

CALIFORNIA COASTAL COMMISSION

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**STAFF REPORT
COASTAL DEVELOPMENT PERMIT APPLICATION**

Application File No.: E-02-024

Applicant: State Lands Commission

Project Location: Various locations along the Santa Barbara Channel.

Project Description: Remove hazardous or derelict structures from 17 sites to reduce risks to public health and safety and to improve public use.

Substantive File Documents: See Appendix A

SYNOPSIS

This staff report evaluates a project proposed by the State Lands Commission (SLC) to remove hazardous or derelict structures from 16 onshore sites along the Santa Barbara Channel between Tajiguas Creek and the Ventura River, and one deepwater site located approximately 2 ½ miles offshore of Gaviota, Santa Barbara County.

The types of structures to be removed include steel beams, wooden and steel sheet piles and posts, abandoned pipes and cables, well casings, and other similar objects. None of the structures are serviceable. The onshore structures will be removed using various methods, such as excavating, cutting with torches, or using vibratory pile extractors, and the offshore structures will be removed by divers using cutting torches.

The project is intended to reduce risks to public health and safety and to improve the public's ability to use the areas for public trust purposes. However, project-related activities do have the potential to cause temporary adverse effects on coastal resources, including disturbance of marine mammals and other sensitive species, disturbance of terrestrial and marine habitats, and the potential for oil or fuel spills.

To address these potential adverse impacts, this staff report includes a number of recommended special conditions. **Special Condition 1** limits the work at several sites to times of the year when sensitive species are dependent on the sites. **Special Condition 2** requires the Applicant to treat any structures remaining after project activities are completed to reduce their hazard to human and marine life. **Special Condition 3** requires the Applicant to perform pre- and post-project eelgrass surveys and to mitigate for any damage. **Special Condition 4** requires the Applicant to provide an anchoring plan for Executive Director review and approval. **Special Condition 5** requires the Applicant to follow specific protocols to survey, report, and treat for *Caulerpa taxifolia*. **Special Condition 6** requires evidence of an approved spill prevention plan. **Special Condition 7** restricts equipment and vehicle fueling to specific locations. **Special Condition 8** ensures areas of damaged vegetation are properly re-vegetated.

Staff recommends that the Commission approve the proposed project, as conditioned

1.0 STAFF RECOMMENDATION

The staff recommend conditional approval of the permit application.

Motion:

I move that the Commission **approve** Coastal Development Permit E-02-024 subject to conditions set forth in the staff recommendation specified below.

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

The Commission hereby **approves** the Coastal Development Permit for the proposed project and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

2.0 STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

3.0 SPECIAL CONDITIONS

1. **Project Timing Restrictions:** Project-related work shall not occur at the following sites during the following time periods:
 - Site 19 (Casitas Pier): Project activities shall not be done at this site during the harbor seal pupping season between December 1 and May 31 of any year.
 - Site 24 (Pauley well, offshore): Project activities shall not be done at this site during the gray whale migration seasons December 1 through February 28 of any year.
 - Various sites: The Permittee shall also consult with the California Department of Fish and Game (CDFG) to determine which project sites are used for grunion spawning. Project activities at those sites shall not occur between March 1 and September 15 of any year, unless those activities and a grunion monitoring plan are approved by CDFG.
2. **Prevention of Further Hazards:** If project-related structures are only partially removed during the project, the remaining parts of the structures that may be exposed shall be treated to present a smooth surface that will reduce the possibility of harm to human or marine life and will reduce snagging of marine debris.

- Eelgrass Survey and Mitigation:** The Permittee shall conduct pre- and post-project eelgrass surveys to determine whether eelgrass is damaged during project activities. The survey protocols shall be submitted to the Executive Director for review and approval, and shall, at a minimum, conform to the Southern California Eelgrass Mitigation Policy (Appendix B). The Permittee shall provide survey results to the Executive Director within 30 days of completing each survey.

If the Executive Director determines that less than 10 square meters of eelgrass was damaged during project activities, the Permittee shall submit for Executive Director review and approval a mitigation plan that conforms to the protocols of the Southern California Eelgrass Mitigation Policy. If the Executive Director determines that 10 square meters or more eelgrass area was damaged, the Permittee shall submit an application for permit amendment to determine mitigation requirements.

- Anchoring Plan:** Before starting construction at project sites requiring anchoring, the Permittee shall provide an anchoring plan for review and approval by the Executive Director. This plan shall identify all areas of hard bottom substrate in the project area and shall include measures to avoid direct and indirect impacts to these areas. Project-related construction at sites where anchoring is necessary shall not begin before the Executive Director approves the plan.
- Caulerpa taxifolia* Pre-construction Survey:** No earlier than 90 days and no later than 30 days before starting project construction, the Permittee shall complete a survey of the nearshore portion of the project area in accordance to the protocols established in Section D of the *Caulerpa* Control Protocol established by the Southern California *Caulerpa* Task Force, dated November 22, 2002. Within five (5) business days of completing the survey, the Permittee shall submit the results for review and approval by the Executive Director and the Task Force's Surveillance Subcommittee (contact William Paznokas, California Department of Fish and Game, at 858-467-4218 or Robert Hoffman, National Marine Fisheries Service, at 562-980-4043).

If *Caulerpa taxifolia* is found within the survey area, the Permittee shall not proceed with the project until (a) the Permittee provides evidence to the Executive Director that all *Caulerpa taxifolia* discovered within the survey area has been eliminated in a manner that complies with all applicable regulatory requirements, including the Coastal Act, or (b) the Permittee has revised the project to avoid any contact with *Caulerpa taxifolia*. No revisions to the project shall occur without a Coastal Commission-approved amendment to this coastal development permit, unless the Executive Director determines that an amendment is not required.

- Spill Prevention and Response Plan:** Before starting construction, the applicant shall submit evidence to the Executive Director that the spill response plan required of the project's work vessels and approved by the U.S. Coast Guard also meets the requirements of the California DFG Office of Spill Prevention and Response.

7. **Fueling and Fuel Storage:** At onshore project sites, equipment and vehicles shall be fueled away from the beach at staging areas over paved or impervious surfaces, and any fuel or petroleum products used for project equipment and vehicles shall be stored away from beach areas and within the staging area paved or impervious surfaces. Equipment and vehicles shall be inspected daily for fuel or fluid leaks, and leaking equipment or vehicles shall be repaired or replaced immediately. The Permittee shall have available at each staging area adequate spill containment equipment (e.g., absorbent materials, containment booms, etc.) to respond to any fuel or oil spills or leaks from project-related vehicles and equipment.

8. **Re-Vegetation:** The Permittee shall perform pre-and post-construction surveys to determine whether areas of terrestrial vegetation were disturbed during project activities. Surveys shall be completed no greater than 30 days before and after work at each site, and the Permittee shall provide survey results to the Executive Director no later than 30 days after each survey is completed. If the Executive Director determines that mitigation is required, the Permittee shall provide a mitigation plan for Executive Director review and approval within 60 days of the determination. That plan shall include a description of the types and densities of plants to be used, planting techniques and timing, monitoring requirements, and performance standards for planting success. After replanting the affected areas, the Permittee shall continue to monitor these areas for a minimum of one additional year following replanting to document site restoration. The Permittee shall submit a monitoring report with photographs to the Executive Director one year following replanting. The Permittee shall replant the areas and/or undertake other appropriate measures necessary to ensure full restoration of any areas disturbed by the permitted development.

4.0 FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

4.1 Project Setting, Description, and Background

Project Setting: The proposed project involves removing hazardous or derelict structures from 17 sites along the Santa Barbara Channel (see Figures 1a and 1b)¹. The structures were originally placed several decades ago, but have not been maintained for a number of years and are no longer functional. The original owners or responsible parties are generally not known. The structures are seaward of the mean high tide line and within the jurisdiction of the State Lands Commission (the Applicant), as well as within the retained permit jurisdiction of the Coastal Commission.

All but one of the project sites are on beaches between Tajiguas Creek between Gaviota and El Capitan in Santa Barbara County and the Ventura River in Ventura County. These sites are used in varying degrees for public access, recreation, fishing, and other activities. The remaining site, an abandoned wellhead, is about 13,500 feet offshore of Gaviota at a water depth of about 250 feet. The onshore structures are generally visible only during winter months when storms and wave action remove sand from the beaches and expose the various hazards.

The project sites and the associated structures to be removed are:

Site 1 – Tajiguas Creek: 30 steel I-beams located waterward of a concrete seawall near the mouth of the creek.

Site 2 – El Capitan State Beach: 184 6-inch H-piles and 3 dry well casings located on the beach.

Site 4 – Ellwood Cove West/Eagle Canyon: 25 6-inch H-piles and a dry well casing located approximately 750 feet west of the Venoco Pier.

Site 5 – Ellwood Cove East: 128 6-inch H-piles, 20 wooden piles, 2 12-inch dry well casings, and a 40-foot length of wooden sheet piles located along about 200 yards of the beach.

Site 6 – Santa Barbara Shores A: 80 6-inch H-piles, 3 14-inch dry well casings, and 500 feet of 6-inch pipeline, located immediately south of Santa Barbara Shores Drive.

Site 10 – Isla Vista Park (Goleta/Dos Pueblos Canyon): 55- 6-inch H-piles and 4 6-inch dry well casings, located on the beach.

¹ The original project proposal included several additional sites that have been removed from the project. Several were deleted from the project due to high sand levels preventing surveyors from locating the structures, due to location of structures outside of State Lands Commission jurisdiction, or due to unresolved concerns about potential impacts to wildlife habitat. These sites include Site 3 (Las Varas Canyon), Site 7 (Santa Barbara Shores B), Site 8 (Devereaux Slough), Site 9 (Devereaux Point), Site 11 (Goleta Beach), Site 12 (East Beach), and Site 18 (Carpinteria State Beach). This proposed Coastal Development Permit does not include review or approval for work at those sites.

Site 13 – Biltmore Hotel Beach Front (South Birnam): a 30-foot steel groin located on the beach in front of the hotel on the beach.

Site 14 – Miramar Beach: 6 wooden piles located on the beach.

Site 15 – Fernald Point: a 60-foot length of steel sheet piling and remnants of a rock jetty or groin.

Site 16 – Ortega at Summerland: 180 railroad irons, 31 6-inch H-piles, 1 8-inch dry well casing, 3 12-inch dry well casings, and 600 feet of electrical cable, all located along the beach near the east end of Padrano Lane, south of Summerland.

Site 17 – Santa Claus Lane: 12 8-inch H-piles and 850 railroad irons, located waterward of the breakwater along Santa Claus Lane.

Site 19 – Casitas Pier: 10 12-inch H-piles located along the beach and within a harbor seal rookery.

Site 20 – Rincon/Mussel Shoals at Mussel Rock/Pitas Point: 30 6-inch H-piles located near the foot of the beach stairs seaward of Breakers Way and west of a pier.

Site 21 – Ventura River: 18 8-inch H-piles located about 50 feet south of the river mouth.

Site 22 – Ortega Hill (East Fernald Point): 80 H-beams located just south of a concrete retaining wall on the beach.

Site 23 – Rincon Point: 5 railroad irons located on the beach.

Site 24 – Pauley Well: an abandoned wellhead consisting of three nested casings (10 3/4-inch, 8 5/8-inch, and 7 7/8-inch) and a cement plug, located about 13,500 feet offshore of Gaviota at a water depth of about 244 feet.

Project techniques:

Methods: Work at each site will vary somewhat due to the particular characteristics of each site and the structures. The Applicant has described the following types of techniques that will be used at various sites:

- Land-based: The site will be approached from land. Structures will be excavated or exposed using mechanized or hand equipment and will be removed using cutting torches. The work will be done by a seven-person crew and will include use of a backhoe, loader, and trailer. Work will generally occur during low tides. Temporary steel or wooden ramps may be used if needed to access the beach. A backhoe will be used to first attempt to pull out the structures, and if not successful, will excavate around them to aid in removal. Removal may be done by pulling, using oxy/acetylene torches, saws, or rigging. Some work may require the use of a vibratory pile extractor, which will be mounted on a vehicle using the same means of access as the other vehicles. All material and debris will be removed from the beach.

- **Shallow water-based:** The site will be approached by water using a utility work vessel equipped with a crane and mooring system, dive air system, jet pump, and other equipment. Dive teams of six people will deploy from the vessel and may use a jet pump to excavate sediment from around the structures before they are pulled out or cut. Material and debris will be loaded onto the vessel and disposed of on land.
- **Deep water site:** The deep water structure to be removed is the top 10 to 15 feet of an abandoned wellhead about 10 feet in diameter. The structure will be removed using a 27-person dive team operating from a 127-foot work vessel equipped with a crane, Remotely Operated Vehicle (ROV), jet pump, welding gear, rigging, and mixed gas diving system. The primary vessel will be assisted by a dive support vessel. The vessel will use a four-point "fly-over" anchor system to stabilize itself over the work site. The ROV will be deployed to survey the work area, and divers will then use a high pressure water blaster to remove sediments from near the well casing, rig the structures for recovery, and use a torch to cut through the casing and plates. All materials and debris will be pulled aboard the vessel for disposal on land.

Timing: Work at each site is dependent in part on site conditions, habitat considerations, and funding. Several sites will have specific restrictions on allowable work periods based on habitat and species concerns. In general, work is anticipated to take place primarily during winter months when storms and wave actions remove sand from the beach and expose the various structures, thus requiring less excavation at each site.

Access to sites: Access to the sites varies. Some will be through existing public access points and some via private land. Private land will be used only if the Applicant has received permission from the landowner. In some cases, the upland landowners have provided permission subject to timing or other access constraints.

4.2 Other Permits, Approvals, and Authorizations

The project is also subject to the following permits and approvals:

- **State Lands Commission:** As the lead agency under the California Environmental Quality Act, the Commission issued a Mitigated Negative Declaration (MND), July 30, 2002.
- **State Water Resources Control Board:** Section 401 Water Quality Certification, issued February 26, 2003.
- **U.S. Army Corps of Engineers:** Permit approval pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, to be issued.

4.3 Coastal Act Issues

4.3.1 Filling in Coastal Waters

Section 30233 of the Coastal Act states:

(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 the following:

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
- (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
- (3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.*
- (4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
- (5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
- (6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
- (7) Restoration purposes.*
- (8) Nature study, aquaculture, or similar resource dependent activities.*

The proposed project involves placement of fill in the form of temporary ramps for vehicles to access various beach sites, and excavation of beach sand to create temporary storage piles during removal of structures. The primary purpose of the project is to remove structures that constitute fill in and adjacent to coastal waters.

Coastal Act section 30233 restricts the Commission from authorizing a project that requires filling open coastal waters unless it meets three tests. The first test requires the proposed activity to fit within one of eight categories of uses described in Coastal Act section 30233(a)(1)-(8). The second test requires that there be no feasible less environmentally damaging alternatives to the fill. The third test mandates that feasible mitigation measures be provided to minimize the project's adverse environmental effects.

- 1) Allowable Use Test: Coastal Act section 30233(a)(7) allows fill in open coastal waters for restoration purposes. The purpose of this project is to remove hazardous or derelict structures in order to restore safety and public uses of the sites. In some cases, removal of the structures will remove impediments to natural beach processes, sand migration, and wave action, and will therefore restore a more natural coastal setting. Therefore, in this instance, the Commission finds that the proposed temporary and incidental fill is for purposes of restoration and therefore in conformance with Coastal Act section 30233(a)(7).
- 2) No Feasible, Less Environmentally Damaging Alternatives: The second test of section 30233(a) requires an assessment of whether there are feasible less environmentally damaging alternatives. Because the hazards are at specific sites along the coast, there are no alternatives to doing the work at a particular location, other than not performing the work. The Applicant's proposal to temporarily place metal or wooden ramps constitutes fill, but it is a measure meant to reduce impacts to coastal dune habitat. Absent this temporary fill, the adverse project impacts could be greater. Therefore, the Commission finds that there are no feasible, less environmentally damaging alternatives to the proposed project and therefore meets the second test of Coastal Act section 30233(a).
- 3) Feasible Mitigation Measures: The third test under section 30233 requires that the project include feasible mitigation measures to minimize adverse environmental effects. In other sections of this report, the Commission has identified several feasible mitigation measures that will minimize those effects. By imposing the special conditions described in this report as part of the coastal development permit, the Commission finds that the third test of Coastal Act section 30233(a) has been met.

For the reasons above, the Commission finds that this coastal-dependent project, as conditioned, is an allowable use for fill, has no feasible less environmentally damaging alternatives, and includes feasible mitigation measures, and is therefore consistent with section 30233 of the Coastal Act.

4.3.2 Marine Biological Resources and Water Quality

Coastal Act section 30230 states:

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.

Coastal Act section 30231 states:

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.

The project will take place in and adjacent to the coastal waters of the Santa Barbara Channel. Project activities may potentially affect biological resources through temporary disturbances to various sensitive habitat types and species and likely result in temporary turbidity impacts to water quality.

Marine Biological Resources:

The project sites provide several types of habitat for a wide range of species. The Applicant has included a number of general measures that will avoid or reduce impacts to marine, terrestrial, and aquatic species and habitats in and near the project sites. Many of these general measures are listed below, and additional measures are described in Section 4.3.4 (Environmentally Sensitive Habitat Areas) of this report. The mitigation measures include:

- Performing pre-construction biological surveys at each site to determine whether special status species are present and what measures may be necessary to protect them.
- Having a biologist on site for all project activities to conduct training for project personnel and to monitor project activities to ensure impacts are avoided and minimized.
- Using rubber tired rather than tracked vehicles where feasible.
- Keeping vehicles above the high tide line and on dry sand where possible.
- Preventing vehicles from traversing coastal foredune habitat.
- Gaining any necessary vertical access as close as practicable to the project sites to minimize impacts to the beach.
- Working primarily during winter low tide periods outside of breeding and nesting seasons.
- Minimizing the width of work corridors and using existing roads, paths, or disturbed areas where possible.
- Sidecasting any excavated materials inshore (higher on the beach) and replacing excavated material at end of each day.
- Removing vehicles from the beach each day.
- Using temporary wooden or steel sheets as ramps over rocky features on the beach.

The Applicant has also included a number of more specific mitigation measures meant to avoid or reduce impacts to particular types of species, as described below. Additionally, many of the specific measures described in Section 4.3.4 would further avoid or reduce impacts to marine species.

Marine mammals: Numerous studies have identified at least thirty-four species of marine mammals that live in or migrate through California waters. The project area serves as habitat for a variety of these marine mammals. The most common include several whale species – the California gray whale (*Eschrichtius robustus*), the blue whale (*Balaenoptera musculus*), humpback whale (*Megaptera novaeangliae*), sperm whale (*Physeter macrocephalus*), and Minke whales (*Balaenoptera acutorostrata*); toothed whales – common dolphins (*Delphinus capensis* and *D. delphis*), Dall's porpoise (*Phocoenoides dalli*), and others; two pinniped species – California sea lions (*Zalophus californianus*) and harbor seals (*Phoca vitulina*); and Southern sea otters (*Enhydra lutris nereis*). All marine mammals are protected by the federal Marine Mammal Protection Act (MMPA), which prohibits the intentional taking² of any marine mammal without a permit. Additionally, several of the marine mammal species found in the project area are protected by the federal Endangered Species Act (ESA), including the humpback whale, blue whale, sperm whale, which are listed as endangered. Potential project-related impacts to marine mammals include disturbance due to noise, the presence of equipment on the beach, and vessel traffic.

Noise-related impacts would be due to activities of equipment and work vessels used in the project. The project involves the use of heavy equipment, cutting torches, motor vehicles, and vessels, all which would create some noise and disturbance, although it is likely to be minor and short-term at each of the project sites. Marine mammals that live in these areas are believed to be tolerant of a limited amount of noise and disturbance, although some types of disturbance may result in the animals moving away from the area. Additionally, at least one site (Site #19, Casitas Pier) is located at a harbor seal rookery in an area that is closed to human access each year from December 1 to May 31 to protect seals during pupping seasons. Because marine mammals are protected under the MMPA and some are protected under the ESA, any adverse effect or "take" may be considered significant. The Applicant incorporated several mitigation measures into the project to further reduce the low potential for adverse impacts to marine mammals, including:

- Implementing a marine mammal protection plan as described in the project MND that includes a number of mitigation measures, including avoidance techniques, use of NMFS-approved monitors during project activities, establishing marine mammal protection zones near the work areas, routing vessels away from marine mammals and known travel corridors, requiring regular reports of marine mammal sightings and any project-related incidents, training project personnel on techniques to avoid harming or harassing marine mammals, and others.
- Using vessels that are relatively slow-moving and represent little increased risk of collision with marine mammals.
- Scheduling project work at Site 24 (offshore Pauley well removal) to occur outside of the gray whale migration season (December to June each year).

² The definition of "take" under the Act includes intentional or unintentional harassment, any act that could cause injury or death, and any action that changes the behavior of the animal.

To further ensure marine mammals are protected in conformity to Coastal Act policies, **Special Condition 1** prohibits work from occurring at Site #19 (Casitas Pier) from December 1 to May 31 of any year to protect the seal rookery during pupping season. **Special Condition 2** requires the Applicant to treat any of the remaining project structures so they are smoothed, rounded, or otherwise altered to present no sharp edges that may injure marine mammals and other biological resources.

Eelgrass: Several of the project sites include areas of eelgrass (*Zostera* sp.) immediately offshore in the low intertidal and shallow subtidal areas. Possible impacts include crushing or burying eelgrass areas due to excavation or turbidity. To avoid or minimize such impacts, the Applicant has incorporated several mitigation measures into the project, including conducting pre-anchoring surveys, using anchoring techniques such as crown buoys, vertical placement and removal, and near-surface anchor lines that minimize anchor drag across the seafloor, and using an anchor-assist vessel to deploy anchors from multi-anchor vessels. The pre-anchoring surveys are intended to identify areas where anchors can be dropped at least 20 feet from eelgrass areas.

The project's mitigation measures are expected to result in complete avoidance of impacts to eelgrass. However, to ensure eelgrass is protected in conformity to Coastal Act policies, **Special Condition 3** requires the Applicant to submit pre- and post-construction surveys to the Executive Director to determine whether eelgrass is damaged during the project. The surveys are to be done using the protocols established in the Southern California Eelgrass Mitigation Policy (see Appendix B). This Policy includes specific protocols for surveys, mitigation sites, ratios, techniques, monitoring, and success. If eelgrass impacts cover less than 10 square meters (which is the lowest threshold in the Policy), **Special Condition 3** further requires the Applicant to use those protocols to develop a mitigation plan subject to Executive Director review and approval. If the project's impacts to eelgrass cover greater than 10 square meters, **Special Condition 3** requires the Applicant to submit an application for permit amendment to determine what mitigation is necessary.

Hard bottom habitat: Several nearshore areas adjacent to some project sites include hard bottom habitat that may be affected due to project activities, primarily through anchoring or turbidity. The Applicant has included several mitigation measures that are likely to result in complete avoidance of hard bottom areas, such as performing pre-construction surveys and developing an anchoring plan to identify and avoid these areas during the project work, using anchoring techniques that will avoid dragging anchors across hard bottom areas, and others. Additionally, many of the measures described elsewhere in this section will result in avoidance or minimization of adverse impacts to hard bottom. To further ensure the project meets Coastal Act policies, **Special Condition 4** requires the Applicant to submit an anchoring plan for Executive Director review and approval before starting work in these areas.

Invasive Species – *Caulerpa taxifolia*: *Caulerpa taxifolia*, an invasive plant species, has been found in at least two locations along the California coast, and has the potential to live and thrive in many more coastal locations. *Caulerpa* is a fast growing plant that creates a dense vegetative mat that can smother or crowd out native fish, invertebrate, and vegetative species used by other species as food or habitat. Its habitat requirements are not yet fully known, but it has the potential to become established in shallow waters along much of California's coast.

To address the threat posed by *Caulerpa*, the Southern California *Caulerpa* Task Force was established to provide quick and effective responses to prevent or control *Caulerpa* in coastal waters. The Task Force includes representatives from state, federal, local, and private entities. The Task Force developed protocols (see Appendix C) to be used when work in coastal waters could result in discovery, introduction, or dispersal of *Caulerpa*. **Special Condition 5** requires the Applicant to conform to those protocols, including conducting a pre-construction survey in the nearshore waters of the project site, and notifying the Task Force if *Caulerpa* is found.

Marine birds: The project sites provide suitable foraging, and resting habitat for a wide variety of marine birds, including several special status species – the California brown pelican (*Pelecanus occidentalis*), the California least tern (*Sterna antillarum*), and the Western snowy plover (*Charadrius alexandrinus nivosus*). Possible project impacts to marine birds include disturbance of foraging or resting behavior, and death or injury due to oil or fuel spills.

Many of the mitigation measures meant to avoid or reduce impacts to marine resources and water quality and to avoid oil spills will also result in reduced adverse effects to marine birds. [Note: Section 4.3.4, on Environmentally Sensitive Habitat Areas, includes additional analysis of the project's possible adverse effects on avifauna, along with mitigation measures and conditions to avoid or minimize those adverse effects.]

Water Quality:

The project's primary impacts to water quality will occur due to turbidity and sedimentation caused by excavating the various structures or anchoring the project-related vessels. The Applicant will perform the project-related activities using Best Management Practices and erosion control methods such as silt fencing, jute netting, and others, where erosion could result in sedimentation to nearby waterbodies. Additionally, project work is subject to conditions of a Section 401 water quality certification issued by the State Water Quality Resources Board.

The mitigation measures described above meant to protect marine biological resources will also act to avoid or reduce the project's impacts on water quality. Many of the anchoring techniques the project will use will also result in less turbidity, and provisions of the required spill prevention plan described below in Section 4.3.3 will result in further reduced risk of water quality impacts.

Conclusion:

For the reasons above, the Commission finds that the project, as conditioned, will be carried out in a manner protective of marine resources and water quality, and therefore is consistent with sections 30230 and 30231 of the Coastal Act.

4.3.3 Oil and Fuel Spills

Coastal Act section 30232 states:

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.

The proposed project could potentially increase the risk of oil spills on or adjacent to coastal waters due to its use of motor vehicles and vessels.

Coastal Act section 30232 requires an applicant to undertake measures to prevent an oil spill. The Applicant has included a number of measures as part of the project to avoid or reduce the potential for oil or fuel spills, including fueling equipment and vehicles at staging areas, storing fuel and other hazardous materials in approved storage containers, and locating staging areas away from waterbodies and wetlands. The removal of the Pauley wellhead at the abandoned oil and gas well at the offshore site is not expected to result in a release since the project involves removing only the top 10 to 15 feet of the structure, which extends into the seafloor an additional 250 to 380 feet deep.

The potential for oil or fuel spills is considered very low, due in part to the short duration of the project work at any site, and due in part to the Applicant's mitigation measures. These include preventative measures, such as proper storing and fueling methods, and removing equipment from the beach at the end of each day, as well as an oil spill contingency plan for both onshore and offshore activities. The plan includes:

- Equipment necessary to have on hand to respond to possible spill scenarios (with the likely worst-case to be less than 5 barrels);
- Identification of an onsite spill response team;
- Notification requirements in the event of a spill (e.g., U.S. Coast Guard, OSPR, etc.); and,
- Availability of additional response (i.e., Clean Seas), if needed.

Special Condition 6 requires the Applicant before starting construction to submit to the Executive Director evidence that the spill plan has been approved by the state Office of Spill Prevention and Response. In addition, in order to minimize the chance of spills from the land-based motor vehicles and equipment used during the project, **Special Condition 7** imposes several additional measures to reduce the risk of spills due to equipment fueling or fuel storage.

Conclusion:

With these measures in place, and as conditioned, the Commission finds the project adequately protects against spills and includes necessary measures to contain and cleanup potential spills, and is therefore consistent with the requirements of Coastal Act section 30232.

4.3.4 Environmentally Sensitive Habitat Areas

Coastal Act section 30240 states:

(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 recreational areas.*

The project sites are within a region characterized as a transition zone between Southern and Central California's marine and terrestrial biological communities. As such, they include a variety of both marine and terrestrial habitat types providing habitat to a number of species including several considered endangered or sensitive. Most of the sites have been disturbed to some degree by human activity, but still contain important habitat characteristics.

Terrestrial Flora: The project sites encompass at least eleven types of plant communities and habitat, including freshwater marsh, southern coastal salt marsh, southern foredune, riparian scrub, Venturan coastal sage scrub, southern coastal bluff scrub, annual grassland, eucalyptus woodland, riparian forest, oak woodland, and ruderal (disturbed) habitat. A review of the California Fish and Game Natural Diversity Data Base indicates that the sites either contain, or have the potential to contain, at least 17 special status plant species³.

Only two of these special status species were identified at the project sites during pre-project field surveys – sand verbena and cliff aster – and these two species were seen at only two of the sites. However, several of the project sites include potential habitat for these and other special status species; therefore, the Applicant will conduct pre-construction surveys to identify individuals of these species and avoid those areas. With the surveys and the use during the project of existing disturbed roads and trails to access the project sites, the likelihood of disturbing these plants is low.

³ Special status plant species include those listed or proposed for listing under state or federal Endangered Species Acts, the California Native Plant Protection Act, and other regulations or determinations. For this project, the listed plants include Aphanisma (*Aphanisma biltoides*), Black-flowered figwort (*Scrophularia atrata*), Cliff aster (*Malacothrix saxatilis* var. *saxatilis*), Coulter's saltbush (*Atriplex coulteri*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), Gaviota tarplant (*Hemizonia increscens* ssp. *villosa*), Late-flowered mariposa lily (*Calochortus weedii* var. *vestus*), Nuttall's scrub oak (*Quercus dumosa*), Refugio manzanita (*Arctostaphylos refugioensis*), Salt marsh bird's-beak (*Cordylanthus maritimus* ssp. *maritimus*), Sand verbena (*Abronia maritima*), Santa Barbara morning glory (*Calystegia sepim* ssp. *binghamiae*), Santa Ynez false lupine (*Thermopsis macrophylla*), Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*), Southern tarplant (*Centromadia parryi* ssp. *australis*), and Ventura marsh milk-vetch (*Astragalus pycnostachyus*).

Additionally, the Applicant will use the pre-construction surveys to identify areas where project activities may have damaged existing vegetation, both special status and non-special status, and will re-vegetate those areas. **Special Condition 8** requires any necessary re-vegetation to be done using native plants only, and requires the re-vegetation plan be approved by the Executive Director.

Terrestrial and Aquatic Wildlife:

The project sites provide known or potential habitat for a wide variety of terrestrial mammals, amphibians, reptiles, and birds, including 25 special status species⁴. Not all these species are expected to be present at the project sites, and many of those present will be there only seasonally.

Many of the measures taken to protect other marine biological resources will also result in protection of these species. Additionally, the Applicant has designed the project to avoid the riparian and estuarine habitats important to these species, further reducing the potential for adverse impacts. The Applicant has included a number of measures that will avoid or reduce impacts to plants and animals near the project sites. These measures include:

- Having a qualified biologist provide pre-construction surveys for special status plant and wildlife species, conduct training for project personnel, and monitor all activities near sensitive habitat areas.
- Installing temporary protective fencing around sensitive biological resources during project activities.
- Avoiding breeding season (generally April 1 to July 1 of any year).
- Where possible, using existing roads, paths, and other disturbed areas for equipment and personnel access to the work sites.
- Refueling equipment at least 100 feet from wetlands and fueling only on impervious and bermed surfaces within 100 feet of the mean high tide line or coastal drainages.
- Replanting or reseeding vegetated areas that may be disturbed during project work with native or naturalized vegetation.
- Providing erosion control measures, such as jute netting and silt fencing where necessary to protect nearby sensitive habitat areas.

⁴ Special status wildlife species include those listed or proposed for listing under federal or state Endangered Species Acts, those that meet the definition of rare or endangered under CEQA, and other regulations or determinations. For this project, those species include the Monarch butterfly (*Danaus plexippus*), Southern steelhead (*Oncorhynchus mykiss*), Light-Footed Clapper Rail (*Rallus longirostris levipes*), Tidewater goby (*Eucyclogobius newberryi*), California red-legged frog (*Rana aurora draytonii*), Coast horned lizard (*Phrynosoma coronatum frontale*), California newt (*Taricha torosa torosa*), Southwestern pond turtle (*Clemmys marmorata pallida*), Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*), Silvery legless lizard (*Anniella pulchra pulchra*), Two-striped garter snake (*Thamnophis hammondi*), Western snowy plover (*Charadrius alexandrinus nivosus*), Golden eagle (*Aquila chrysaetos*), White-tailed kite (*Elanus caeruleus*), Bell's sage sparrow (*Amphispiza belli belli*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Least Bell's vireo (*Vireo belli pusillus*), Loggerhead shrike (*Lanius ludovicianus*), Cooper's hawk (*Accipiter cooperi*), Northern harrier (*Circus cyaneus*), Bank Swallow (*Riparia riparia*), Arroyo Toad (*Bufo californicus*), Tri-colored blackbird (*Agelaius tricolor*), Pallid bat (*Antrozous pallidus*), American badger (*Taxidea taxus*), San Diego desert woodrat (*Neotoma lepida intermedia*), and the White abalone (*Haliotis sorenseni*).

In addition to these measures proposed as part of the project, **Special Condition 1** imposes timing restrictions that protect several species during sensitive times of the year, and **Special Condition 8** requires re-vegetation of disturbed areas using native plants, appropriate planting and monitoring techniques, and other mitigation measures, as approved by the Executive Director.

Conclusion:

With these measures in place, and as conditioned, the Commission finds the project adequately protects environmentally sensitive habitat areas, and is therefore consistent with the requirements of Coastal Act section 30240.

4.3.5 Public Access and Recreation

Coastal Act section 30210 states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Coastal Act section 30211 states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Coastal Act section 30220 states:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

The project will result in short-term adverse impacts to recreational use of the coastal setting at the various project sites. The project sites are generally used by the public for general recreation, swimming, surfing, fishing, and other similar activities.

Most of the project work will be done in the winter months, when sand levels at the beach sites are low, and when public use is not at its peak. The Applicant has also included mitigation measures to avoid or minimize impacts to public access and recreation, such as locating the project staging areas away from recreational access points and clearly delineating the various work sites using temporary safety fencing to allow users to avoid the areas. Additionally, the work is generally expected to take no more than several days at each site, with work expected to take less than a day at many of the sites.

Equipment staging areas for most project sites will be located either on private land or on land not accessible to the public (e.g., CalTrans storage yards, wastewater treatment plant yards, etc.). For those staging areas in public areas, impacts to public access involve the temporary use of several parking spaces, and are expected to be minimal and short-term.

Conclusion:

For the reasons above, the Commission finds that the project, as conditioned, will not interfere with public access to the sea and is therefore consistent with sections 30210, 30211, and 30220 of the Coastal Act.

4.3.7 Cultural Resources

Coastal Act section 30244 states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Historical and cultural resources are defined as those areas of the land and marine environment that possess historical, cultural, archaeological or paleontological significance, including sites, structures, or objects significantly associated with, or representative of earlier people, cultures and human activities and events. This area of coastal California includes a rich assemblage of sites, primarily of the Chumash culture, and has been subject to extensive archaeological research. The Applicant conducted records searches at several entities (University of California, Santa Barbara – Central California Information Center; National and California Historical Registers; Office of Historic Preservation Properties Directory; California Historic Landmarks and Points of Historical Interest; and the Native American Heritage Commission). Based on available records, many of the project sites and access routes are near known cultural resources and are potentially at or near sites that are not yet known.

The Applicant has proposed several mitigation measures to avoid or reduce the potential for adverse impacts to offshore cultural resources, including:

- Avoiding all known archaeological sites.
- Having a qualified archaeologist monitor train project personnel in procedures related to the discovery of artifacts or remains.
- Having the archaeologist present for all project work, including when equipment is being moved to the various project sites, to reduce the risk of affected as-of-yet unknown sites.
- Stopping work if artifacts or remains are found and notifying the Native American Heritage Commission and the State Historic Preservation Office to determine necessary treatment or protection of the materials.

Conclusion:

With the project's mitigation measures, the Commission finds that the project will not adversely affect archaeological or paleontological resources and is therefore consistent with Coastal Act Section 30244.

4.3.8 Air Resources

Coastal Act section 30253 states in part:

New development shall:

...(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

The proposed project involves the use of heavy equipment and vessels that emit air pollutants. Most of the sites are within the Santa Barbara County non-attainment area for ozone, and two of the sites are within the Ventura County non-attainment zone for ozone and PM₁₀ (inhalable particulate matter). The project would result in relatively short-term impacts to air quality, and includes mitigation measures to reduce adverse air quality effects, including watering sites and using erosion control methods to control airborne dust and dirt, maintaining low vehicle speeds, and others.

Because these mitigation measures will reduce potential emissions and the overall emissions are expected to be under the threshold that would require permits from the Santa Barbara or Ventura Air Pollution Control Districts, the project is expected to have less-than-significant impacts.

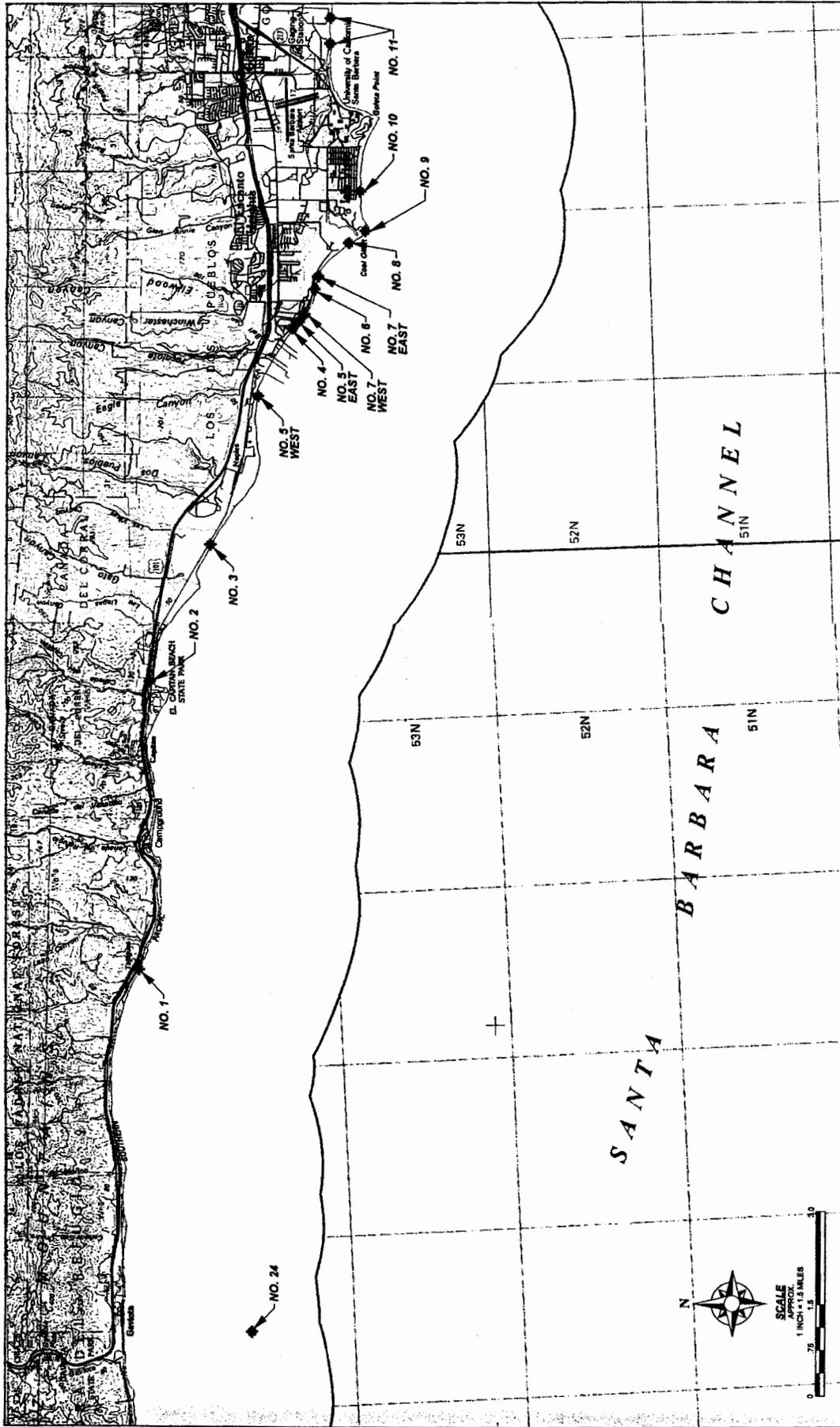
Conclusion:

For the reasons above, the Commission finds the project, as conditioned, is consistent with section 30253 of the Coastal Act.

5.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of the CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. The project as conditioned herein incorporates measures necessary to avoid any significant environmental effects under the Coastal Act, and there are no less environmentally damaging feasible alternatives. Therefore, staff recommend the Commission find that the proposed project is consistent with the resource protection policies of the Coastal Act and with the CEQA.

June 2002
Project No. 0202-0981



AREA AND SITE LOCATION MAP
FIGURE 1-1A

Figure 1a
E-02-024

padre
 ENGINEERS, INC.
 ENVIRONMENTAL SCIENTISTS
 Santa Barbara County Hazards Removal Project

APPENDIX A: SUBSTANTIVE FILE DOCUMENTS

Coastal Development Permit Application and Coastal Zone Management Program Materials

State Lands Commission Application for Coastal Development Permit E-02-024, received October 30, 2002.

Agency Permits, Orders, and Approvals

Mitigated Negative Declaration, issued by the State Lands Commission, July 30, 2002.

Section 401 Water Quality Certification, issued by State Water Resources Control Board, February 26, 2003.



SOUTHERN CALIFORNIA EELGRASS MITIGATION POLICY
(Adopted July 31, 1991)

(From: <http://swr.nmfs.noaa.gov/hcd/eelpol.htm>)

Eelgrass (*Zostera marina*) vegetated areas function as important habitat for a variety of fish and other wildlife. In order to standardize and maintain a consistent policy regarding mitigating adverse impacts to eelgrass resources, the following policy has been developed by the Federal and State resource agencies (National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game). This policy should be cited as the Southern California Eelgrass Mitigation Policy (revision 8).

For clarity, the following definitions apply. "Project" refers to work performed on-site to accomplish the applicant's purpose. "Mitigation" refers to work performed to compensate for any adverse impacts caused by the "project". "Resource agencies" refers to National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game.

1. Mitigation Need. Eelgrass transplants shall be considered only after the normal provisions and policies regarding avoidance and minimization, as addressed in the Section 404 Mitigation Memorandum of Agreement between the Corps of Engineers and Environmental Protection Agency, have been pursued to the fullest extent possible prior to the development of any mitigation program.

2. Mitigation Map. The project applicant shall map thoroughly the area, distribution, density and relationship to depth contours of any eelgrass beds likely to be impacted by project construction. This includes areas immediately adjacent to the project site which have the potential to be indirectly or inadvertently impacted as well as areas having the proper depth and substrate requirements for eelgrass but which currently lack vegetation.

Protocol for mapping shall consist of the following format:

1) Coordinates

Horizontal datum - Universal Transverse Mercator (UTM), NAD 83, Zone 11

Vertical datum - Mean Lower Low Water (MLLW), depth in feet.

2) Units

Transects and grids in meters.

Area measurements in square meters/hectares.

All mapping efforts must be completed during the active growth phase for the vegetation (typically March through October) and shall be valid for a period of 120 days with the exception of surveys completed in August - October.

A survey completed in August - October shall be valid until the resumption of active growth (i.e., March 1). After project construction, a post-project survey shall be completed within 30 days. The actual area of impact shall be determined from this survey.

3. Mitigation Site. The location of eelgrass transplant mitigation shall be in areas similar to those where the initial impact occurs. Factors such as, distance from project, depth, sediment type, distance from ocean connection, water quality, and currents are among those that should be considered in evaluating potential sites.

4. Mitigation Size. In the case of transplant mitigation activities that occur concurrent to the project that results in damage to the existing eelgrass resource, a ratio of 1.2 to 1 shall apply. That is, for each square meter adversely impacted, 1.2 square meters of new suitable habitat, vegetated with eelgrass, must be created. The rationale for this ratio is based on, 1) the time (i.e., generally three years) necessary for a mitigation site to reach full fishery utilization and 2) the need to offset any productivity losses during this recovery period within five years. An exception to the 1.2 to 1 requirement shall be allowed when the impact is temporary and the total area of impact is less than 100 square meters. Mitigation on a one-for-one basis shall be acceptable for projects that meet these requirements (see section 11 for projects impacting less than 10 square meters).

Transplant mitigation completed three years in advance of the impact (i.e., mitigation banks) will not incur the additional 20% requirement and, therefore, can be constructed on a one-for-one basis. However, all other annual monitoring requirements (see sections 8-9) remain the same irrespective of when the transplant is completed.

Project applicants should consider increasing the size of the required mitigation area by 20-30% to provide greater assurance that the success criteria, as specified in Section 9, will be met. In addition, alternative contingent mitigation must be specified, and included in any required permits, to address situation where performance standards (see section 9) are not met.

5. Mitigation Technique. Techniques for the construction and planting of the eelgrass mitigation site shall be consistent with the best available technology at the time of the project. Donor material shall be taken from the area of direct impact whenever possible, but also should include a minimum of two additional distinct sites to better ensure genetic diversity of the donor plants. No more than 10% of an existing bed shall be harvested for transplanting purposes. Plants harvested shall be taken in a manner to thin an existing bed without leaving any noticeable bare areas. Written permission to harvest donor plants must be obtained from the California Department of Fish and Game.

Plantings should consist of bare-root bundles consisting of 8-12 individual turions. Specific spacing of transplant units shall be at the discretion of the project applicant.

However, it is understood that whatever techniques are employed, they must comply with the stated requirements and criteria.

6. Mitigation Timing. For off-site mitigation, transplanting should be started prior to or concurrent with the initiation of in-water construction resulting in the impact to the eelgrass bed. Any off-site mitigation project which fails to initiate transplanting work within 135 days following the initiation of the in-water construction resulting in impact to the eelgrass bed will be subject to additional mitigation requirements as specified in section 7. For on-site mitigation, transplanting should be postponed when construction work is likely to impact the mitigation. However, transplanting of on-site mitigation should be started no later than 135 days after initiation of in-water construction activities. A construction schedule which includes specific starting and ending dates for all work including mitigation activities shall be provided to the resource agencies for approval at least 30 days prior to initiating in-water construction.

7. Mitigation Delay. If, according to the construction schedule or because of any delays, mitigation cannot be started within 135 days of initiating in-water construction, the eelgrass replacement mitigation obligation shall increase at a rate of seven percent for each month of delay. This increase is necessary to ensure that all productivity losses incurred during this period are sufficiently offset within five years.

8. Mitigation Monitoring. Monitoring the success of eelgrass mitigation shall be required for a period of five years for most projects. Monitoring activities shall determine the area of eelgrass and density of plants at the transplant site and shall be conducted at 3, 6, 12, 24, 36, 48, and 60 months after completion of the transplant. All monitoring work must be conducted during the active vegetative growth period and shall avoid the winter months of November through February. Sufficient flexibility in the scheduling of the 3 and 6 month surveys shall be allowed in order to ensure the work is completed during this active growth period. Additional monitoring beyond the 60 month period may be required in those instances where stability of the proposed transplant site is questionable or where other factors may influence the long-term success of transplant.

The monitoring of an adjacent or other acceptable control area (subject to the approval of the resource agencies) to account for any natural changes or fluctuations in bed width or density must be included as an element of the overall program.

A monitoring schedule that indicates when each of the required monitoring events will be completed shall be provided to the resource agencies prior to or concurrent with the initiation of the mitigation.

Monitoring reports shall be provided to the resource agencies within 30 days after the completion of each required monitoring period.

9. Mitigation Success. Criteria for determination of transplant success shall be based upon a comparison of vegetation coverage (area) and density (turions per square meter) between the project and mitigation sites. Extent of vegetated cover is defined as that area where eelgrass is present and where gaps in coverage are less than one meter between individual turion clusters. Density of shoots is defined by the number of turions per area

present in representative samples within the control or transplant bed. Specific criteria are as follows:

- a. a minimum of 70 percent area of eelgrass bed and 30 percent density after the first year.
- b. a minimum of 85 percent area of eelgrass bed and 70 percent density after the second year.
- c. a sustained 100 percent area of eelgrass bed and at least 85 percent density for the third, fourth and fifth years.

Should the required eelgrass transplant fail to meet the established criteria, then a Supplementary Transplant Area (STA) shall be constructed, if necessary, and planted. The size of this STA shall be determined by the following formula:

$$STA = MTA \times (|A_t + D_t| - |A_c + D_c|)$$

MTA = mitigation transplant area.

A_t = transplant deficiency or excess in area of coverage criterion (%).

D_t = transplant deficiency in density criterion (%).

A_c = natural decline in area of control (%).

D_c = natural decline in density of control (%).

Four conditions apply:

- 1) For years 2-5, an excess of only up to 30% in area of coverage over the stated criterion with a density of at least 60% as compared to the project area may be used to offset any deficiencies in the density criterion.
- 2) Only excesses in area criterion equal to or less than the deficiencies in density shall be entered into the STA formula.
- 3) Densities which exceed any of the stated criteria shall not be used to offset any deficiencies in area of coverage.
- 4) Any required STA must be initiated within 120 days following the monitoring event that identifies a deficiency in meeting the success criteria. Any delays beyond 120 days in the implementation of the STA shall be subject to the penalties as described in Section 7.

10. Mitigation Bank. Any mitigation transplant success that, after five years, exceeds the mitigation requirements, as defined in section 9, may be considered as credit in a "mitigation bank". Establishment of any "mitigation bank" and use of any credits accrued from such a bank must be with the approval of the resource agencies and be consistent with the provisions stated in this policy. Monitoring of any approved mitigation bank shall be conducted on an annual basis until all credits are exhausted.

11. Exclusions.

1) Placement of a single pipeline, cable, or other similar utility line across an existing eelgrass bed with an impact corridor of no more than $\frac{1}{2}$ meter wide may be excluded from the provisions of this policy with concurrence of the resource agencies. After project construction, a post-project survey shall be completed within 30 days and the results shall be sent to the resource agencies. The actual area of impact shall be determined from this survey. An additional survey shall be completed after 12 months to insure that the project or impacts attributable to the project have not exceeded the allowed $\frac{1}{2}$ meter corridor width. Should the post-project or 12 month survey demonstrate a loss of eelgrass greater than the $\frac{1}{2}$ meter wide corridor, then mitigation pursuant to sections 1-11 of this policy shall be required.

2) Projects impacting less than 10 square meters. For these projects, an exemption may be requested by a project applicant from the mitigation requirements as stated in this policy, provided suitable out-of-kind mitigation is proposed. A case-by-case evaluation and determination regarding the applicability of the requested exemption shall be made by the resource agencies.

(last revised 2/2/99)

CAULERPA CONTROL PROTOCOL **(Version 1.2, adopted November 22, 2002)**

A. Background Information:

Caulerpa taxifolia (“*Caulerpa*”) is a green alga native to tropical waters that typically grows in limited patches. A particularly cold tolerant clone (tolerant of temperatures at least as low as 10 °C for a period of three months) of this species has already proven to be highly invasive in the Mediterranean Sea and efforts to control its spread have been unsuccessful. In areas where the species has become well established, it has caused ecological and economic devastation by overgrowing and eliminating native seaweeds, seagrasses, reefs, and other communities. In the Mediterranean, it is reported to have harmed tourism and pleasure boating, devastated recreational diving, and had a significant impact on commercial fishing both by altering the distribution of fish as well as creating a considerable impediment to net fisheries.

This alga and potentially other *Caulerpa* species pose a substantial threat to marine ecosystems in California, particularly to the extensive eelgrass meadows and other benthic environments that make coastal waters such a rich and productive environment. The eelgrass beds and other coastal resources that could be directly impacted by an invasion of *Caulerpa* are part of a food web that is critical to the survival of numerous native marine species including those of commercial and recreational importance..

Currently, *Caulerpa* has been detected in two locations in southern California and other infestations may also exist but remain undetected. In order to minimize the spread and introduction of this species and other potentially invasive species of this genus to other systems, the following provisions have been established for California nearshore coastal and enclosed bays, estuaries, and harbors from Morro Bay to the U.S./Mexican border.

B. Definitions:

Disturbing Activity – a work activity initiated by a permit holder which could fragment or disseminate *Caulerpa*.

Area of Potential Effect (APE) – the area surrounding an authorized project site that could be affected by a Disturbing Activity related to the implementation of the project work. This includes the project footprint, areas where equipment is stored, areas where vessel prop-wash could occur in association with work, or in-water disposal areas used by the project. It does not include EPA designated deep-ocean disposal sites.

High Growth Period – May 1 to September 30.

Infected System – any bay, harbor, estuary, or lagoon in which *Caulerpa* has been identified, regardless of where the infestation occurs geographically within the system. Following eradication and subsequent verification surveillance for at least two High Growth Periods, an Infected System may be re-designated as a “*Caulerpa*-Free System” by the National Marine Fisheries Service (NOAA Fisheries) and California Department of Fish and Game (CDFG). Currently identified infected systems are:

Agua Hedionda Lagoon
Huntington Harbour

NOAA Fisheries/CDFG Contacts – the designated federal and state agency contacts for submittal of survey reports and reports of *Caulerpa* findings. All submitted material must be provided to these agencies at the following addresses:

National Marine Fisheries Service
Southwest Regional Office
501 West Ocean Boulevard, Suite 4200
Long Beach, CA 90802
Attn: Robert Hoffman
ph.: (562) 980-4043
fx.: (562) 980-4092
e-mail: Bob.Hoffman@noaa.gov

Calif. Dept. of Fish & Game
South Coast Region
4949 Viewridge Drive
San Diego, CA 92124
Attn: William Paznokas
ph.: (858) 467-4218
fx.: (858) 467-4299
e-mail: wpaznokas@dfg.ca.gov

Survey Area – the area over which surveys are conducted, typically synonymous with the Area of Potential Effect.

Survey Level – the level of intensity of the survey within the survey area. Survey levels are defined as either:

- 1) *Surveillance Level* – General survey coverage providing a systematic sub-sampling of the entire APE during which at least 20% of the bottom is inspected and widespread occurrences of *Caulerpa* would be expected to be identified if present. Surveys may be accomplished using diver transects, remote cameras, or acoustic surveys with visual ground truthing.
- 2) *High Intensity Level* – More intensive survey using a systematic sub-sampling of the entire APE during which at least 50% of the bottom is inspected. Surveys may be accomplished using diver or remote camera transects that provide.
- 3) *Eradication Level* – This is the most intensive survey using a systematic and comprehensive survey of the entire APE during which 100% of the bottom is inspected. Surveys must be accomplished using divers moving at a rate appropriate to the site conditions to ensure that all areas are comprehensively searched irrespective of site conditions which may complicate surveys.

C. Reporting Requirements:

1. Surveys conducted in accordance with requirements outlined in this document shall be submitted to the NOAA Fisheries/CDFG Contacts within 15 days of completion of each survey. Surveys shall be submitted on the attached survey form or in a suitable reproduction of the form fields.
2. If *Caulerpa* is identified at a permitted project site during a survey or at any other time prior, during, or within 120 days after completion of authorized activities, the NOAA Fisheries/CDFG Contacts shall be contacted within 24 hours of first noting the occurrence.
3. For survey actions requiring input or coordination with NOAA Fisheries/CDFG Contacts, please provide information in a timely fashion and allow at least 5 working days for agency coordination and feedback.

D. Surveys within *Caulerpa*-Free System:

The following survey conditions shall apply to permitted Disturbing Activity within *Caulerpa*-Free Systems.

1. Prior to initiation of any permitted Disturbing Activity, a pre-construction survey of the project APE shall be conducted to determine the presence or absence of *Caulerpa*. This survey shall be conducted at a Surveillance Level. Survey work shall be completed not earlier than 90 days prior to the Disturbing Activity and not later than 30 days prior to the Disturbing Activity.
2. In the event that *Caulerpa* is detected, the Disturbing Activity shall not be conducted until such time as the infestation has been isolated, treated and the risk of spread from the proposed Disturbing Activity is eliminated in accordance with section F.
3. Exemptions – Individual, privately owned boat docks and related structures are exempt from provisions 1 and 2 of this section when such facilities are found in *Caulerpa*-Free Systems and permitted activities are limited to structural repairs, replacement, modification, and pile driving and do not include dredging or other significant bottom disturbing activities.

E. Surveys within Infected Systems:

The following survey conditions shall apply to permitted Disturbing Activity within Infected Systems.

1. Prior to initiation of any permitted Disturbing Activity within an Infected System, two surveys, initiated not less than 60 days apart, shall be conducted within the project APE during the High Growth Period. The first survey shall be conducted

using High Intensity Level techniques and the second survey shall be conducted using Eradication Area Level techniques.

2. At least one survey shall be conducted within 45 days of initiation of permitted Disturbing Activity dredging (a "Pre-Act Survey"). This survey could be the second (Eradication Area Level) survey conducted during the High Growth Period. However, project timing may require that a third survey be conducted prior to initiation of Disturbing Activity in order to meet this 45 day requirement. If a third survey is required, this survey shall be conducted at either a High Intensity Level or Eradication Area Level as determined by the NOAA Fisheries/CDFG Contacts based upon site circumstances and proximity to infestations. To determine appropriate survey level, please contact the NOAA Fisheries/CDFG Contacts with project specific information.
3. If the Disturbing Activity extends for over 90 calendar days, the portions of the APE that would be expected to be impacted by a Disturbing Activity within the subsequent 90 days must be surveyed at a High Intensity Level. This subsequent survey must be conducted within 15 days following the first 90 days. Prolonged activities would require a repetition of this phased survey requirement.
4. If dredged material is removed from the APE and placed elsewhere in the marine environment, then no sooner than 60 days after placement of the dredged materials and during the next High Growth Period, the applicant shall conduct a Surveillance Level survey at all disposal areas except where material is disposed of within an existing EPA designated deep ocean disposal site. The specific survey requirements shall be determined by NOAA Fisheries and CDFG on a case-by-case basis.

F. If *Caulerpa* is Found:

1. If *Caulerpa* is found, then the NOAA Fisheries/CDFG Contacts shall be notified within 24 hours of the discovery.
2. All *Caulerpa* assessment and treatment shall be conducted under the auspices of the CDFG and NOAA Fisheries as the state and federal lead agencies for implementation of *Caulerpa* eradication in California.
3. Within 96 hours of notification, the extent of the *Caulerpa* infestation within the project APE shall be fully documented. *Caulerpa* eradication activities shall be undertaken using the best available technologies at the time and will depend upon the specific circumstances of the infestation. This activity may include in situ treatment using contained chlorine applications, and may also incorporate mechanical removal methods. The eradication technique is subject to change at the discretion of NOAA Fisheries and CDFG and as technologies are refined.

4. The efficacy of treatment shall be determined prior to proceeding with permitted activities. To determine effectiveness of the treatment efforts, a written Sampling and Analysis Plan (SAP) shall be prepared. The plan shall be developed in conjunction with the CDFG and NOAA Fisheries and shall be approved by these agencies prior to implementation.
5. This policy does not vacate any additional restrictions on the handling, transport, or disposal of *Caulerpa* that may apply at the time of permit issuance or in the future. It is incumbent upon the permittee to comply with any other applicable State or Federal regulations, restrictions, or changes to the Protocol that may be in effect at the time of initiation of permitted activities.

Caulerpa Survey Reporting Form

This form is required to be submitted for any surveys conducted for the invasive exotic alga *Caulerpa taxifolia* that are required to be conducted under federal or state permits and authorizations issued by the U.S. Army Corps of Engineers or Regional Water Quality Control Boards (Regions 8 & 9). The form has been designed to assist in controlling the costs of reporting while ensuring that the required information necessary to identify and control any potential impacts of the authorized actions on the spread of *Caulerpa*. Surveys required to be conducted for this species are subject to modification through publication of revisions to the *Caulerpa* survey policy. It is incumbent upon the authorized permittee to ensure that survey work is following the latest protocols. For further information on these protocols, please contact: Robert Hoffman, National Marine Fisheries Service (NOAA Fisheries), (562) 980-4043, or William Paznokas, California Department of Fish & Game, (858) 467-4218).

Site Name: (common reference)	
Survey Contact: (name, phone, e-mail)	
Permit Reference: (ACOE Permit No., RWQCB Order or Cert. No.)	
Hydrographic System: (name of bay, estuary, lagoon, or harbor)	
Specific Location: (UTM, Lat./Long., datum, accuracy level, and an electronic survey area map or hard copy of the map must be included)	
Was <i>Caulerpa</i> Detected: (if <i>Caulerpa</i> is found, please immediately contact the permitting agency project staff and NOAA Fisheries or CDFG personnel identified above)	_____ Yes, <i>Caulerpa</i> was found at this site and _____ has been contacted on _____ date. _____ No, <i>Caulerpa</i> was not found at this site.
Description of Permitted Work: (describe briefly the work to be conducted at the site under the permits identified above)	

Description of Site: (describe the physical and biological conditions within the survey area at the time of the survey and provide insight into variability, if known. Please provide units for all numerical information).	<i>Depth range:</i>	
	<i>Substrate type:</i>	
	<i>Temperature:</i>	
	<i>Salinity:</i>	
	<i>Dominant flora:</i>	
	<i>Dominant fauna:</i>	
	<i>Exotic species encountered (including any other Caulerpa species):</i>	
<i>Other site description notes:</i>		
Description of Survey Effort: (please describe the surveys conducted including type of survey (SCUBA, remote video, etc.) and survey methods employed, date of work, and survey density (estimated percentage of the bottom actually viewed). Describe any limitations encountered during the survey efforts.	<i>Survey date and time period:</i>	
	<i>Horizontal visibility in water:</i>	
	<i>Survey type and methods:</i>	
	<i>Survey personnel:</i>	
	<i>Survey density:</i>	
	<i>Survey limitations:</i>	
Other Information: (use this space to provide any additional information or references to attached materials such as maps, reports, etc.)		

