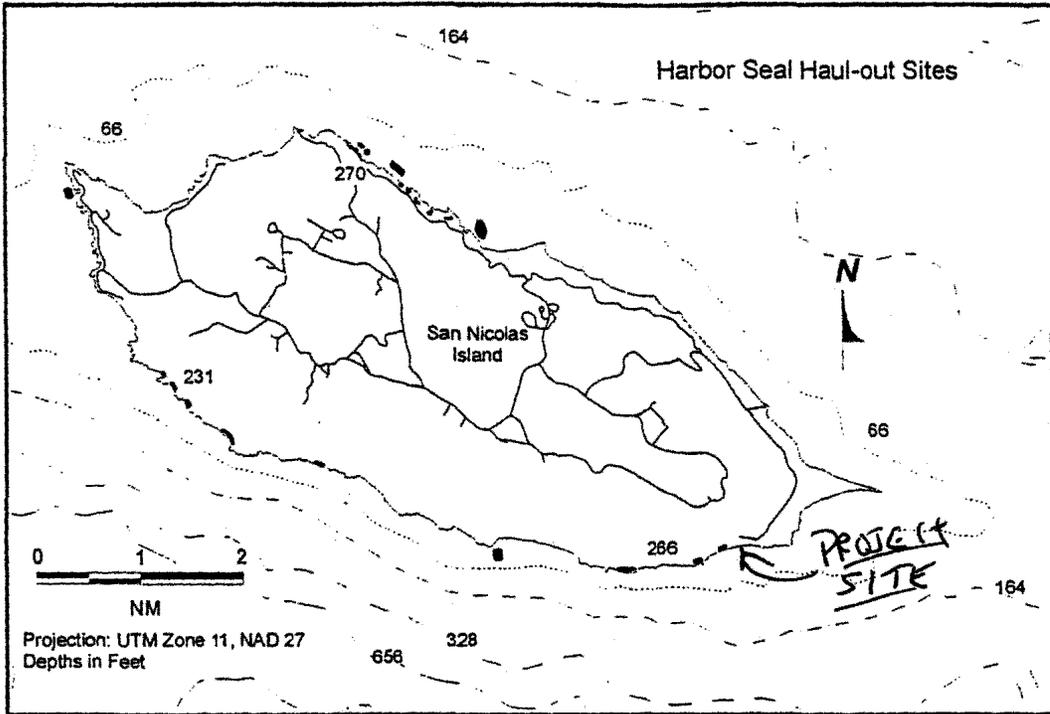


Figure 3.7-21
Map of San Nicolas Island showing areas used by northern elephant seal

EXHIBIT NO.	4
APPLICATION NO.	
CD-48-02	

California Sea Lion

California sea lions do not have a special status. The San Nicolas Island population has increased at 21.4 percent per year since 1983. The 1995 size was 78,000 to 88,000 animals of all ages and sexes, which was about 47 percent of the U.S. population. About half of the San Nicolas Island population may be hauled out on land at one time during the peak of the breeding season (refer to Section 3.7.4.3 of the "Marine Mammal Technical Report" [NAWCWPNS Point Mugu 1998e]). Sea lions have recently occupied new areas on San Nicolas Island and they now occur along most of the southern shore (Figure 3.7-22). There is no evidence that numbers have reached the carrying capacity of the available habitat.

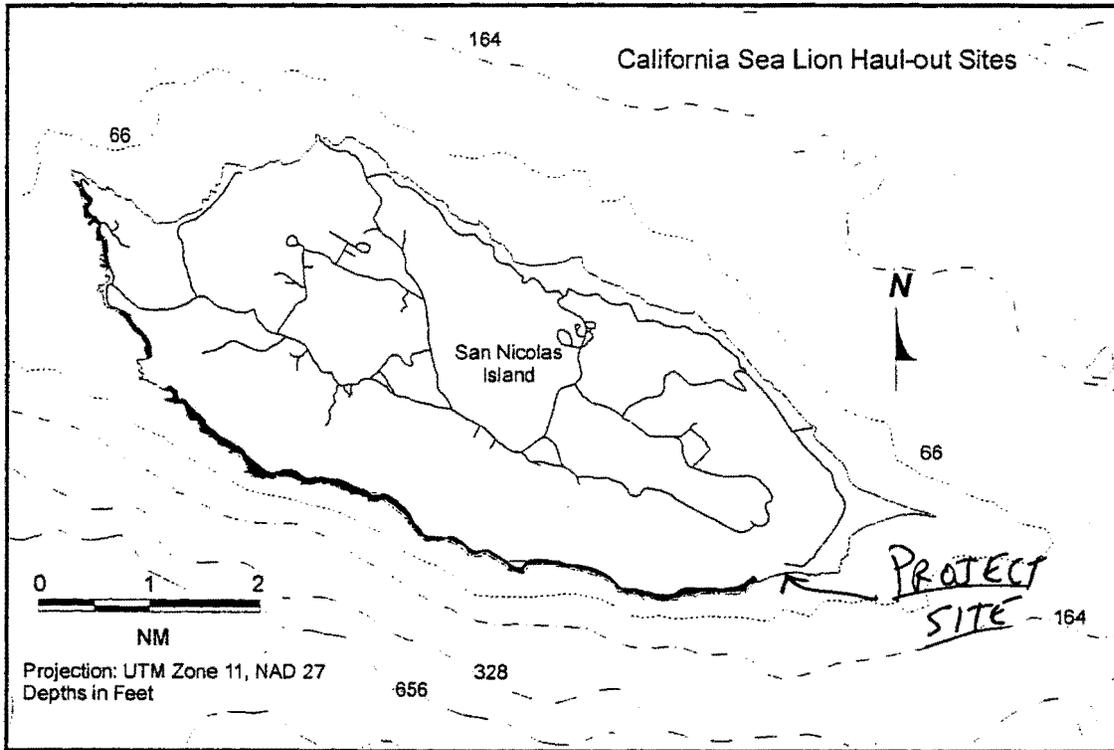


Figure 3.7-22
Map of San Nicolas Island showing areas used by California sea lions.

Guadalupe Fur Seal

Eighteen sightings of Guadalupe fur seals were made on San Nicolas Island between 1949 and 1986. Most sightings were either juveniles of undetermined sex or adult males. One male defended a territory among breeding California sea lions each year from 1981 to 1986. Observations suggest that Guadalupe fur seals are capable of obtaining space for breeding among California sea lions, and that they may successfully recolonize the Channel Islands once the species is abundant enough to establish a breeding population (Stewart et al. 1987).

EXHIBIT NO. 5
APPLICATION NO.
CD-48-02

3.7-5

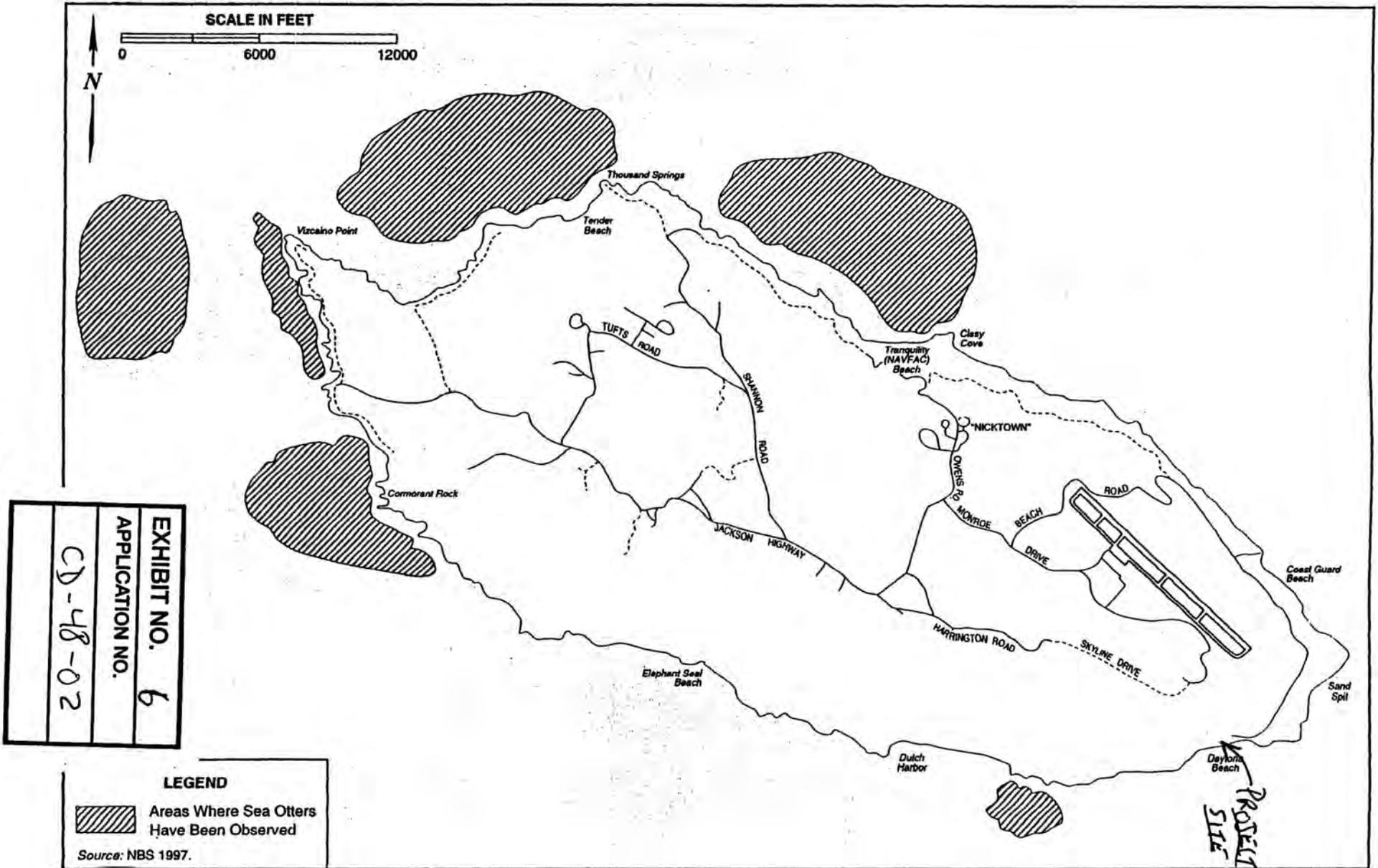


Figure 3.7-23
Sea Otter Distribution at San Nicolas Island



Special Interest Avian Species of San Nicolas Island

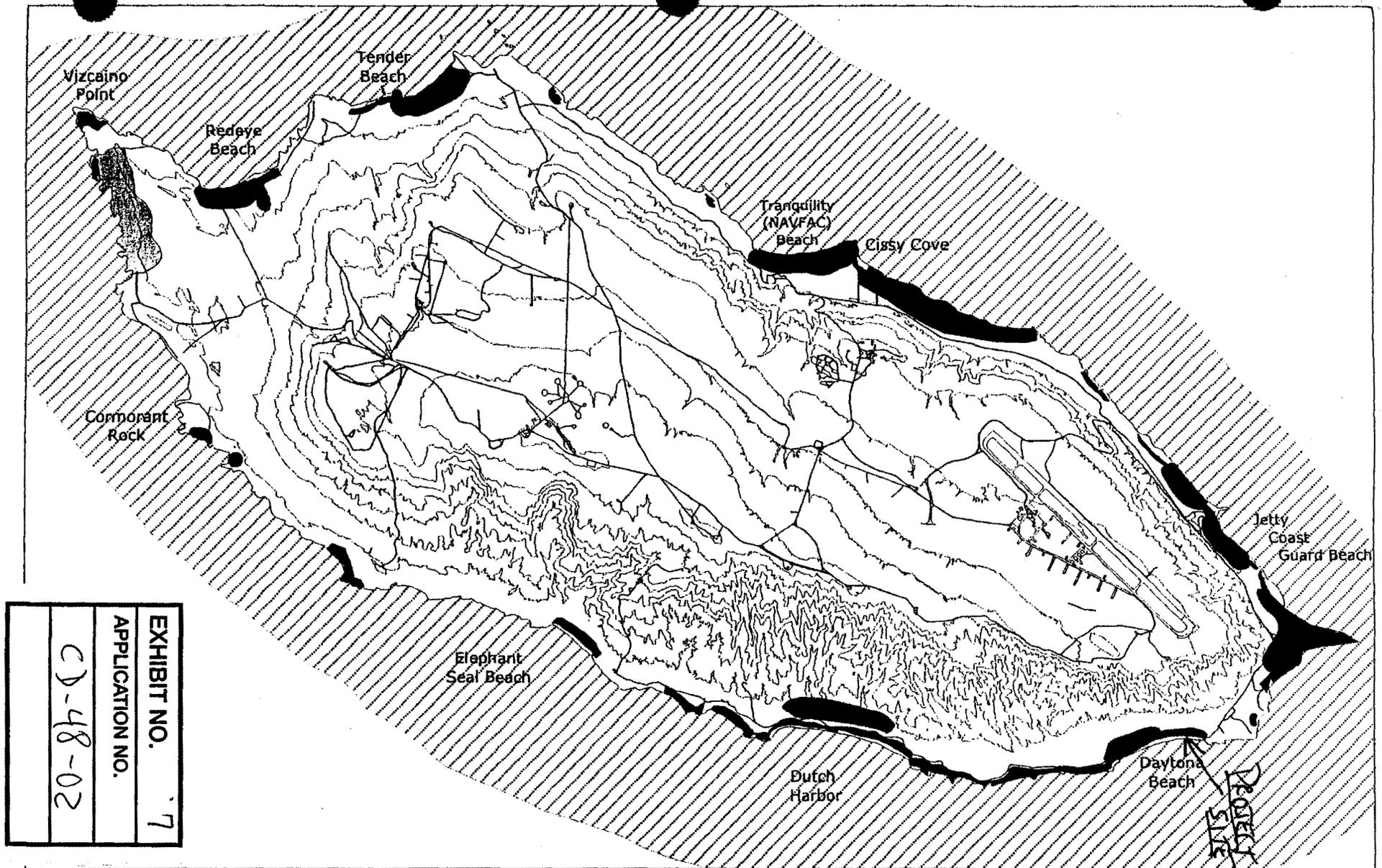
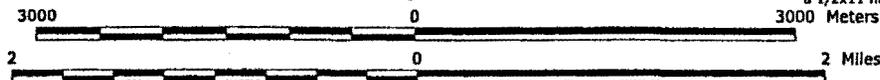


EXHIBIT NO.	7
APPLICATION NO.	CD-48-02

Legend

-  Brown Pelican Day Feeding Area
-  Brown Pelican Day Roosting Area
-  Designated Snowy Plover Critical Habitat
-  Brandt's Cormorant Nesting Area
-  Western Gull Nesting Area
-  100' Contour Lines



Projection: Universal Transverse Mercator, Zone 11
North American Datum of 1927, Scale 1:60,000

Source: Brown Pelican & Snowy Plover data provided by S. Schwartz
(Snowy Plover updated based on 12-7-99 Federal Register Notice
(NAWS Point Mugu 1997). All other species data provided on
8 1/2x11 hand-drawn maps by Environmental Division personnel, SNI.

Figure
3.8-7

**REPORT OF PINNIPED DISPLACEMENT ACTIVITIES
AT THE SAN NICOLAS ISLAND BARGE LANDING AREA
December 2000 – July 2001**

Grace Smith, Ecologist
Environmental Project Office
Naval Air Weapons Station China Lake

INTRODUCTION

The Navy maintains radar, telemetry, and communications equipment on San Nicolas Island to support its mission of testing and evaluating weapons systems. Supplies needed to support that mission have been transported by barge and offloaded at a developed site on Daytona Beach since the mid 1970s. Barges land at the site two to four times per month.

Three species of pinnipeds occur regularly on San Nicolas Island. They include the northern elephant seal (*Mirounga angustirostris*), the California sea lion (*Zalophus californianus*), and the Pacific harbor seal (*Phoca vitulina richardsi*). Currently, elephant seals haul out at the barge landing area from December through mid-May. This time frame encompasses the breeding season, as well as the female and juvenile molting period. Mixed age groups of sea lions intermittently haul out in the vicinity throughout the year, and bachelor bulls establish territories at the landing site during June and July. Harbor seals rarely frequent the area.

San Nicolas Island is currently the second largest elephant seal rookery and hauling grounds in southern California. Since 1988 the San Nicolas Island population has continued to increase at an average rate of 15.4 percent per year. As of 1995, approximately 23,000 elephant seals of all ages and sexes occupied the island over the course of the year. Elephant seals began hauling out within the barge landing operational area in December 1991, with numbers within the project area increasing yearly.

The San Nicolas Island population of California sea lions increased at a rate of 21.4 percent per year from 1983 to 1995, and the species has recently begun to use areas that were not formerly used. The 1995 island population size estimate was 78,000 to 88,000 animals of all ages and sexes. In 1999, bachelor bulls began establishing breeding season territories at the barge landing site.

The Navy, in order to reduce impacts to this ever increasing pinniped population, has made substantial modifications to both the barge landing infrastructure and operational procedures during the last six years. Animals have been excluded from the staging area and access road by the installation of over 1500 linear feet of concrete barriers. Installation of a semi-permanent off-loading ramp in 1998 significantly reduced the size of the beach area required to conduct barge operations and minimized the possibility of contact between seals and vehicles. Additionally, sturdy fencing was attached to the

sides and oceanfront edges of the ramp to keep animals from hauling out onto it. Barges can only off-load on the ramp when the sea state is favorable and the high tide is over 4.5 feet. This requirement has restricted the number of barge landings. Nonetheless, the ramp is always used during pinniped pupping seasons and beach landings are only conducted outside those times.

PROJECT AREA AND OPERATIONAL ACTIVITIES

Daytona Beach is located on a south-facing stretch of coastline at the eastern end of the island. Due to its relatively sheltered location and topography, Daytona Beach is one of the few sites on the island capable of supporting barge landing operations. The beach is approximately 120-200 feet wide on average, and is approximately 0.8 miles long. The barge-landing site is located on the narrowest, eastern portion of the beach. Access to the area is provided by a paved road, and ends at the existing staging area. The staging area is set back off the beach and consists of a 120 x 150 foot asphalt parking area with a trailer and equipment storage building. A landing ramp consisting of two metal pontoons, each 21 feet wide and 90 feet long and placed end to end, extends from the asphalt pavement to the edge of the water.

All government barges are offloaded using the landing ramp. During routine operations, it is not necessary for heavy equipment to be driven onto Daytona Beach. However, the barge must be secured by cables to deadmen buried on shore. During each landing this is accomplished by 3-5 barge personnel traveling by foot, approximately 40 feet across the beach from the pontoon to the attachment locations. This is done at the beginning and end of each normal barge landing, and is the only time there is human activity on the beach proper. Barge operations take 2-4 hours to complete. Thirteen government barges landed during this reporting period.

During the reporting period, one construction contractor delivered materials to the island via private barge. Due to the barge configuration, attempts to land on the ramp were unsuccessful. Instead the barge was pushed by tug directly onto shore (immediately adjacent to the "permanent" landing platform), cables were secured to the existing deadmen, the landing ramp was dropped, and materials offloaded by driving 50 - 70 feet across the beach and into the staging area. Due to the type of materials being offloaded, these barge operations can take up to 10 hours to complete. These type landings were conducted outside of the elephant seal pupping period. Five contractor barges landed during this reporting period.

During pinniped haul-out and breeding seasons, Environmental Project Office (EPO) staff, or trained assistants, safely displace pinnipeds from the access road, staging area, and required operations area. During barge operations, behavioral responses of animals in the vicinity are recorded.

REPORTING PERIOD

This report describes activities relating to the displacement of pinnipeds from the barge landing operations area on San Nicolas Island, during the period 1 December 2000 through 25 July 2001. The activity reported herein is authorized under Section 109(h)(1)(a) of the Marine Mammal Protection Act which allows the non-injurious movement of marine mammals for the protection and welfare of the animal.

The numbers herein, represent incidences of displacement. Some individual animals were displaced several times, either on the same day, or on subsequent days. Following the narrative section of this annual report is a tabular listing of all displacement activities including: the date of the displacement, the number of animals displaced on each date, the age and sex class of each animal (with the exception of subadults, where sexing would cause additional disturbance), the duration of disturbance (in minutes) and the displacement distance (in feet).

METHODS AND RESULTS

On days when a barge is scheduled to land, EPO personnel arrive at the site prior to the operation, move pinnipeds if necessary, and make a determination if the barge can be brought in without negatively impacting pinnipeds. Operational personnel or equipment are not allowed to proceed until that determination is made. Environmental personnel remain on site during the barging operation to ensure the safety of animals during the activity and to monitor the behavior and responses of the animals. Environmental personnel have the authority to suspend barge operations before landing of the barge, or during operations, if harmful impacts to marine mammals are anticipated or observed. Conducting barging activities without harmful impact to the animals requires constant surveillance, attentiveness and communication with equipment operators.

Northern Elephant Seals: Installation of the landing ramp has significantly reduced the size of the beach area required to conduct barge operations. This change, combined with previously gained knowledge regarding acclimation and parental behaviors of female elephant seals, allowed the EPO to implement a more "hands off" approach to management than in past years. Elephant seals were allowed to haul out and stay adjacent to the ramp. Animals were not intentionally moved unless they were immediately in the way of operations.

Coaxing an elephant seal to move, preferably on its own terms, without causing undue stress, requires close attention to specific details of age, sex, physical condition and behavioral cues. Knowledge of animal behavior standards such as personal space requirements, flight or fight reactions, antagonistic behavior, typical mother-pup interactions, and stress indicators are important governors of if, when, or how quickly an animal may be coaxed into moving.

The specific method used varies with individual response, and often requires a combination of tactics, but typical procedures for moving elephant seals are as follows:

Daily, when gravid females are beginning to haul out, and starting 3 days before a scheduled barge landing once pups are present, a vehicle is driven onto the landing ramp and parked for a brief period several times each day. This activity does not cause a sudden startle response, but allows nervous animals to slowly move away while allowing more tolerant individuals to acclimate to vehicle activity.

If an animal must be approached, EPO personnel alert the subject animal by speaking loudly while approaching slowly. This ensures that the animals are not startled, thereby preventing fight-or-flight reactions. Standing patiently at the outside edge of their "comfort zone" is usually sufficient to cause the subject to move off in a normal fashion. If the previous method is unsuccessful, noise is created by striking a heavy gauge metal lid with a wooden baton while approaching slowly. The tempo and frequency of the noise making is usually sufficiently annoying to cause the subjects to move off in a normal fashion.

Particularly unimpressed individuals are touched in the area between the hind flippers, and then move off in a normal fashion.

Infrequently, an emaciated, weak or ill weaner is encountered. These animals are not allowed to expend energy that could deplete critical fat reserves. Instead, the subject is quickly coaxed onto a gurney and carried out of the area.

Females are directed either into the water or laterally along the beach, whichever distance is shortest, to move them out of the operations area. Weaners are usually only displaced immediately prior to the landing of the barge and it is not necessary to totally clear the area of all animals. Weaners congregate in groups, and care is taken to retain pod integrity as the animals are moved to "safe zones" within the larger operational area. Once relocated, the weaners usually sleep through barge operations.

Milk-dependant pups and their mothers are occasionally moved in tandem, using a passive method. The need to move a nursing animal is a rare event, usually only when a mother and pup are within the cable attachment area. Standing patiently just outside the mothers "comfort zone" is usually sufficient to cause the female to slowly coax her pup away. Extreme care is taken to ensure the movement proceeds slowly and with minimal stress to the pair. A secondary passive technique involves placing a 4' x 8' sheet of plywood, in an upright position, approximately ten feet away from the pair, on the side opposite the direction in which they are to be moved. The presence of this novel object does not frighten the female, but due to cautious maternal instinct, more often than not she will slowly move her pup several yards away from the unfamiliar object over the course of a quarter hour to several hours. By repeatedly repositioning the structure near the edge of her "comfort zone", the female and pup are coaxed from the operational area. Between repositioning of the plywood, the bonded pair is assured ample time to rest and nurse. Depending on the position of the pair within the operational area, this process may require several days. This passive technique does not result in mother/pup separation, and nursing behavior proceeds normally. Follow-up observations have shown that all milk-dependant pups moved in this fashion have weaned successfully.

to establish breeding season territories immediately adjacent to the barge landing ramp during June and July.

During the last six years, the Navy, in order to reduce impacts to an ever increasing pinniped population, has made substantial and costly modifications to barge operational procedures. Installation of an off-loading ramp has significantly reduced the size of the beach area required to conduct barge operations. In addition, the removal and placement of items on the barge is off the beach, causing less vibration and minimizing the possibility of contact between seals and vehicles. Fencing attached to the sides and oceanfront edges of the ramp significantly reduced the number of elephant seal weaners climbing onto the ramp, and the subsequent need to move them prior to barge landings. The entire length of access road running parallel to the beach and the barge staging area are now sectioned off from the beach proper by K-rails (20'x 3' concrete barriers commonly used on freeways). These barriers have proven successful in keeping females, weaners, and all but the most determined bulls out of the staging area and off the road. Thereby reducing the need to displace them, and minimizing the likelihood of a seal/vehicle collision.

Implementation of these measures has resulted in the lowest total number of elephant seal displacements since the initiation of reporting (1994-95 breeding season). This is a significant reduction given that more pinnipeds were present, more barges were landed than in most of the prior years, and an increased level of environmental management occurred. However as to be expected, the number of females with pups moved was higher than in all but one prior year.

Measures taken to reduce impacts to elephant seals have provided a secondary benefit; exclusion of the increasing sea lion population from the operational area. However since this species is far more capable of climbing over barriers, effective and humane methods to exclude them from the barge landing area will continue to be developed.

PERSONNEL INVOLVED IN DISPLACEMENT ACTIVITY

Grace Smith, Navy Ecologist
Sandra Harvill, DSI Corporation, Assistant
Lisa Thomas, DSI Corporation, Assistant

MARINE MAMMAL DISPLACEMENT RECORD
 BARGE LANDING AT DAYTONA BEACH/SAN NICOLAS ISLAND, CA
 12/01/00-5/3/01

ESeal2001.xls
 7/2/2002

DATE	ADULT FEMALE			ADULT MALE			ELEPHANT SEAL SUB ADULT			WEANER			PUP		
	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN
	12/1/00*				1	10	1								
12/8/2000	1	60	3				1	100	10						
12/9/2000							1	90	5						
12/16/2000	1	60	2												
12/16/2000	1	80	3												
12/18/00*	1	60	1	1	100	10									
1/6/2001	1	10	5												
1/7/2001															
1/8/2001	1	20	5												
1/8/2001	1	60	5												
1/8/2001	1	40	20												
1/8/2001	1	60	10												
1/9/2001	1	10	5												
1/9/2001	1	50	2												
1/9/2001	1	10	15										1	10	15
1/9/2001	1	40	3												
1/9/2001	1	30	4												
1/12/2001	1	60	45	1	60	20							1	180	140
1/12/2001	1	80	5												
1/15/2001	1	60	1												
1/15/2001	1	40	1												
1/15/2001	1	40	1												
1/15/2001	1	20	1												
1/15/2001	1	40	2												
1/15/2001	1	30	2												
1/15/2001	1	30	2												
1/15/2001	1	5	10												
1/16/2001	1	70	20												
1/16/2001	1	70	20												

* Indicates barge landing dates.

MARINE MAMMAL DISPLACEMENT RECORD
 BARGE LANDING AT DAYTONA BEACH/SAN NICOLAS ISLAND, CA
 12/01/00-5/3/01

ESeal2001.xls
 7/2/2002

DATE	ADULT FEMALE			ADULT MALE			ELEPHANT SEAL SUB ADULT			WEANER			PUP		
	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN
	1/16/2001	1	20	10											
1/16/2001	1	10	5												
1/16/2001	1	30	5												
1/16/2001	1	30	5												
1/16/2001	1	40	15												
1/16/2001	1	50	15												
1/17/2001	5	20	30										5	20	30
1/17/2001	6	35	30	1	20	20									
1/17/2001	14	30	30	1	30	20							14	30	30
1/17/2001	5	50	10	1	40	20									
1/18/01*	14	30	120										14	30	120
1/18/01*	7	35	120	1	50	5							7	35	120
1/18/01*	3	60	10	1	50	5				1	20	20			
1/20/2001	1	60	2												
1/20/2001	1	50	2												
1/20/2001	1	30	2												
1/20/2001	1	75	1												
1/20/2001	1	40	1												
1/20/2001	1	20	1												
1/21/2001	1	20	5												
1/21/2001	1	10	2												
1/21/2001	1	25	2												
1/23/2001	1	25	10												
1/23/2001	1	50	5												
1/23/2001	1	20	1												
1/24/01*	5	30	10	1	50	5				1	25	5	5	30	10
1/24/01*	5	20	10	1	20	15				1	80	5	5	20	20
1/24/01*	2	60	15	1	40	10							2	60	15
1/24/01*	1	75	15										1	75	15

* Indicates barge landing dates.

MARINE MAMMAL DISPLACEMENT RECORD
 BARGE LANDING AT DAYTONA BEACH/SAN NICOLAS ISLAND, CA
 12/01/00-5/3/01

ESeal2001.xls
 7/2/2002

DATE	ADULT FEMALE			ADULT MALE			ELEPHANT SEAL SUB ADULT			WEANER			PUP		
	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN
	1/24/01*	1	100	5											
1/30/2001				1	180	10				1	15	5			
2/3/2001	1	40	2							1	20	15			
2/3/2001	1	65	2							1	35	2			
2/6/2001	1	10	5							1	20	2	1	10	5
2/6/2001	1	15	2							1	15	5	1	15	2
2/7/2001				1	200	20									
2/9/01*	3	30	10							5	150	10	3	30	10
2/9/01*	3	25	10							5	120	15	3	25	10
2/9/01*	1	130	2							6	150	20			
2/9/01*	4	30	5							18	27	15	4	30	5
2/9/01*	1	80	10							18	45	10	1	80	10
2/9/01*	1	10	10	1	30	5				6	50	15	1	10	10
2/9/01*	2	20	2										2	20	2
2/9/01*	3	25	10										3	25	10
2/9/01*	1	40	5												
2/9/01*	3	40	2										3	40	2
3/8/01*										45	150	10			
3/8/01*										12	60	6			
3/8/01*										47	175	17			
3/8/01*										1	120	10			
3/20/2001										19	40	5			
3/20/2001										2	20	5			
3/20/2001										6	100	10			
3/21/01*										9	60	5			
3/21/01*										10	30	2			
3/21/01*										3	80	10			
3/21/01*										1	30	8			
3/23/01*							1	120	5	5	80	5			

* Indicates barge landing dates.

MAR MAMMAL DISPLACEMENT RECORD
 BARGE LANDING AT DAYTONA BEACH/SAN NICOLAS ISLAND, CA
 12/01/00-5/3/01

ESeal2001.xls
 7/2/2002

DATE	ADULT FEMALE			ADULT MALE			ELEPHANT SEAL SUB ADULT			WEANER			PUP		
	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN
	3/23/01*										1	60	5		
3/23/01*										7	120	10			
3/23/01*										1	5	5			
3/23/01*										1	80	10			
4/4/01*	3	120	10				1	30	5	11	70	5			
4/4/01*							2	45	2	5	120	15			
4/4/01*							16	120	10						
4/18/2001	5	250	10				10	250	15						
4/18/2001	3	80	10				4	80	10						
4/18/2001	1	50	5												
4/19/01*							7	140	10	5	140	10			
4/19/01*							7	20	15						
4/19/01*							4	25	5						
4/26/01*							1	100	3						
4/26/01*							8	250	12						
5/3/01*				1	80	5	1	40	2						
TOTAL	150	6,920	4,055	15	960	170	64	8,530	675	257	25,856	2,738	77	2,455	3,587
AVERAGE		46.1	27.0		64.0	11.3		133.3	10.5		100.6	10.7		31.9	46.6

* Indicates barge landing dates.

MARINE MAMMAL DISPLACEMENT RECORD
 BARGE LANDING AT DAYTONA BEACH/SAN NICOLAS ISLAND, CA
 6/20/01-7/25/01

CSL2001.xls
 7/2/2002

CALIFORNIA SEA LION															
MIXED GROUP				ADULT FEMALE			ADULT MALE			SUB ADULT			PUP		
DATE	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN	NUM	DIST FEET	TIME MIN
6/20/01*							38	60	3						
6/20/01*							11	60	3						
6/27/01*							65	35	1.5	5	35	1.5			
7/12/01*							59	30	2						
7/16/01*							8	30	2	8	30	2			
7/16/01*							11	30	2	10	30	2			
7/16/01*							1	20	10						
7/25/01*							2	15	1	3	15	1			
7/25/01*							3	20	1						
7/25/01*							2	25	1						
TOTAL	0	0	0	0	0	0	200	7,715	418	26	760	47	0	0	0
AVERAGE								38.6	2.1		29.2	1.8			
All Ages															
Total Seals	226	8,475	464												
Averages		37.5	2.1												

* Indicates barge landing dates.