CALIFORNIA COASTAL COMMISSION
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Filed:	2/1/10
180th Day:	07/31/10
270th Day:	10/29/10
Staff:	A. Tysor
Staff Report:	7/29/10
Hearing Date:	8/12/10

Item Th19a

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-07-098

APPLICANT: California Department of Parks and Recreation

AGENTS: Mark Abramson, Santa Monica Bay Restoration Foundation

PROJECT LOCATION: Malibu Lagoon State Park, City of Malibu, Los Angeles County

PROJECT DESCRIPTION: Implementation of a Wetland Habitat Restoration and Enhancement Program for Malibu Lagoon to improve the function of the lagoon ecosystem by recontouring/reconfiguring the lagoon, slopes and drainages to increase hydrologic flow involving 88,700 cu. yds. of grading (51,200 cu yds. excavation and 37,500 cu. yds. fill); revegetation with native wetland and upland plant species and removal of non-native plant species; construction of a public access trail around lagoon with new interpretive public informational/educational improvements; and implementation of a long-term lagoon monitoring plan.

MOTION & RESOLUTION: Page 7

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **APPROVAL** of the proposed project **with sixteen (16) special conditions** regarding: (1) Construction, Timing, and Sensitive Species Surveys, (2) Erosion Control Plans, (3) Timing, Operations, and Maintenance Responsibilities, (4) Final Dewatering Plan, (5) Final Hydrological Monitoring Plan (6) Habitat (Plant Communities) Vegetation, Restoration Monitoring and Reporting Plan, (7) Final Aquatic Vegetation, Benthos, Fish and Avian Monitoring Plan, (8) Plans Conforming to Geotechnical Engineer's Recommendations, (9) Herbicide Use, (10) Final Public Access Program, (11) Required Approvals, (12) Assumption of Risk, (13) Discharge Requirements, (14) Mitigation Measures, (15) Archaeological Resource Monitoring, and (16) Removal of Excavated Material.

The proposed project is for the implementation of a comprehensive restoration and enhancement program for Malibu Lagoon. The project includes dewatering the western 12 acre portion of the lagoon and recontouring slopes and drainages within the western portion of the lagoon, including 51,200 cu ydfill, and 13,700 cu. yds. export of phased

grading to improve circulation and increase tidal flow. No excavation or recontouring will occur within the main channel of the lagoon. The project includes implementation of a restoration and planting plan to remove non-native plant species and revegetation of all disturbed areas with an appropriate mix of native plant species, including low marsh, mid-high marsh, high marsh transitional, and coastal scrub plantings. A north-south oriented temporary berm is proposed in order to temporarily separate the western lagoon area where restoration will occur from the main portion of Malibu Lagoon in order to allow dewatering of the restoration area. A small area adjacent to the Adamson House is proposed to be deepened and replanted. All excavated material will be temporarily stockpiled in designated areas on site, including the parking lot and appropriate erosion control measures are proposed to ensure that uncontrolled runoff does not occur and that there is no potential increase in sedimentation of the lagoon. The project includes detailed plans for management of erosion during construction, a habitat planting plan, a public access, education, and interpretation plan, and a detailed long-term monitoring program for habitat (flora and fauna), water quality during both open and closed lagoon mouth conditions, sediment quality, and lagoon topography/bathymetry.

The project raises several issues relating to the disruption of the current lagoon habitat. Although the restoration project may have short term construction-related impacts, the restoration activities are intended to enhance the long-term value and function of the Malibu Lagoon ecosystem. Several special conditions are recommended to ensure that the proposed restoration effort is successful. **Special Condition (1)** requires an environmental resources specialist to be present during all construction, grading, excavation, vegetation eradication and removal, hauling, and maintenance activities and requires sensitive species surveys and protective measures to assure that construction impacts will not harm (avian and terrestrial). **Special Condition Four (4)** requires a final dewatering plan to assure the proper protection and relocation techniques for tidewater goby, steelhead, and other important aquatic species during dewatering operations. To protect water quality during construction, **Special Conditions (2), (3), (8) and (16)** require that proper construction measures and adequate erosion control measures are implemented. To assure appropriate long-term monitoring of the restoration project, **Special Condition (6)** and **Special Condition (7)** require the applicant to conduct bi-annual monitoring and submit annual monitoring reports (for at least 5 years) regarding: hydrology, plant community revegetation, aquatic vegetation, benthos, fish, and avian species. If the monitoring reports do not indicate improvement of water circulation, water quality, or indicate impacts to sensitive species, the applicant is required to submit a revised or supplemental plan, certified by a registered engineer and a qualified Resource Specialist, that specifies additional or supplemental measures to modify the portions of the original plan that have failed or are not in conformance with the approved plan. Archeological resources exist on the site and **Special Condition (16)** requires the applicant to have a qualified archaeologist(s) and appropriate Native American consultant(s) present on-site during all restoration activities which occur within or adjacent to the archaeological sites and to document work and to halt work if necessary. Further, **Special Condition (10)** requires the applicant to develop and

implement a public access program to ensure that the public has maximum access to the State Park during construction.

PROCEDURAL NOTE, PROJECT JURISTICTION AND CONSOLIDATED REVIEW:

The proposed project includes components that are located within the City of Malibu's Local Coastal Program (LCP) jurisdiction as well as components within the retained jurisdiction of the Coastal Commission. The City of Malibu would typically have jurisdiction over the onshore portions of the project within its LCP jurisdiction. However, Section 30601.3 of the Coastal Act authorizes the Commission to process a consolidated coastal development permit application, when its criteria are satisfied, for both aspects of a proposed project that would otherwise require a coastal development permit from both a local government with a certified local coastal program and the Commission.

The standard of review for a consolidated coastal development permit application submitted pursuant to Section 30601.3(a) shall follow Chapter 3 of the Coastal Act (commencing with Section 30200), with the appropriate local coastal program used as guidance.

The proposed development is the restoration of Malibu Lagoon and its upland public park facilities and public amenities. Although the portions of the project involving wetland restoration are located within the Commission retained coastal development permit jurisdiction, the construction and replacement of the upland components of the project cross the boundary of the Commission's retained jurisdiction into areas where the City of Malibu's LCP is effective. Typically, development located within a certified area requires a coastal development permit from the certified local government. However, in this case, the project work that would occur within the Commission's original jurisdiction, including reconfiguration of the 12-acre western portion of the lagoon, is physically integrated with the activities that would occur outside the area of retained jurisdiction (i.e. in the City's permit jurisdiction).

Pursuant to Section 30601.3(a)(2), the applicant, appropriate local government, and the Commission may agree to consolidate a permit action for a project that spans local and state jurisdictions. In this case, the City of Malibu, in a letter to Commission staff dated October 25, 2007, requested that the Commission assume jurisdiction over all activities associated with the proposed project. The applicant both consented to, and facilitated this consolidated jurisdictional process. Further, public participation is not substantially impaired by the consolidated review in this case because the other portions of the project were reviewed by the City of Malibu in a public hearing process and the subject portion of the project was made known at the time. Additionally, and Environmental Impact Report was prepared for this project. Further, the subject application will be noticed and heard consistent with the Coastal Commission's public hearing process, which facilitates both written and oral comment.

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EXHIBITS:

Exhibit 9. Grading Plan Sheet 3
Exhibit 10. Grading Plan Sheet 4
Exhibit 11. Planting Plan Sheet 1
Exhibit 12. Planting Plan Sheet 2
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Exhibit 14. Planting Plan Sheet 4
Exhibit 15. Plant Palette
Exhibit 16. Public Access and Interpretive Plan
Exhibit. 17. City of Malibu Permit Consolidation Agreement
Exhibit. 18. Applicant Consolidation Agreement
Exhibit. 19. Ex-Parte Communication Disclosure
Exhibit. 20. Sampling Location Map (Approx. Location of Monitoring Sites)

LOCAL APPROVALS RECEIVED: City of Malibu Coastal Development Permit No. 07-021 for relocation of existing parking lot (Phase I of Malibu Lagoon restoration project), approved June 19, 2007. Action Final July 24, 2007; Letters of agreement from City of Malibu and project applicant for a consolidated CDP review, dated October 25, 2007.

AGENCY REVIEWS AND APPROVALS: California Regional Water Quality Control Board, Los Angeles Region, General NPDES Permit No. CAG994004, Order No. R4-2008-0032 and Monitoring and Reporting Program No. Cl-9573, Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, March 9, 2010; California Regional Water Quality Control Board, Los Angeles Region, Water Quality Certification for Proposed Malibu Lagoon Restoration Project, Malibu Lagoon, City of Malibu, Los Angeles (File No. 07-133);United States Fish and Wildlife Service Biological Opinion for the Malibu Lagoon Restoration and Enhancement Project (CON-1-8-08-F-4), dated August 26, 2009; United States Fish and Wildlife Service letter to Daniel P. Swenson, Chief, U.S. Army Corps of Engineers, Biological Opinion Amendment, dated January 8, 2010; National Marine Fisheries Service, Endangered Species Act Section 7 Informal Consultation Letter, dated August 18, 2008 to US Army Corps of Engineers; California Department Fish & Game, Streambed Alteration Agreement (Default Approval), No. 1600-2007-0316-R5, dated November 20, 2007; United States Army Corps of Engineers Provisional Permit No. SPL-2007-01016-MAS, dated December 14, 2009.

SUBSTANTIVE FILE DOCUMENTS: Malibu Lagoon Restoration Feasibility Study – Final Alternatives Analysis, prepared by Moffatt & Nichol, in association with Heal the Bay, dated March 2005; Malibu Lagoon Restoration and Enhancement Plan, Project Assessment and Evaluation Plan, prepared by California State Coastal Conservancy, dated July 29, 2005; Malibu Lagoon Restoration and Enhancement Plan, Project Monitoring Plan, prepared by California State Coastal Conservancy, dated July 29, 2005; Malibu Lagoon Restoration and Enhancement Plan, prepared by Moffatt & Nichol, in association with Heal the Bay, dated June 17, 2005; Malibu Lagoon Restoration and Enhancement Plan Final Environmental Impact Report (SCH #2005101123), prepared by Jones & Stokes, dated March 2006;Jurisdictional Delineation for Malibu Lagoon Restoration and Enhancement Project, prepared by Jones & Stokes, dated July 2007; Enhanced Environmental Monitoring Program at Malibu Lagoon and Malibu Creek, Prepared by R. Ambrose, I. Suffet, and S. Que Hee, dated March 23, 1995; Malibu Lagoon: A Baseline Ecological Survey, Prepared by Sean Manion and Jean Dillingham, dated 1989; Floristic Survey of Malibu Lagoon State Beach, prepared by Carl Wishner of Envicom Corp., dated July, 2005; Breeding Bird Survey Results, prepared by Daniel Cooper, Cooper Ecological Monitoring Inc., dated August 24, 2005; Birds of Malibu Lagoon, Final Report 2006, prepared by Daniel Cooper, Cooper Ecological Monitoring Inc., dated August 8, 2006; Malibu Lagoon Fish Survey Results, Prepared by Rosi Dagit (SMMRCD) and Dr. Camm Swift (Entrix Inc.), dated July 20, 2005; Amphibian, Reptile, and Terrestrial Invertebrate Survey Results, prepared by Frank Hovore & Associates, dated August 28, 2005; Small Mammal Trapping Survey, prepared by Natural Resources Assessment, Inc., dated October 6, 2005;The Tidewater Goby:

Reintroduction of an isolated fish species into Malibu Lagoon-A Watershed Perspective, prepared by Sean Manion, dated June 1993; Study of Potential Water Quality Impacts on Malibu Creek and Lagoon from On-site Septic Systems, prepared by URS Greiner Woodward Clyde, prepared for City of Malibu, dated June 1999; Sediments as a Non-Point Source of Nutrients to Malibu Lagoon, prepared by M. Sutula, K. Kramer and J. Cable, dated November 1, 2004.

I. STAFF RECOMMENDATION

MOTION: ***I move that the Commission approve Coastal Development Permit No. 4-07-098 pursuant to the staff recommendation.***

STAFF RECOMMENDATION OF APPROVAL:

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 the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development 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 and the policies of the certified Local Coastal Program for the City of Malibu. 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.

II. 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 or interpretation of any term or 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.

III. SPECIAL CONDITIONS

1. Construction Timing and Sensitive Species Surveys

For any construction activities the applicant shall retain the services of a qualified biologist or environmental resource specialist (hereinafter, "environmental resources specialist") to conduct sensitive species surveys (including birds and other terrestrial species) and monitor project operations associated with all construction activities:

At least 30 calendar days prior to commencement of any construction activities, the applicant shall submit the name and qualifications of the environmental resources specialist, for the review and approval of the Executive Director. The environmental resources specialist shall ensure that all project construction and operations shall be carried out consistent with the following:

A. The applicant shall ensure that the environmental resources specialist, with experience in conducting sensitive species surveys shall conduct surveys 30 calendar days prior to the listed activities to detect any active sensitive species, reproductive behavior, and active nests within 500 feet of the project site. Follow-up surveys must be conducted 3 calendar days prior to the initiation of construction and nest surveys must continue on a monthly basis throughout the nesting season or until the project is completed, whichever comes first.

B. In the event that any sensitive species are present in the project area but do not exhibit reproductive behavior and are not within the estimated breeding/reproductive cycle of the subject species, the qualified biologist shall either: (1) initiate a salvage and relocation program prior to any excavation/maintenance activities to move sensitive species by hand to safe locations elsewhere along the project reach or (2) as appropriate, implement a resource avoidance program with sufficient buffer areas to ensure adverse impacts to such resources are avoided. The applicant shall also immediately notify the Executive Director of the presence of such species and which of the above actions are being taken. If the presence of any such sensitive species requires review by the United States Fish and Wildlife Service and/or the California Department of Fish and Game, then no development activities shall be allowed or continue until any such review and authorizations to proceed are received, subject to the approval of the Executive Director.

C. If an active nest of a federally or state-listed threatened or endangered species, bird species of special concern, or any species of raptor is found, the applicant shall notify the appropriate State and Federal agencies within 24 hours, and shall develop an appropriate action specific to each incident. The applicant shall notify the California Coastal Commission in writing by facsimile or e-mail within 24 hours and consult with the Commission regarding determinations of State and Federal agencies.

D. If an active nest of any federally or state listed threatened or endangered species, species of special concern, or any species of raptor is found within 300 feet of construction activities (500 feet for raptors), the applicant shall retain the services of an environmental resources specialist with experience conducting bird and noise surveys, to monitor bird behavior and construction noise levels. The environmental resources specialist shall be present at all relevant construction meetings and during all significant construction activities (those with potential noise impacts) to ensure that nesting birds are not disturbed by construction related noise. The environmental resources specialist shall monitor birds and noise every day at the beginning of the project and during all periods of significant construction activities. Construction activities may occur only if construction noise levels are at or below a peak of 85 dB at the nest (s) site. If construction noise exceeds a peak level of 85 dB at the nest (s) site, sound mitigation measures such as sound shields, blankets around smaller equipment, mixing concrete batches off-site, use of mufflers, and minimizing the use of back-up alarms shall be employed. If these sound mitigation measures do not reduce noise levels, construction within 500 ft. of the nesting trees/areas shall cease and shall not recommence until either new sound mitigation can be employed or nesting is complete.

E. The environmental resources specialist shall be present during all construction, grading, excavation, vegetation eradication and removal, hauling, and maintenance activities. The qualified biologist shall require the applicant to cease work should any breach in permit compliance occur, or if any unforeseen sensitive habitat issues arise. If significant impacts or damage occur to sensitive habitats or to wildlife species, the applicants shall be required to submit a revised, or supplemental program to adequately mitigate such impacts. The revised, or supplemental, program shall be processed as an amendment to this coastal development permit or a new coastal development permit

2. <u>Erosion Control Plans</u>

Prior to issuance of a coastal development permit, the applicants shall submit, for the review and approval of the Executive Director, two (2) sets of erosion control plans to reduce erosion for all disturbed portions of the project area. The subject plan shall be prepared by a qualified engineer. The erosion control plan shall be reviewed and approved by the consulting engineering geologist to ensure that the plans are in

conformance with the consultants' recommendations. The erosion control plan shall incorporate the following criteria:

1. The plan shall delineate the areas to be disturbed by grading or construction activities, including staging and stockpile areas. Areas to remain undisturbed shall be clearly delineated on the project site with fencing or survey flags.
2. The plan shall specify that should grading take place during the rainy season (November 1 – March 31), with Executive Director approval in accordance with **Special Condition Two (2)**, the applicants shall install or construct temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing, stabilize any stockpiled fill with geofabric covers or other appropriate cover, install geotextiles or mats on all cut or fill slopes and close and stabilize open trenches as soon as possible.
3. Erosion control measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained throughout the development process to minimize erosion and sediment from runoff waters during construction. All sediment should be retained on-site unless removed to an appropriate approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive fill.
4. The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than 30 days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils and cut and fill slopes with geotextiles and/or mats, sand bag barriers, silt fencing; temporary drains and swales and sediment basins. The plans shall also specify that all disturbed areas shall be seeded with native grass species and include the technical specifications for seeding the disturbed areas. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume.
5. All excavated material shall be contained within the designated access and stockpile sites. Stockpile sites shall be located as far as possible from the lagoon. During dewatering, the site(s) shall be lined with silt fencing to prevent any silt from entering the creeks/channels/wetlands.
6. The plan shall include measures to minimize the area of bare soil exposed at one time (phased grading).

The applicants shall undertake development in accordance with the final erosion control plans approved by the Executive Director. No proposed changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required. The applicants shall be fully responsible for advising construction personnel of the requirements of the Erosion Control Plan. Throughout the construction period, the

applicants shall conduct regular inspections of the condition and operational status of all structural BMPs required by the approved Erosion Control Plan. The applicants shall repair or replace failed or inadequate BMPs expeditiously.

3. <u>Timing, Operations, and Maintenance Responsibilities</u>

A. It shall be the applicant's responsibility to assure that the following occurs concurrent with, and after completion of, all project operations:

a. All project activities, including dewatering, dredging, and planting restoration activities, shall occur only during the period from June 1st through October 15. Construction for the public access and interpretive elements outside of wetland areas may occur up to December 31st. The Executive Director may grant additional time for good cause.

b. All project activities, with the exception of monitoring, shall occur Monday through Friday, excluding state holidays. No work shall occur on Saturday or Sunday.

c. Staging areas shall be used only during active construction operations and will not be used to store materials or equipment between operations.

d. The applicant shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to implement the project.

e. Construction equipment shall not be cleaned on the temporary lagoon berm or in the public parking lots/public trails.

f. Construction debris and sediment shall be properly contained and secured on site with BMPs to prevent the unintended transport of sediment and other debris into coastal waters by wind, rain or tracking.

g. Construction debris and sediment shall be removed from construction areas as necessary to prevent the accumulation of sediment and other debris which may be discharged into coastal waters. Any and all debris resulting from construction activities shall be removed from the project site within 24 hours. Debris shall be disposed at a debris disposal site outside of the coastal zone or at a location within the coastal zone authorized to receive such material.

h. The applicant shall be responsible for removing all unsuitable material or debris within the area of placement should the material be found to be unsuitable for any reason, at any time, when unsuitable material/debris can reasonably be associated with the placement material. Debris shall be disposed at a debris disposal site outside of the coastal zone or at a location within the coastal zone authorized to receive such material.

i. All upland areas disturbed as a result of this project shall be planted and maintained for habitat restoration purposes as soon as possible after disturbance has occurred.

4. <u>Final Dewatering Plan</u>

Prior to issuance of the coastal development permit**,** the applicant shall submit, for the review and approval of the Executive Director, a Final Revised Dewatering Plan.

A. The Final Dewatering Plan shall delete all references to a one-time mechanical breach of the lagoon, and

B. The Final Dewatering Plan shall incorporate a tidewater goby, southern steelhead, and other sensitive aquatic species dewatering protection plan including the following requirements:

1. The applicant will use a qualified biologist with a minimum of a 4-year college degree in biology or related field, approvals for handling tidewater gobies, southern steelhead, and other sensitive aquatic species, and two years of professional experience in the application of standard survey, capture, and handling methods for tidewater gobies, steelhead, and other sensitive aquatic species. At least 30 days prior to commencement of any onset of work, the applicant shall submit the name and qualifications of a qualified biologist, for the review and approval of the Executive Director. The applicant will exclude tidewater gobies, southern steelhead, and other sensitive aquatic species from the restoration construction area by following the actions required by US Fish and Wildlife Service (FWS) approval dated Aug 26, 2009 and the National Marine Fisheries Service (NMFS) approval dated Aug 18, 2008 including the following:

   i.) The qualified biologist retained by the applicant shall conduct a training session for all construction personnel prior to the onset of work. The training shall include a description of the tidewater goby, southern steelhead, and other sensitive aquatic species, their habitats; the specific measures that are being implemented to protect sensitive aquatic species during construction; and the project limits.

   ii.) The qualified biologist and a crew working under his/her direction shall clear all fish, including tidewater gobies and southern steelhead, from the area to be dewatered prior to construction. The capture, handling, exclusion, and relocation activities identified by the qualified biologist will be completed no earlier than 48 hours before construction begins to minimize the probability that listed species will recolonize the affected areas.

   iii.) The qualified biologist and a crew working under his/her direction shall inspect the dewatered areas and construction site regularly to

detect whether any tidewater gobies, southern steelhead or other fish are passing through the berm and/or cofferdam and investigate whether sensitive aquatic species protection measures are being implemented.

iv.) The qualified biologist and a crew working under his/her direction shall be present when the berms and/or cofferdams are removed and the construction area refilled with water to relocate any fish present in the construction area before completion of removal operations and to ensure successful reintroduction of aquatic habitat in the construction area.

v.) Following construction, the qualified biologist shall complete post-construction surveys for tidewater gobies, southern steelhead, and other sensitive aquatic species.

vi.) The qualified biologist shall prepare a post-project monitoring report documenting the efforts to protect the tidewater goby, southern steelhead, and other sensitive aquatic species and the results. In the event that monitoring shows a significant decrease in tidewater goby, southern steelhead, or other sensitive aquatic species that cannot be readily explained by natural factors or is clearly linked to the restoration, the qualified biologist, in consultation with the USFWS and other experts, shall recommend a course of action to address the problem.

C. The applicant shall undertake development in accordance with the final approved plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission - approved amendment to the coastal development permit, unless the Executive Director determines that no amendment is legally required.

5. <u>Final Hydrological Monitoring Plan</u>

A. ***Prior to issuance of the Coastal Development Permit***, the applicant shall submit, for the review and approval of the Executive Director, a Final Hydrological Monitoring Plan, prepared by a qualified hydrologic engineer. The final plan shall incorporate all provisions of the *Malibu Lagoon Restoration & Enhancement Plan* prepared by Moffat & Nichol, dated June 17, 2005, the *Project Monitoring Plan* and the *Project Assessment and Evaluation Plan* prepared by the California State Coastal Conservancy, dated July 29, 2005, and the *Quality Assurance Project Plan* prepared by 2nd Nature, dated February 6, 2006, except that it shall be consistent with the following provisions:

1. Sampling Locations Map

Prior to issuance of the coastal development permit, the applicant shall provide revised full-size plans, prepared by a licensed surveyor or engineer, clearly delineating the eight (8) proposed Sampling locations, as generally shown on **Exhibit 20**. The plans shall be of adequate scale to clearly delineate the precise

location of each of the sites and shall have a key identifying clearly what parameters will be measured at each location.

2. Monitoring and Reporting Requirements

The Final Monitoring Plan shall be revised to require that all monitoring be conducted bi-annually for a period of 5 years after initial construction. Post-project monitoring should take place in a functionally equivalent location and as close as possible to the pre-project monitoring sites. In addition, the Plan shall also provide that the applicant shall conduct monitoring to provide an annual assessment of changes in bathymetry/physical conditions, sediment sampling, water quality sampling and surface and bottom water nutrient sampling, consistent with the following provisions:

a. *Cross-Sections/Physical Conditions Monitoring*

i.) The 4 identified transect lines/cross-sections shall be surveyed on a bi-annual basis each spring (during open lagoon conditions, approximately April) and fall season (prior to the wet season, approximately September) at approximately the same time each year for a period of 5 years after initial construction. The points of each transect shall be at a permanently marked location that can be identified by Baseline Survey Markers and GPS coordinates. Cross-sections shall be obtained by attaching survey tape to the monuments and recording channel depth and water elevation at equal increments across each cross section to collect at least 20 data points. The date, time and tidal conditions for all measurements shall be recorded. Estimates of sediment volume scour or deposition shall be provided.

b. *Sediment Analysis*

i.) A total of at least 22 surface sediment samples (20 samples plus 1 triplicate at the top 0-2 cm) shall be collected bi-annually (end of April and end of September) at the 4 cross-section locations identified in the Sampling Locations Map (**Exhibit 20**).

ii.) A minimum of 5 sediment samples shall be collected at each transect following the protocol outlined in the Quality Assurance Project Plan, dated February 6, 2006. Sediment samples will be collected from 5 locations equally spaced along the transect including each side of the wetted perimeter edge. The wetted perimeter and the second and fourth samples will be composited. The third sample will be collected from the deepest part of the channel thalweg and analyzed separately.

iii.) All samples shall be analyzed for grain size distribution in order to obtain the following grain size distribution:

a. Greater than sand: >2.0mm
b. Sand: .05 to 2.0 mm in diameter
c. Silt: .002 to 0.5 mm in diameter

d. Clay: less than .02 mm in diameter
e. Average size (d50) um

iv.) All sediment samples shall be analyzed for nutrients, including total organic carbon, total nitrogen, and total phosphorous concentrations. Sediment samples will be collected from 5 locations equally spaced along the transect including each side of the wetted perimeter edge. The wetted perimeter and the second and fourth samples will be composited. The third sample will be collected from the deepest part of the channel thalweg and analyzed separately.

c. *Water Sampling:*

i.) At least 3 multi-parameter water quality data loggers (YSI 600 XLM) shall be used to collect data from April through the first storm of the rainy season (October or November) at the sites noted in the Sampling Location Map (Exhibit 20) to monitor water depth, dissolved oxygen (% and mg/L), temperature, salinity, conductivity, pH, and oxygen reduction potential (ORP) on 30-minute interval.

ii.) Vertical profiles of water quality parameters (including dissolved oxygen, water temperature, conductivity, salinity, and pH) shall be performed using a YSI 85 (or equivalent) hand-held water quality instrument. Vertical profiles shall be conducted bi-annually at 0.5 ft. intervals at 6 sites shown on the Sampling Location Map and shall be conducted at the same time of day for each monitoring event. The testing protocol shall follow the procedures outlined in the Quality Assurance Project Plan, dated February 6, 2006.

d. *Surface and Bottom Water Nutrient Sampling*:

i.) Bi-annual surface water (1 ft. below surface) and bottom water samples shall be located at the 6 sites shown on the Sampling Location Map (**Exhibit 20**).

ii.) Surface water samples shall be analyzed for dissolved nitrate as nitrogen, nitrite (NO3-N and NO2), ammonia as nitrogen (NH3-N), total Keldjahl nitrogen (TKN), soluble reactive phosphorous (SRP), and total phosphorous (TP), and % cover of macroalgae, and cover and biomass of submerged aquatic vegetation. The surface water sampling shall also provide a dataset to evaluate the concentrations of total and biological available fractions of nutrients required for primary production;

iii.) Bottom water samples shall be evaluated for nitrate-nitrogen, total nitrogen, SRP, TKN, and TP.

e. Reporting Requirements:

i.) The applicant shall submit an annual monitoring report, for the review and approval of the Executive Director, for a period of 5 years after initial construction is complete. The monitoring report shall be submitted

on annual basis and shall include all survey data and a written report prepared by a qualified expert indicating the results of each of the parameters listed above, including cross-sectional data, sediment sampling, water quality sampling and surface and bottom water nutrient sampling.

ii.) The monitoring report shall include conclusions regarding the level of success of the project, a detailed analysis of any change in cross-sections/physical conditions, sediment quality, and water quality. More specifically, the report shall include, but not be limited to, the following:

- Water quality change and sediment comparisons at each sampling location for each survey period, using the initial pre-project conditions as the baseline.
- If feasible, utilization of aerial photographs to provide information to address lagoon circulation and sediment aggradation/degradation dynamics.
- Conclusions regarding the level of success and any adverse effects, including any observed impacts to water quality and sediment quality and size.
- The data collected in the restored areas shall be compared to the pre-restoration conditions at functionally similar sites.
- The annual precipitation totals, timing, and magnitude of peak stream flows and estimates of annual peak reoccurrence intervals.
- The report shall include a brief history of all previous years' monitoring results to track changes in cross-sectional data, sediment, and water quality conditions.

B. Success Criteria and Supplemental Measures

1. The Final Monitoring Plan shall incorporate specific indicators/success criteria that will be used to determine whether the restored lagoon shows improvements in water circulation and tidal flushing, including but not limited to the following:

a. Grain size distribution (percent sand in the sample and/or of the median grain size, D_{50}) at each sampling location should increase from the baseline monitoring conditions. Adaptive management shall be implemented if:

i.) any one site fails the grain size criteria, above, for 6 consecutive samplings for a period of 3 consecutive years,
ii.) the average of any transect shows decreased grain size and increased nutrient sequestering over 3 consecutive years as compared to the baseline monitoring in similar locations.

b. Water quality monitoring indicates persistent stratification of lagoon waters (salinity differences) and depressed bottom water dissolved oxygen (DO) and

oxygen-reduction potential (ORP) values during closed lagoon conditions, measured by any of the following:

i.) at locations within the western channel persistent DO levels below 1.5 mg/l for a sustained period of more than 12 hours a day over two closed lagoon periods of more than 60 days or consistently low dissolved oxygen levels below 1.0 mg/l that occur for more than 6 hours a day over the course of 30 days during closed conditions.

c. The average of any transect shows decreased grain size and increased nutrient sequestering of Nitrogen (N) and Phosphorous (P) over 3 consecutive years.

d. Continual occurrence of sandbar formation/sedimentation (sandbar in area that isolates the western arms from the main channel) (3 times over a 6 year period) during open lagoon conditions

2. If the monitoring reports indicate that circulation within the lagoon has not improved or has failed to meet the requirements specified above in B.1. , the applicant, or successors in interest, shall submit to the Executive Director, within 90 days of the date of the relevant monitoring report, a revised or supplemental plan, certified by a registered engineer and a qualified Resource Specialist, that specifies additional or supplemental measures to modify those portions of the original plan that have failed or are not in conformance with the original approved lagoon restoration plan. The Executive Director may grant additional time for good cause. The revised or supplemental project plan shall describe all supplemental actions in detail, including: timing of work, staging areas, equipment to be used and exact restoration/grading areas (with full-size plans) and shall include all relevant monitoring reports required pursuant to all special conditions to ensure that the operations are in substantial conformance with the resource protection and public access conditions of this permit. All supplemental actions and work shall be in accordance with all conditions of this coastal development permit, including other agency approvals. The Executive shall determine whether implementation of the revised or supplemental plan is consistent with the terms and provisions of the Commission's approval of CDP 4-07-098 or whether the plan will require an amendment to this permit. This revised or supplemental plan shall be implemented by the applicant within 90 days after the plan is approved by the Executive Director, unless the Executive Director either: (1) grants additional time for good cause or (2) determines that an amendment is required. If the Executive Director determines that the revised or supplemental plan requires an amendment to this permit, then the applicant shall submit a complete application for an amendment to this permit within 90 days after such determination.

C. The applicant shall undertake development and monitoring in accordance with the final approved plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Coastal Commission - approved amendment to the coastal

development permit, unless the Executive Director determines that no amendment is legally required.

6. Plant Communities Restoration, Monitoring, and Reporting Plan

The applicant shall retain the services of a qualified environmental resource specialist (s) with no less than 2 years of wetland/upland restoration experience to prepare a final wetland/upland habitat restoration/enhancement plan, monitoring program, and reporting plan. The applicant shall submit the name and qualifications of the environmental resources specialist(s) for the review and approval of the Executive Director. The environmental resource specialist(s) shall base the habitat restoration/enhancement plan, monitoring program, and reporting plan on the habitat plan and monitoring program laid out in the *Malibu Lagoon Restoration & Enhancement Plan*, prepared by Moffatt & Nichol dated June 17, 2005, the *Project Monitoring Plan*, *Project Assessment and Evaluation Plan* prepared by the California State Coastal Conservancy, dated July 29, 2005, and the *Quality Assurance Project Plan*, dated February 6, and the *Malibu Lagoon State Beach Restoration and Enhancement – Phase 2: 95% Submittal Restoration Plans* prepared by ICF International dated January 29, 2010, except as modified by the Special Conditions herein. The final wetland/upland habitat restoration/enhancement plan, monitoring program, and reporting plan shall provide for the following:

A. Final Wetland/Upland Habitat Restoration/Enhancement Plant that includes the following:

1. A baseline assessment of vegetation and habitats on site including detailed descriptions of existing conditions on site prior to any restoration/enhancement activities authorized by this coastal permit and photographs taken from pre-designated sites annotated to a copy of the site plans. The habitat restoration/enhancement plan shall delineate existing coastal wetland/upland/disturbed habitat types and show the distribution and abundance of any sensitive species.

2. Provision for collection and maintenance of all native wetland and upland plant species that would be disturbed by the habitat restoration/enhancement project activities for future planting. Native wetland/upland seeds shall also be collected in anticipation of future plantings. The habitat restoration/enhancement plan shall provide a description of the methodology of how any existing wetland/upland plants/cuttings/seeds will be collected, stored, and used for re-vegetation of the site.

3. Sufficient technical detail on the habitat restoration/enhancement design including, at a minimum, a map of the proposed habitats, a planting program including a description of planned site preparation, method and location of exotic species removal, timing of planting, and elevations on the baseline map, and maintenance timing and techniques.

4. Plant palette for all habitats to be restored/enhanced (including numbers of individual species), location of individual plants in respective habitats, and plant installation plan (use of seed mix, cuttings, containers and planting methodology). The plant palette shall consist exclusively of native plants appropriate to the respective habitats. All plant material shall be native to the region: grown from seeds or vegetative materials obtained from the site or from appropriate nearby coastal wetland/upland locations so as to protect the genetic makeup of natural populations. Horticultural varieties shall not be used. Plantings shall be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the re-vegetation requirements.

5. Provisions for on-going wetland/upland habitat maintenance for a five year monitoring period after replanting is completed. At a minimum, semi-annual maintenance and/or management activities shall include, as necessary, debris removal, periodic weeding of invasive and non-native vegetation and re-vegetation consistent with the approved restoration plan.

B. A monitoring program shall be implemented to monitor the habitat restoration/enhancement project for compliance with the specified guidelines and performance standards and shall provide the following:

1. Goals of the habitat restoration/enhancement project.

2. List of the habitats, and attributes thereof, to be monitored.

3. Methods for monitoring each attribute including monitoring frequency and the location of monitoring stations.

4. Success criteria/performance standards as laid out in the for the *Malibu Lagoon Restoration & Enhancement Plan*, prepared by Moffatt & Nichol dated June 17, 2005 and the *Malibu Lagoon State Beach Restoration and Enhancement – Phase 2: 95% Submittal Restoration Plans* prepared by ICF International dated January 29, 2010 where restored/enhanced wetland habitats (low marsh, mid marsh, high marsh) and upland habitats (coastal scrub) should attain 50% total percent cover of native species within three years and 90% total cover within five years. The monitoring plan shall provide corroboration for the 90% total cover value (final habitat cover value) based on the published literature for the respective habitats. Should the published literature deviate from this percent cover objective, the final habitat value must be adjusted accordingly. There shall be 0% non-natives in the restored/enhanced wetland habitats at the end of five years and no more than 5% non-natives in the upland habitat at the end of five years.

5. Description of how the resulting data will be analyzed and how the level of performance will be determined.

6. Identification of how the need for remediation or alteration of the habitat restoration/enhancement project will be assessed.

7. Explicit timetable for the monitoring program including data collection, data analysis, and data reporting.

C. A reporting plan for providing information on the status of the habitat restoration/enhancement project and monitoring program that includes the following:

1. Initial Monitoring Report: The applicant shall submit, upon completion of the initial habitat restoration/enhancement, a written report prepared by the environmental resources specialist, for the review and approval of the Executive Director, documenting the completion of the initial restoration/enhancement work. This report shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) documenting the completion of the initial restoration/enhancement work.

2. Interim Monitoring Reports: After initial restoration/enhancement activities are completed, the applicant shall submit, for the review and approval of the Executive Director, on an annual basis for a period of five (5) years, a written monitoring report prepared by the environmental resources specialist (s) indicating the progress and relative success or failure of the restoration/enhancement. This report shall also include further recommendations and requirements for additional restoration/enhancement activities in order for the project to meet the success criteria and performance standards. This report shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) indicating the progress of recovery at each of the sites. Each report shall be cumulative and shall summarize all previous results. (duplication of requirements in the previous paragraph above) Each report shall also include a “Performance Evaluation” section where information and results from the monitoring program are used to evaluate the status of the habitat restoration/enhancement in relation to the interim performance standards and final success criteria.

3. Final Report: A final detailed report on the habitat restoration/enhancement shall be submitted by the applicant for the review and approval of the Executive Director. If this report indicates that the habitat restoration/enhancement has, in part, or in whole, been unsuccessful, based on the success criteria and performance standards specified in the monitoring program, the applicant shall submit within 90 days a revised or supplemental habitat restoration/enhancement plan to compensate for those portions of the original plan which did not meet the approved success criteria and performance standards. The Executive shall determine whether implementation of the revised or supplemental plan is consistent with the terms and provisions of the Commission’s approval of CDP 4-07-098 or whether the plan will require an amendment to this permit. This revised or supplemental plan shall be implemented by the applicant within 90

days after the plan is approved by the Executive Director, unless the Executive Director either: (1) grants additional time for good cause or (2) determines that an amendment is required. If the Executive Director determines that the revised or supplemental plan requires an amendment to this permit, then the applicant, shall submit a complete application for an amendment to this permit within 90 days after such determination.

D. California Rapid Assessment Plan: If feasible, the applicant shall perform a CRAM (California Rapid Assessment Method) wetland survey prior to initiation of the proposed Phase 2 restoration project and every other year following completion of the proposed restoration project through year 10 (or 5 – to be determined). CRAM should be conducted simultaneously with quantitative interim monitoring surveys. CRAM survey results shall be uploaded to "project tracker", the open-source, web-based database designed to provide wetland status and trend data to state and federal information systems.

7. <u>Final Aquatic Vegetation, Benthos, Fish, and Avian Monitoring and Reporting Plan</u>

The applicant shall retain the services of a qualified environmental resource specialist(s) with no less than 2 years of aquatic and terrestrial species monitoring experience to prepare a final aquatic vegetation, benthos, fish, and avian monitoring program and reporting plan. The applicant shall submit the name and qualifications of the environmental resources specialist(s) for the review and approval of the Executive Director. The environmental resource specialist (s) shall base the final aquatic vegetation, benthos, fish, and avian monitoring program and reporting plan on the monitoring program for submerged aquatic vegetation and macroalgae, infaunal and eipifaunal benthic invertebrates, fish, and birds laid out in the *Malibu Lagoon Restoration and Enhancement Plan* prepared by Moffat and Nichols, dated June 17, 2005, the *Project Monitoring Plan*, and the *Project Assessment and Evaluation Plan*, prepared by the California State Coastal Conservancy, dated July 29, 2005, the *Quality Assurance Project Plan*, prepared by 2nd Nature, dated February 6, 2006. The applicant shall also comply with the monitoring program and reporting plan requirements outlined above in Special Condition 6, sections B and C, substituting "Final Aquatic Vegetation, Benthos, Fish, and Birds" for "Final Habitat Restoration/Enhancement", except as modified here regarding success criteria:

The abundance and diversity of submerged aquatic vegetation and macroalgae, infaunal and eipifaunal benthic invertebrates, fish, and birds shall not decrease following restoration. Although a short-term decrease may be expected due to construction related impacts, submerged aquatic vegetation and macroalgae, infaunal and eipifaunal benthic invertebrates, fish, and birds should be at commensurate pre-restoration levels within three years of restoration activities and should be at or above pre-restoration levels after five years If these criteria are not attained, targeted studies should be

performed to determine why criteria are not being met and devise adaptive management solutions to achieve goals.

8. Plans Conforming to Geotechnical Engineer's Recommendations

By acceptance of this permit, the applicant agrees to comply with the recommendations contained in all of the coastal engineering, geology, geotechnical, and/or soils reports referenced as Substantive File Documents. These recommendations shall be incorporated into all final design and construction plans, which must be reviewed and approved by the consultant prior to commencement of development.

The final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission. Any substantial changes in the proposed development approved by the Commission that may be required by the consultant shall require amendment(s) to the permit(s) or new Coastal Development Permit(s).

9. Herbicide Use

Herbicides shall not be used in any open water areas on the project site. Herbicide use in upland areas shall be restricted to the use of Glyphosate Aquamaster™ (previously Rodeo™) herbicide for the elimination of non-native and invasive vegetation for purposes of habitat restoration only. The environmental resource specialist shall conduct a survey of the project site each day prior to commencement of vegetation removal and eradication activity involving the use of herbicide to determine whether any native vegetation is present. Native vegetation shall be clearly delineated on the project site with fencing or survey flags and protected. In the event that non-native or invasive vegetation to be removed or eradicated is located in close proximity to native riparian vegetation or surface water, the applicant shall either: (a) remove non-native or invasive vegetation by hand (Arundo donax shall be cut to a height of 6 inches or less, and the stumps painted with Glyphosate Roundup™ herbicide), or (b) utilize a plastic sheet/barrier to shield native vegetation or surface water from any potential overspray that may occur during use of herbicide. In no instance shall herbicide application occur if wind speeds on site are greater than 5 mph or 48 hours prior to predicted rain. In the event that rain does occur, herbicide application shall not resume again until 72 hours after rain.

10. Final Public Access Program

A. ***Prior to the issuance of the coastal development permit***, the applicant shall submit, for the review and approval of the Executive Director, a Final Public Access Program that describes the methods (including signs, fencing, posting of security guards, etc.) by which safe public access to or around construction areas and/or staging areas shall be maintained during all project operations. The plan shall also include signs directing the public to alternative parking areas for the duration of construction and staging. Where public paths will be closed during active operations,

a person(s) shall be on-site to detour traffic or adequate fencing and signage shall be used. The applicant shall maintain public access pursuant to the approved version of the report. Any proposed changes to the approved program shall be reported to the Executive Director. No change to the program shall occur without a Commission-approved amendment to the permit unless the Executive Director determines that no such amendment is required.

B. Where use of public parking spaces is unavoidable, the minimum number of public parking spaces (on and off-street) that are required at each receiver site for the staging of equipment, machinery and employee parking shall be used. At each site, the number of public parking spaces utilized shall be the minimum necessary to implement the project.

C. The applicant shall post each construction site with a notice indicating the expected dates of construction and/or trail or public access closures (if temporarily necessary).

11. Required Approvals

By acceptance of this permit, the applicant agrees to obtain all other necessary State or Federal permits that may be necessary for all aspects of the proposed project (including the National Marine Fisheries Service, California Department of Fish and Game, California State Lands Commission, Regional Water Quality Control Board, and the U.S. Army Corps of Engineers).

12. Assumption of Risk

A. By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from storm waves, surges, erosion, and flooding; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement.

B***. Prior to issuance of the Coastal Development Permit***, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

13. Discharge Requirements

A. This Coastal Development Permit incorporates all of the waste discharge requirements, limitations and other requirements and provisions contained in California Regional Water Quality Control Board, Los Angeles Region National

Pollutant Discharge Elimination System (NPDES) Permit No. CAG994004 and Monitoring and Reporting Program No. Cl-9573.

B. If project monitoring indicates that either discharge prohibitions or effluent limitations have failed to meet any of the standards specified in the NPDES Permit, the applicant shall immediately notify the Executive Director. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Coastal Commission-approved amendment to the coastal development permit, unless the Executive Director determines that no amendment is required.

14. Mitigation Measures

All mitigation measures required in the Malibu Lagoon Restoration and Enhancement Plan Final Environmental Impact Report SCH #2005101123 applicable to the proposed project are hereby incorporated by reference as special conditions of the subject permit unless specifically modified by any additional special conditions set forth herein.

15. Archaeological Resources and Monitoring

By acceptance of this permit, the applicant agrees to have a qualified archaeologist(s) and appropriate Native American consultant(s) present on-site during all grading and vegetation clearance activities that occur within or adjacent to recorded archaeological sites in the project area. Specifically, all ground-disturbing activities adjacent to recorded sites shall be controlled and monitored by the archaeologist(s) with the purpose of locating, recording and collecting any archaeological materials. In the event that any significant archaeological resources are discovered during operations, all work in this area shall be halted and an appropriate data recovery strategy be developed, subject to review and approval of the Executive Director, by the applicant's archaeologist and the native American consultant consistent with CEQA guidelines.

16. Removal of Excavated Material

Prior to issuance of the Coastal Development Permit, the applicant shall provide evidence to the Executive Director of the location of the disposal site for all excess excavated material from the site. If the disposal site is located in the Coastal Zone, the disposal site must have a valid coastal development permit for the disposal of fill material. If the disposal site does not have a coastal permit, such a permit will be required prior to the disposal of material.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION

The applicant is proposing to implement a Wetland Habitat Restoration and Enhancement Program for Malibu Lagoon to improve the function of the lagoon ecosystem by recontouring/reconfiguring the lagoon, slopes and drainages to increase hydrologic flow involving 88,700 cu. yds. of grading (51,200 cu yds. excavation and 37,500 cu. yds. fill); revegetation with native wetland and upland plant species and removal of non-native plant species; construction of a public access trail around lagoon with new interpretive public informational/educational improvements; and implementation of a long-term lagoon monitoring plan. The applicant is proposing a work window of June 1st to October 15th in order to avoid potential impacts to sensitive bird and fish species during nesting and spawning seasons. (**Exhibits 1-10**)

Project Purpose:

According to the applicant, the goal of the proposed restoration project is to increase circulation of water in the lagoon during both open mouth and closed mouth conditions in order to improve water quality and decrease eutrophication; to restore the lagoon habitat by re-establishing suitable soil conditions and native plant species and removing non-native species; and to evaluate, record, and analyze existing and changing ecological conditions of the lagoon using physical, chemical, and biological parameters to measure restoration success. The water quality of the lagoon is poor due to inflow of nutrient and pollutant rich water resulting from urban runoff and storm drainage, urban encroachment, and limited water circulation In addition, the quality of the wetland and upland habitat area on site have also been degraded by many historic development on site, impacts from adjacent development, and invasion by non-native plant species. Although the project will involve some short-term impacts to wetland and upland habitat on site, this project is expected to result in a substantial increase in the long-term habitat value and of these same sensitive habitat areas.

Commission Jurisdiction and Permit Consolidation:

The proposed project includes components that are located within the City of Malibu's Local Coastal Program (LCP) jurisdiction as well as components within the retained jurisdiction of the Coastal Commission. The City of Malibu would typically have jurisdiction over the onshore portions of the project within its LCP jurisdiction. However, Section 30601.3 of the Coastal Act authorizes the Commission to process a consolidated coastal development permit application, when its criteria are satisfied, for both aspects of a proposed project that would otherwise require a coastal development permit from both a local government with a certified local coastal program and the Commission. In this case, the City of Malibu, in a letter to Commission staff dated

October 25, 2007, requested that the Commission assume jurisdiction over all activities associated with the proposed project. (**Exhibits 17** and **18**)

Therefore, the standard of review for the project is the Chapter 3 policies of the Coastal Act with the policies of the City of Malibu's Local Coastal Program serving as guidance, as noted above. As conditioned, the proposed project will be consistent with the applicable policies of the Coastal Act and the City's LCP.

Detailed Description of Project Components:

The proposed project includes several different components which are described in detail as follows:

1. Lagoon Reconfiguration

Main Lagoon Channel
The main channel will remain substantially as it exists now. The western edge of the main lagoon at the interface with the western portion of the lagoon will be reconfigured in the form of a naturalized slope to provide a degree of separation between the main lagoon and western portion of the lagoon. The main lagoon channel will be temporarily separated from the western portion of the lagoon by a temporary berm, as described below. However, no work is proposed within the main channel itself.

Western Lagoon Complex
The 12 acre western tidal channel network and channel slopes (as shown on **Exhibit 3**) will be re-contoured to improve circulation and water quality. The existing channels will be reconfigured into a dendritic network with a single main channel to promote tidal circulation and reduce deposition of fine sediments by concentrating hydraulic energy throughout the entire channel length. The existing channels are relatively narrow will be substantially widened as a result of the project to approximately 20 to 60 feet in width(at mean tide level) and contoured to create broad shallow slopes to support a greater diversity of vegetation, and increase circulation within the water column and exposure of intertidal areas during open conditions (**Exhibits 4-15**). Additionally, the reconfigured channel beds will be excavated to a depth below mean sea level (msl) to promote full tidal exchange, and the beds of the second order channels will be sloped to provide a positive hydraulic gradient toward the main channel to increase flushing, and reduce deposition of fine sediments. The channel configuration also allows for potential future expansion of the project on the western side of the site (the golf course property). The removal of approximately 13,700 cubic yards of sediment from the lagoon to be exported to an appropriate off-site disposal location is proposed in order to increase tidal prism, improve circulation, reduce algal growth and improve overall conditions for aquatic species. All grading and excavation of the western lagoon area will be separated from surface connections to the existing lagoon by earthen berms, as described below and as shown on Exhibits 4-6. Groundwater that may accumulate in the excavated areas will be returned to the lagoon via pump in a manner that eliminates sediment and the potential to disturb lagoon salinity stratification, substrate, and temperature. The reduction in fine sediments and the resulting coarser substrate is

proposed in order to improve habitat for aquatic species such as tidewater goby. Salvaged trees are proposed to be placed on the channel slopes and along the lagoon edge to create localized scour in specific areas (i.e., the backchannel on the eastern side of the lagoon), focus stream flows towards the main channel, reinforce channel slopes, and provide roosting habitat for avian species and cover for tidewater goby and steelhead.

After the reconfiguration, under open lagoon mouth conditions, the new channel network will be fully inundated during a normal tidal cycle. Native vegetation planted along the re-contoured channel slopes will be inundated at varying frequencies and durations based on elevation. Under closed conditions, the majority of the site will be inundated, and in the highest observed condition all but the top few feet (above 9' NAVD 88) of the proposed islands will be under water. Because of the increased fetch, it is expected that the currents driven by summer winds will more effectively reduce stagnation and increase oxygen availability in the lower depths of the lagoon through improved horizontal mixing.

Lagoon Islands
The size and orientation of the lagoon islands in the western portion of the lagoon are proposed to increase fetch and to promote wind-driven circulation under closed conditions.

Eastern Channel
The existing boathouse channel adjacent to the Adamson House on the eastern side of the lagoon is proposed to be deepened and re-contoured. This will create additional mudflat habitat and promote additional water circulation. The work on the eastern side of the lagoon will utilize hand crews and low tide windows. Dewatering will not be necessary for work on the eastern side.

2. Dewatering Plan

The 12 acres on the western side of the lagoon ("western lagoon complex") will be included in the grading operation and will require dewatering. A small portion of the eastern side of the lagoon will be hand excavated during low tide and will not require dewatering. All grading operations in the western lagoon complex will occur after the project site is dewatered to allow for construction inspection, species relocation, and to avoid turbidity. All construction is proposed to occur in dry areas only.

The applicant evaluated the alternative of working from the shore, but excavation equipment working from the shore would not have the adequate mechanical reach to complete the required grading in the center of the western lagoon area. Dry jetties were also considered to allow equipment access, but this method was rejected because this method would require the import of additional temporary jetty material and extend the overall construction window. Therefore, the applicant has proposed grading directly in the western lagoon complex after dewatering.

To dewater the western lagoon complex and provide a physical barrier to the main lagoon, a temporary earthen berm/ dike is proposed to be constructed. The temporary berm will connect one shore to the other to isolate the main lagoon from the project area. The berm will be installed either when the lagoon mouth is closed and water will be pumped out while the dike is constructed (expected during the dry summer months) or when the lagoon mouth is naturally in an open lagoon condition during the low tide where the lagoon has been naturally breached and there is little or no water in the lagoon. It is likely that the lagoon mouth will be in a closed condition when work for the project occurs during the proposed timeframe, between June 1st and October 15th, because this the dry season when flow inputs from Malibu Creek are at their lowest. However, it is possible that the lagoon mouth could be in a naturally open condition.

Dewatering and Placement of Temporary Interior Berm

The temporary interior dike/berm will be need to be constructed in a wet environment. The western lagoon complex is proposed to be pumped to lower and hold the water surface to an elevation of 3 feet to expose the temporary berm foundation material. Prior to dewatering, fish biologists will conduct sweeps to clear the construction area and relocate aquatic species prior to placement of geotextile or fill material, as further described below. Material will be placed in 6 inch lifts and compacted to minimize seepage for the duration of construction. Material will be added repeatedly as the dike settles and is compressed. The soil will be confined to a geotextile so sediment will not escape. A turbidity curtain is proposed to be installed and maintained during construction and operation of the dike The construction window for the temporary berm is approximately 12 to 16 hours. Dewatering will maintain the barrier beach and is not proposed to contribute to a potential breach of the lagoon mouth.

The applicant expects that temporary pumps will need to run 24 hours a day for approximately 1 week at a flow rate of up to 25 cfs (11,250 gpm) to achieve elevation 3 ft. in the lagoon. The temporary pumping rate will vary based on the Malibu Creek flows and the rate at which seepage will enter the lagoon during pumping operations. Pumping rates will exceed the creek surface flow rates and groundwater inflows. The applicant expects these flows to be approximately 6 cubic feet per second (cfs) (3.5 cfs average creek flow in addition to 2.5 cfs groundwater inflow). Although the actual pumping may only take 3 days, but the applicant proposes a one week timeframe estimate to allow for management of intake fish screens and potential shutdowns for debris removal and maintenance.

Filtration is proposed to capture 100% of the target contaminants, including but not limited to: nutrients, bacteria, sediment, and metals. Pumped water will be filtered and tested before discharge to Santa Monica Bay in order to meet RWQCB standards, described below. Pre-filtration would be accomplished using flow-through over and under design weir tanks (e.g. “Baker tanks”). Secondary filtration would be conducted using a two-step process with bag filtration followed by particulate filtration to remove solids from the flow stream. The final treatment will be accomplished using carbon and

resin vessels for collecting remaining contaminants. All used filter media and sediment will be disposed of at an approved landfill outside of the coastal zone.

All pumping operations will be tested and monitored to ensure that water quality standards for the lagoon and Santa Monica Bay are met during construction operations. The California Regional Water Quality Control Board ("Regional Water Board") has approved dewatering discharges into the Pacific Ocean under the General National Pollutant Discharge Elimination System ("NPDES permit") and Waste Discharge Requirements. (NPDES No. CAG994004, CI-9573, March 9, 2010). The NPDES permit authorizes California Department of Parks and Recreation to discharge up to 1.3 million gallons per day (MGD) of treated water into the Santa Monica Bay and the permit provides discharge limitations for specific constituents, including: total suspended solids, turbidity, biological oxygen demand (BOD), oil and grease, settleable solids, sulfides, phenols, residual chlorine, copper, and fecal coliform. The Regional Water Board's approval also requires the applicant to comply with a monitoring and reporting program (CI-9573). Several sampling "tap" locations are proposed so that the treatment efficiency may be monitored. Treatments "taps" are proposed to be located prior to any pre-filtration, in between each treatment phase, and prior to discharge at the permitted outfall location. The treatment filtration system is designed to maintain flow and discharge back to the construction area if test results indicate treatment is not adequate. Any exceedence of water quality levels as described in the permit will require immediate reduction of flow rate and re-routing of flows back to the construction area, and potentially shut down of dewatering operations until the treatment process can meet the permitted discharge thresholds.

Western Lagoon Complex Dewatering

Once the lagoon is lowered and the temporary interior berm/dike is constructed, pumping operations will be moved to the construction side of the lagoon (12 acres) and pumping rates will be greatly reduced and only required to manage the groundwater inflow to maintain a dry working area. The applicant has provided detailed data (*See* Substantive File Documents. Jan. 2009 Dewatering Plan) regarding flow rates into the lagoon. As each channel element is constructed, it is expected that excavation would intercept the groundwater table and daylight seepage into the work area. Typical channel elements are 400 feet in length (800 feet, both sides) and the exposed seepage height on the bank would be 4 feet on average. A total of 3200 square feet would contribute at a rate of 0.000769 ft/sec generating an expected dewatering flow rate of approximately 2.5 cfs (1125 gpm). Pumping operations will be moved back to the main lagoon and rates increased to 25 cfs again to help equalize water levels during the temporary interior dike removal.

Species Protection During Dewatering

Several aquatic species occupy the lagoon and need to be protected during the construction operations. Aquatic species relocation is required by the US Fish and Wildlife Service and by the National Marine Fisheries Service, as well as by Special

Condition Four (4) of this permit, including pre-construction and post-construction monitoring, and pre-construction capturing, exclusion, and relocation During the pumping periods, tidewater goby and steelhead juveniles will be of specific concern. Pumps will require isolation to avoid contact with these species. Individual pump intake screens or screen intake galleries are proposed to meet the maximum screen opening and approach velocity criteria.

Re-watering the Western Lagoon Complex

To re-water the western lagoon, the main lagoon elevation will be pumped to the filtration tanks in order to lower the lagoon to an elevation of 3 feet. The temporary interior berm can then be removed, reducing the top elevation of the berm from 10 feet to 5 feet to provide a low stable working surface for heavy equipment (e.g. hydraulic excavator). At the location of the connecting channel excavation, the dike would be lowered an additional 1 foot over a width of 100 feet, centered on the proposed channel alignment. This would create a small spillway toward the dry construction area. The pumping area would then be reduced to regulate the flow into the western lagoon until an elevation of 3 ft. is achieved. The spillway would be observed to ensure that erosion does not occur during this operation. It may become necessary to pump water into the western lagoon area to avoid spillway erosion hazards. When an elevation of 3 feet is achieved in the western lagoon, pumping rates in the main lagoon would be restored to maintain its elevation of 3 ft.

When the western lagoon re-contouring and grading is complete, grading for the main channel that will connect the western lagoon to the main lagoon will be conducted. The temporary dike located at the mouth of the main channel will be removed to finished grade over approximately a length of 150 ft. This would reduce erosion potential of the remaining dike surfaces during the next tide cycle. After the western lagoon is open to the tidal cycle, water surface elevations are expected to naturally equalize. With equal water surfaces on both sides of the dike, turbidity curtains are proposed to be re-installed to isolate the final channel construction area. A fish biologist would perform fish rescues within the area of the turbidity curtain prior to excavation of the last channel segment and final removal of the temporary dike. The removal of the dike would occur in wet conditions until final grade is achieved. Turbidity curtains would remain in place for at least 24 hours following excavation operations to allow some clarity to return. Working from both banks, the remaining footprint of the temporary interior dike would be excavated to achieve the final construction grades. The turbidity curtains would then be removed and water allowed to flow freely between the main lagoon and the western portion of the lagoon. The remaining portions of the dike would then be removed during subsequent low tide periods. Pumping operations will cease and the lagoon will be allowed to flood to a pre-project “closed” condition.

3. Habitat Restoration and Revegetation Plan

The proposed revegetation plan includes the initial planting and reestablishment of native vegetation within the lagoon and its surrounding upland areas, as well as ongoing

maintenance and management activities to ensure that the restoration objectives are achieved. Vegetation restoration activities include appropriately designed slopes/elevations and sediment types, topsoil and sediment salvage and management, restoration planting and natural establishment, maintaining unvegetated habitat areas, minimizing habitat loss from seasonal inundation, and long-term habitat maintenance. elevations, and sediment characteristics. The applicant has submitted a planting program, including salt panne, low marsh, mid-high marsh, high marsh transitional, and coastal scrub habitats. (**Exhibits 11-15**)

4. Public Access Trail and Public Interpretive Amenities

The applicant proposes to improve the existing path around the perimeter of the lagoon and proposes to develop educational and interpretive improvements and other public amenities along the perimeter of the lagoon restoration area (**Exhibits 4** and **16**). These educational/interpretive elements will include pathways, various form of educational and viewing platforms, a bird watching blind, a shade canopy, interpretive displays of the topography and function of the lagoon and watershed and outdoor seating elements. (**Exhibit 16**)

Shade Canopy

A steel shade canopy is proposed to be located adjacent to the parking area at the location of the semicircular concrete seating. The canopy design is an abstract design of a kelp forest. The shade structure will consist of a horizontal surface of approximately 900 sq. ft. of .5 inch steel plate in the abstract design of a kelp forest and supported by 12 ft. tall, 6 in. diameter steel pipe columns. The width, height, and placement of the columns will preserve the integrity of the lagoon from the parking area. The surface below the shade canopy will be decomposed granite.

Watershed Display

A 6 ft. by 8 ft. topographic model of the Malibu Creek watershed will be located at the south end of the current parking access roundabout. The metal casting will be supported by a solid, stone surfaced base to a height about two feet above grade. A tubular metal pipe will be located a few inches from the edge of the model at railing height and surround most of the watershed model. The pipe will be perforated in order to emit a spray of water when a valve is opened (visitor operated), so that the water mist will fall on the topography, collect in the basin, and drain to the lowest point of the model (the lagoon), and then spill into a trench drain corresponding to the shoreline and then track to a drainage swale, mimicking the function of a watershed. The paths leading to and from the watershed fountain will be decomposed granite throughout, except for the immediate area surrounding the fountain, which will consist of concrete pavers and sloped to drain. The concrete paver area will be approximately 250 sq. ft.

Summer Clock and Winter Platform

To the south of the watershed display, three paths diverge and extend to the south. A 10 ft.-wide road with 4 ft. in width of decomposed granite will be constructed at the

westernmost path to allow access for lifeguard use, State Parks, and rescue operations. This access road will be blocked by a steel access gate and used as the express route for emergency access.

The middle and easternmost pathways are part of an interpretive route. The middle path is separated from the access road by an earthen berm. A small seating area will be built into the east face of the berm with decomposed granite and lengths of benches cut from tree logs reclaimed from the previous interpretive area onsite. The middle path is at an elevation of 10 ft. and above the sea level of the lagoon, which peaks at 9 ft. before the berm is breached. The middle path also provides a view during the summer season when the lagoon is closed from tidal influence of the east path, also known as the "Summer Clock." The Summer Clock is a very gradually sloping, 180 ft.-long path designed to provide access to the edge of the tidal marsh during open lagoon conditions and to show the daily rising of the lagoon during the summer season, as the dry season flows slowly fill the lagoon. The increase in lagoon elevation will be evident because the water will advance a foot along the path for every three-tenths of an inch of surface elevation change.

During the winter season, when the lagoon is open to tidal influence, the path will provide access to the winter platform, at an approximately 7 ft. elevation, equal to or above the highest seasonal tides. A circular set of terraces will be located adjacent to the platform with edging designed to separate and show the species of vegetation common to the low, middle, and high elevation marsh communities. The platform and marsh terraces will be cut into a steeply sloping bank. A second sloping path (1:20) will provide a means of ingress and egress to and from the south.

These paths will be surfaced with removable precast concrete pavers and suspended on short piers to allow for subsiding tides and draining lagoon flows and silts to drain through and beneath the paths and platform. The total area of the concrete pavers and 4 ft. wide paths is 1,600 sq. ft. The short section of the summer clock ramp (from 9 ft. to 10 ft. in elevation) that slopes at 1:12 will have level landings and steel handrails for compliance with ADA requirements.

<u>Bird Watching Blind</u>
A public bird watching blind will be constructed south of the Summer Clock where a path leading from the main access road and walking path to a slightly elevated area located opposite one of the proposed lagoon islands. The blind will consist of vertical arcing steel supports at 4 ft. on center along the perimeter of the viewing area. Light stainless steel cables will span in a 16 inch diagonal grid between the vertical elements, creating a frame against which native mulefat stalks will be planted and trained against the form in order to create the appearance of a natural vegetative barrier. The mulefat stalks will be tied against the cable form in various ways to provide opening in the vegetation for viewing the lagoon. The supporting structure will vary from about 4 ft. to a maximum of 12 ft. in height, roughly corresponding to the height of mature mulefat plantings, and will be approximately 88 ft. in length.

"Riparian Forest" Picnic Area
Four concrete picnic tables will be located in a decomposed granite surfaced area, with berms covered with planted live oaks and associated understory plant species, and drainage swales containing sycamore trees, as shown the planting plan (**Exhibit 16**)

Adamson House Wall
A six ft.-high concrete masonry wall will be constructed the length of the southern boundary of the lagoon property, replacing the various fencing and wall types of different heights that currently exist. The wall is necessary to provide separation between the public park and the residential neighborhood located immediately to the south. The wall is proposed to be approximately 880 ft. long and is designed to match the perimeter of the historic Adamson House with embedded tile and rock elements. A decomposed granite path will be constructed along the wall and will meander through the area.

Watershed Overlook
A 600 sq. ft. decomposed granite overlook platform will be constructed to provide a view up the canyon to the north. The platform will be mostly located at grade except for a 20 ft. side of the platform. The northeast corner of the platform will be constructed to extend over the grade below to a maximum height of approximately 3 ft. and supported by a concrete slab that is molded to form a concrete bench at the east end of the platform. The two exposed and elevated lengths of the platform will have a perimeter railing system consisting of steel stanchions and horizontal stainless steel cables, the top surface of which will be concrete cast within a steel angle with impressions of natural elements cast into the top to match the theme established by the existing concrete seating near the parking area.

Observation Deck (East of Parking Area)
The observation deck will consist of a semi-circular decomposed granite surface edged by an elevated radial patterned composite deck varying in width from 4 feet to 7 feet with a total deck area of 380 sq. ft. The decomposed granite will be constructed flush with the decking surface. The deck will be approximately 2 ft. to 3 ft. above grade. The railing system for the deck will consist of steel sanchions and horizontal stainless steel cable, the top surface of which will be concrete cast within a steel angle with impressions of natural elements cast to match the other concrete elements of the project.

5. Project Monitoring

The applicant has proposed a long-term program to monitor the physical conditions (i.e. bathymetry, sediment samples, grain size), water quality, and biological monitoring (marsh vegetation, fish, benthos, aquatic vegetation, and birds) of the restored lagoon over a five year period. The project proposal includes semi-annual physical condition monitoring and water quality monitoring, and frequent biological assessments. The monitoring is proposed for five years after the project is complete. Since 2006, the applicant has been conducting baseline monitoring, including sediment testing, grain

size analysis, and water quality analysis. Additionally, at least two years of data has been collected as a baseline for aquatic species, and for bathymetry (transects).

B. PROJECT LOCATION AND BACKGROUND

Malibu Lagoon covers a 31 acre area located at the terminus of the Malibu Creek Watershed, which is the second largest watershed that drains into Santa Monica Bay. The tidally influenced area covers approximately 24 acres. The lagoon drains into the Santa Monica Bay at Surfrider Beach in the City of Malibu. The Malibu Lagoon is managed and operated by the California Department of Parks and Recreation ("State Parks"). It is bordered to the north by the Pacific Coast Highway (PCH), to the west by a gated residential community ("The Colony"), and to the south by the Pacific Ocean (Santa Monica Bay). The lagoon is ecologically significant because it is one of the last remaining wetlands within Santa Monica Bay and hosts a variety of avian and aquatic species of statewide and regional significance. The lagoon waters seasonally fluctuate between a freshwater, brackish water, and saltwater environment depending on the flow regime in Malibu Creek, the height of the beach barrier, and the diurnal tides of the ocean. The current lagoon configuration does not provide an adequate and fully functional lagoon habitat regime that historically naturally existed at this site mainly because of poor circulation. The proposed project will re-contour the 12 acre western portion of the lagoon to restore tidal complexity and improve the hydraulic circulation and water quality.

The lagoon mouth is either open or closed depending on the height of the barrier beach. When the lagoon mouth is open, the hydraulics are dominated by freshwater creek flows during flood events and during low tides, and by the inflow of saltwater during high tides. When the lagoon mouth is open, the lagoon can drain to an elevation of 0 ft. and match the lowest daily tide. During a majority of the season when the mouth is open (winter season), the barrier beach is naturally maintained at an elevation of 3 ft. Tides enter the lagoon twice a day and flood the project area to an average elevation of 6 ft., with the extreme high tides reaching approximately 8 ft. When the lagoon mouth is closed, the lagoon stores water flowing from Malibu Creek, runoff from PCH, runoff from the adjacent neighborhood, and seepage from local septic leech fields and other groundwater flows and maintains an elevation of approximately 9 ft. above mean high tide. Water quality in the lagoon during the closed condition is generally poor and exceeds water quality standards set by the Regional Water Quality Control Board for the Santa Monica Bay.

Site History and Past Commission Action

The Malibu Lagoon has been significantly altered from its original condition. The existing 31 acre lagoon contains only a small portion of its historic reach. In 1929, the California Department of Transportation used the site as a dumping ground during construction of the Pacific Coast Highway. Since that time, urban development has surrounded the lagoon, including an adjacent housing development (Malibu Colony) and

construction of the Pacific Coast Highway bridge to the north through the lagoon. Further, a large portion of the lagoon was filled in during the 1940's and 1950's and baseball fields were constructed.

Coastal Development Permit No. P-79-5515 was approved by the Commission on August 13, 1979 for a "General Development Plan for Malibu Lagoon Beach" granted to the California Department of Parks and Recreation. The CDP authorized 60,000 cu. yds. of excavation of sediment material for the purpose of marsh restoration of which 50,000 cu. yds. of the excavated material disposed of offsite at Malibu Creek State Park, approximately 6 miles away. The project included creation/restoration of approximately 7 acres of area (the "western lagoon complex") that was historically part of the lagoon but filled in by the California Department of Transportation in 1969 and preceding years as a result of highway construction. The restoration included 3.5 acres of permanent lagoon, 6 acres of tidal marsh, and 3.5 acres of upper marsh. Additionally, a 50-car parking lot adjacent to the marsh area, chemical restroom facilities, a perimeter road, and an elevated walkway over the marsh were also approved. This CDP approval was challenged by the Malibu Little League who received a Superior Court order suspending the permit and requiring the Commission to review the Executive Director's determination of compliance with a condition that State Parks provide assistance to the Little League organization (who had used the property since 1970) to find an alternative site for ball fields. A permit extension was subsequently approved by the Commission on August 25, 1982, reissued as CDP No. 5-81-135E.

In 1986, the Commission approved additional development at the site, including a 1,000 ft. walkway, viewing deck, two stairways, ramp, and underground utilities. (CDP No. 5-86-143) Various other projects have been approved at Malibu Lagoon State Beach by the Commission, including restoring 0.60 acres of wetland and creating salt marsh and dune habitat (CDP No. 5-87-689), breaching the sand berm at the mouth of the lagoon as a one-time emergency measure to remediate flooding (CDP No. 4-95-242-G), installing temporary symbolic fencing for the threatened snowy plover (CDP No. 4-08-015-W and 4-08-085-W), and redirecting the mouth of the Malibu Creek using a tractor to close the channel in order to direct the flow upcoast as a one-time emergency measure to remediate flooding (CDP 4-06-051-G). Another restoration project within the lagoon occurred in 1996, pursuant to the Commission approval of Coastal Development Permit 5-90-1066. This restoration project was implemented by the California Department of Transportation (CalTrans) and coordinated by State Parks and the Resource Conservation District of the Santa Monica Mountains. The restoration was implemented as mitigation for impacts to the from the Malibu Lagoon PCH Bridge Replacement Project. That restoration program included a tidewater goby habitat enhancement project and a revegetation program.

In the late 1990's, the California Coastal Conservancy funded a study by the University of California, Los Angeles to identify restoration goals for the Malibu Lagoon task force. This led to the preparation of the Malibu Lagoon Restoration Feasibility Study and Final Alternatives Analysis (*see* Substantive File Documents). In 2005, the California Department of Parks and Recreation completed the Malibu Lagoon Restoration

Feasibility Study and Final Alternatives Analysis to assess further restoration of Malibu Lagoon. This effort involved coordination meetings between the California Department of Parks and Recreation (State Parks), the Resource Conservation District of the Santa Monica Mountains, the California State Coastal Conservancy, the Lagoon Restoration Working Group,and the Malibu Lagoon Technical Advisory Committee to determine the most ecologically beneficial restoration design with the least amount of harmful impacts to the lagoon ecosystem, focusing on long-term habitat and water quality benefits. A Final Environmental Impact Report was completed for this project dated March 2006. Subsequently, the applicant has obtained preliminary permit approvals for the project from the Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), and the Army Corps of Engineers (Corps) and permit approvals from the Regional Water Quality Control Board (RWQCB).

Under a grant from the State Water Resources Control Board, the applicant has secured funding to complete the initial stages of the project, including "Phase I," the parking lot relocation, which has been completed. The City of Malibu approved a Coastal Development Permit Application by the California Department of Parks and Recreation (CDP NO. 07-012) for Phase I of the Malibu Lagoon Restoration Project in 2007 to relocate the parking lot for the Malibu Lagoon State Beach. The City of Malibu simultaneously approved Variance No. 07-024 allowing the parking facilities to be located within the front yard setback and within a public open space. The City's CDP permitted the relocation the previously existing parking lot further away from the lagoon, the relocation of the vehicular entryway and pedestrian pathway (the primary pedestrian and vehicle entryway from Pacific Coast Highway) and a new pedestrian footpath and bridge allowing entry to Surfrider Beach approximately 300 ft. to the southeast.

C. DIKING, FILLING, AND DREDGING OF COASTAL WATERS

The proposed project is located within Malibu Lagoon, a wetland area. Wetlands are defined in Section 30121 of the Coastal Act as follows:

'Wetland' means lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

Section 30233 of the Coastal Act allows filling of coastal waters (or wetlands) only where feasible mitigation measures have been provided to minimize adverse environmental effects, and for only the following seven uses listed in Section 30233(a) of the Coastal Act:

> ***(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 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.***

(4) 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.
(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
(6) Restoration purposes.
(7) Nature study, aquaculture, or similar resource dependent activities.

As previously described above, the proposed development includes the restoration and enhancement of Malibu Lagoon to improve the long-term function of the lagoon ecosystem by recontouring/reconfiguring the lagoon, slopes and drainages to increase hydrologic flow. The project involves approximately 51,200 cu yds. of excavation and 37,500 cu. yds. fill for the purpose of wetland and habitat restoration. Approximately 13,700 cu. yds. of excavated sediment material will be exported from the project site to an appropriate disposal location. The project also includes implementation of a habitat restoration plan to replant native wetland and upland plant species and remove non-native plant species, construct an public access trail around lagoon with interpretive public educational/interpretive exhibits and improvements, and implement a long-term monitoring plan to monitor physical processes, biological changes, and vegetation restoration of the lagoon over a 5-year period to ensure the success of the restoration efforts.

Section 30233(a) limits dredging and fill activities in wetlands to eight allowable uses, including restoration. In this case, all proposed dredging/grading within wetland areas is for the purpose of restoration of the lagoon ecosystem. Moreover, the proposed grading is necessary to improve the circulation of the lagoon in order to increase water movement, water quality, and the long-term biological productivity of coastal waters. The project includes an extensive revegetation plan to remove non-native plant species and plant appropriate native wetland and upland plant species. Thus, the proposed grading (including all excavation and fill) is clearly an allowable use within a wetland pursuant to Section 30233(6).

Section 30233 allows grading in a wetland only where there is no feasible less environmentally damaging alternative to the proposed project. Alternatives to the project as proposed must be considered prior to finding that a project satisfies this provision of Section 30233. As noted above, the purpose of the proposed project is restoration and enhancement of the Malibu Lagoon. The Final Environmental Impact Report (FEIR) SCH No. 2005101123 found that although the proposed project will, in the long-term, significantly improve the wetland and upland habitat on site and increase the biological productivity of coastal waters, the proposed project may result in potential short-term impacts to sensitive species during initial construction/restoration operations. Specifically, recontouring of the lagoon banks and slopes would occur in area where sensitive fish species are located. In order to avoid, or minimize impacts to the maximum extent feasible, the applicant proposes to temporarily relocate the tidewater gobies, steelhead, and all other aquatic species from the construction areas to the main lagoon channel. The applicant proposes to accomplish this by seining the work area to collect the gobies and other species, releasing them behind a blocking net, constructing a berm to create a complete barrier across the estuary, and then dewatering the

construction area with screened pumps. Moreover, all work involving the gobies and other sensitive species would be conducted by qualified biologists authorized by the U.S. Fish and Wildlife Service (USFWS) approval. Additionally, in order to ensure that the applicant's proposed best management practices are adequately implemented, **Special Condition (4)** requires the applicant to submit a Final Dewatering Plan, for the review and approval of the Executive Director. The plan must incorporate all USFWS requirements into the plan for species removal and relocation, and the special condition also requires pre-construction surveys, construction personnel training, biological supervision of species removal and relocation, post-construction surveys, and post-project monitoring reports.

As noted above, grading and recontouring the lagoon is integral to the proposed project's main objective to expand the restore circulation and riparian habitat. Any project alternative that included excavation of the estuary banks would require dewatering of the estuary and grading and its attendant impacts on tidewater gobies and other aquatic and terrestrial species. A "no project" alternative would lessen short-term impacts by eliminating the proposed grading and would not have noise impacts to sensitive species. However, the proposed project will create enhanced habitat and a functioning lagoon ecosystem. Therefore, the proposed project is expected to have long-term beneficial impacts on the tidewater goby population and populations of other sensitive species with minimal short-term impacts. Thus, the Commission finds that there is no less environmentally damaging alternative than the proposed project.

Section 30233 requires that adequate mitigation measures to minimize adverse impacts of the proposed project on habitat values shall be provided. The applicant has incorporated numerous mitigation measures in the proposal, including erosion control measures, revegetation of the lagoon banks with emergent wetland and riparian vegetation (**Exhibit 6**), and the proposed dewatering and aquatic species protection plan described above. **Special Condition Fifteen (15)** incorporates, by reference, all of the mitigation measures required in Final Environmental Impact Report SCH No. 2005101123, as special conditions of the subject permit. Additionally, **Special Conditions 6 and 7** require additional monitoring and reporting relating to the success of lagoon physical hydrology, revegetation, aquatic, and terrestrial species. Therefore, the Commission finds that, as conditioned, the project will provide adequate mitigation measures to minimize adverse impacts on habitat values and no net loss of wetland area or function will occur as a result as required by the third test of §30233.

Due to the reasons discussed above, the Commission finds that the proposed project, as conditioned, is consistent with §30233 of the Coastal Act and with all relevant policies of the adopted City of Malibu Local Coastal Program.

D. WATER QUALITY

The Malibu LCP incorporates Section 30231 of the Coastal Act, which 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, minimizing alteration of natural streams.

Further, the following LUP water quality policies are applicable:

3.100 New development shall be sited and designed to minimize impacts to water quality from increased runoff volumes and nonpoint source pollution. All new development shall meet the requirements of the Los Angeles Regional Water Quality Control Board (RWQCB) in its the Standard Urban Storm Water Mitigation Plan For Los Angeles County And Cities In Los Angeles County (March 2000) (LA SUSMP) or subsequent versions of this plan.

3.102 Post-construction structural BMPs (or suites of BMPs) should be designed to treat, infiltrate, or filter the amount of stormwater runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMPs and/or the 85th percentile, 1-hour storm event (with an appropriate safety factor, i.e. 2 or greater) for flow-based BMPs. This standard shall be consistent with the most recent Los Angeles Regional Water Quality Control Board municipal stormwater permit for the Malibu region or the most recent California Coastal Commission Plan for Controlling Polluted Runoff, whichever is more stringent.

3.110 New development shall include construction phase erosion control and polluted runoff control plans. These plans shall specify BMPs that will be implemented to minimize erosion and sedimentation, provide adequate sanitary and waste disposal facilities and prevent contamination of runoff by construction chemicals and materials.

3.111 New development shall include post-development phase drainage and polluted runoff control plans. These plans shall specify site design, source control and treatment control BMPs that will be implemented to minimize post-construction polluted runoff, and shall include the monitoring and maintenance plans for these BMPs.

3.125 Development involving onsite wastewater discharges shall be consistent with the rules and regulations of the L.A. Regional Water Quality Control Board, including Waste Discharge Requirements, revised waivers and other regulations that apply.

3.126 Wastewater discharges shall minimize adverse impacts to the biological productivity and quality of coastal streams, wetlands, estuaries, and the ocean. On-site treatment systems (OSTSs) shall be sited, designed, installed, operated, and maintained to avoid contributing nutrients and pathogens to groundwater and/or surface waters.

3.127 OSTSs shall be sited away from areas that have poorly or excessively drained soils, shallow water tables or high seasonal water tables that are within floodplains or where effluent cannot be adequately treated before it reaches streams or the ocean.

3.131 The construction of private sewage treatment systems shall be permitted only in full compliance with the building and plumbing codes and the requirements of the LA RWQCB. A coastal development permit shall not be approved unless the private sewage treatment system for the project is sized and designed to serve the proposed development and will not result in adverse individual or cumulative impacts to water quality for the life of the project.

3.138 New septic systems shall be sited and designed to ensure that impacts to ESHA, including those impacts from grading and site disturbance and the introduction of increased amounts of groundwater, are minimized. Adequate setbacks and/or buffers shall be required to protect ESHA and other surface waters from lateral seepage from the sewage effluent dispersal systems.

3.141 Applications for a coastal development permit for OSTS installation and expansion, where groundwater, nearby surface drainages and slope stability are likely to be adversely impacted as a result of the projected effluent input to the subsurface, shall include a study prepared by a California Certified Engineering Geologist or Registered Geotechnical Engineer that analyzes the cumulative impact of the proposed OSTS on groundwater level, quality of nearby surface drainages, and slope stability. Where it is shown that the OSTS will negatively impact groundwater, nearby surface waters, or slope stability, the OSTS shall not be allowed.

The Commission recognizes that new development has the potential to adversely impact coastal water quality and aquatic resources because changes such as the removal of native vegetation, the increase in impervious surfaces, and the introduction of new uses cause increases in runoff, erosion, and sedimentation, reductions in groundwater recharge and the introduction of pollutants such as petroleum, cleaning products, pesticides, and other pollutants, as well as effluent from septic systems.

In this case, the proposed development is the restoration and enhancement of Malibu Lagoon, a degraded lagoon ecosystem that is currently characterized by poor water quality conditions due in part to inflow of nutrient and pollutant rich water from Malibu Creek including urban runoff, storm drainage, and groundwater inputs. Currently, the water quality in the lagoon exceeds Regional Water Quality Control Board standards. The proposed reconfiguration of the lagoon and hydrological system is expected to improve circulation and result in improved water quality. However, the temporary dewatering of the 12 acre western lagoon complex may result in potential short-term adverse impacts to water quality in other portions of the lagoon and to Santa Monica Bay due to increased disturbance during construction. As explained below, the discharges from dewatering the western portion of the lagoon are regulated by the California Regional Water Quality Control Board and will be treated according to the standards outlined in the approved National Pollutant Discharge Elimination System Permit (“NPDES Permit”). Moreover, although the proposed restoration activities may result is some short-term construction impacts to water quality, the proposed project is expected, in the long-term, to significantly improve the circulation of the lagoon in order to increase water movement, water quality, and the long-term biological productivity of coastal waters.

1. Hydrologic Connectivity of Malibu Lagoon

Malibu Lagoon is influenced by streamflow inputs, tides, and wave action. In the rainy winter season, streamflows in Malibu Creek are higher. As noted above, Malibu Creek inputs in the lagoon include flows from surface water runoff, discharges from Tapia Wastewater Treatment Plan, and seepage from septic systems. Malibu Creek has the potential to discharge large storm flows that generally occur in the late fall and winter months and these flows can contribute to the lagoon mouth opening. The Las Virgenes Municipal Water District Tapia Water Reclamation Plant (LVMWD) is permitted to discharge only during the rainy season, from November 15th through April 15th. LVMWD is permitted to discharge in the summer months only during a rain event or when flows are measured below 3 cubic feet per second (cfs). When flows are measured below 3cfs, LVMWD is required to discharge approximately 1cfs until those flows daylight at Serra Retreat Bridge which triggers a stoppage of this regulated discharge. These flows are required by the RWQCB to augment naturally occurring flow in order to protect steelhead trout. By the time these flows reach the lagoon, as little as 1.2 cfs will typically pass through the lagoon as surface flow. The mean daily flows from the creek were calculated from data collected between 1931 to 2009 between June and October and measured to be approximately 3.5 cfs.

During the spring months and drier summer months, the force of the streamflow decreases, the lagoon mouth may close. When the mouth is closed, poor circulation and warmer temperatures leads to eutrophication, which in turn degrades water quality and aquatic habitat. Increases in dry season runoff in Malibu Creek watershed could impact lagoon water levels can and could cause a breach in the summer of the closed lagoon. Additionally, summer breaching has occurred in the past informally by local beachgoers or others.

2. Lagoon Water Quality

A key objective of the proposed project is to improve water quality in the lagoon by increasing circulation of water in the lagoon. Water quality in the lagoon when the lagoon is closed is generally poor since creek flows, local runoff, and seepage from residential septic systems is collected and held by the lagoon. The bacteria and Total Maximum Daily Load (TMDL) requirements for nutrients, including nitrate and phosphate, are regularly exceeded.

a. TMDL Water Quality Targets

Malibu Lagoon and Malibu Creek are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Malibu Lagoon is listed as impaired by enteric viruses, eutrophication, high coliform counts, and pH. Malibu Creek is listed as impaired by high coliform counts, nutrients (algae), and scum/unnatural foam. TMDL's to address nutrients and bacteria impairment within the Malibu Creek Watershed, including the

lagoon, were adopted by the Los Angeles Region of the California Regional Water Quality Control Board in 2003.

(i) TMDL for Nutrients in the Malibu Creek Watershed

The numeric targets for nitrogen and phosphorus in the Malibu Creek watershed established by the U.S. Environmental Protection Agency (EPA) are provided in Table 1, below. These targets were established to reduce nutrient impairment in the watershed, and consider seasonal variations in nutrient concentrations. The RWQCB has eliminated winter limits as data has shown that algal and nutrient impairments exist in both winter and summer.

Table 1. TMDL Targets for Nutrients

Summer (April 15 to November 15)		Winter (November 16 to April 14)
Total Nitrogen (mg/L)	Total Phosphorus (mg/L)	Total Nitrogen (mg/L)
1.0	0.1	8.0

Existing Water Quality Conditions- Nutrients

Previous studies have shown that excessive inputs of nutrients (nitrogen and phosphorus) into the lagoon from the surrounding watershed can result in nuisance algal blooms, objectionable odors low dissolved oxygen concentrations, and fish kills. The primary sources of nitrogen to the lagoon include septic systems, surface runoff, and sediment release. The primary sources of phosphorus to the lagoon include septic systems, upland systems, surface runoff, and sediment release.

Average lagoon values recorded by Ambrose and Orme (2000) during the summer months were 1.39 mg/l for nitrogen and 0.49 mg/l for phosphorus. The average winter concentrations measured by Ambrose and Orme were 4.0 mg/l for nitrogen and 0.63 mg/l for phosphorus. Water quality sampling conducted by the LVMWD in the lagoon (station HtB-20) between April and September 2003, reported a combined nitrate-N plus nitrite-N concentration of from 0.10 to 2.5 mg/l and ammonia-N from 0.005 to 0.1 mg/l. Additional surface water quality sampling was conducted by the Malibu Creek Preservation Company LLC in the Lagoon west of the Malibu Creek Plaza from February 2003 to December 2003. Samples collected from this location in February, October, November, and December of 2003 reported total N concentrations ranging from 1 mg/l to 4 mg/l.

Sampling in groundwater monitoring wells conducted by Stone (2004) reported mean total nitrogen concentrations for the 3 monitoring wells located along the southern (C-1

and C-2) and northwestern shoreline (P-7) of the lagoon ranging from 0.80 mg/l to 6.47 mg/l. Maximum and minimum total nitrogen concentrations reported at these locations are provided in Table 2, below.

Table 2. Total Nitrogen Concentrations

Well ID	# of Samples	Minimum Total N (mg/l)	Mean Total N (mg/l)	Maximum Total N (mg/l)
C-1	12	3.2	6.47	10.62
C-2	12	0.55	1.01	1.93
P-7	12	0.18	0.80	1.65

(ii.) TMDL for Bacteria/Coliform in the Malibu Creek Watershed

The numeric targets for bacteria in the Malibu Creek watershed established by the U.S. Environmental Protection Agency (EPA) are provided in Table 2, below. These targets were established to protect water contact recreational use in the watershed.

Table 3. TMDL Targets for Coliform

Parameter	Geometric Mean	Single Sample
Total	1,000	10,000 or 1,000 *if* FC/TC >1.0
Fecal	200	400
Enterococcus	35	104

Existing Water Quality Conditions- Bacteria

The bacteria TMDL for the Malibu Creek watershed estimate that 158,000 billion counts of fecal coliform are present in the lagoon, annually. Bacteria are transported into the lagoon from the surrounding watershed through wastewater treatment discharges into Malibu Creek, and leaching from septic systems located in the immediate vicinity of the lagoon.

Surface water quality sampling conducted by the Malibu Creek Preservation Company, LLC in the Lagoon west of the Malibu Creek Plaza from February 2003 to December 2003 reported Enterococcus counts ranging from 52 MPN/100 ml to greater than 2,419.2 MPN/100 ml. The highest counts occurred in June, July, and August.

Sampling in groundwater monitoring wells conducted by Stone (2004) reported mean total coliform concentrations for the 3 monitoring wells located along the southern (C-1 and C-2) and northwestern shoreline (P-7) of the lagoon ranging from 8 MPN/100 ml to 57 MPN/100 ml. Maximum and minimum total coliform concentrations reported at these locations are provided in the Table 4, below.

Table 4. Total Coliform Concentrations

	# of Samples	Minimum Total Coliform (MPN/100 ml)	Mean Total Coliform (MPN/100 ml)	Maximum Total Coliform (MPN/100 ml)
C-1	12	ND	8	22
C-2	12	ND	14	50
P-7	12	ND	57	1600

Mean fecal coliform levels ranged from 3 MPN/100 ml to 9 MPN/100 ml, and mean Enterococcus concentrations ranged from 31 MPN/100 ml to 38 MPN/100 ml at these locations. Maximum and minimum fecal coliform and Enterococcus concentrations reported at these locations are provided in Table 5 and Table 6, below.

Table 5. Fecal Coliform Concentrations

Well ID	# of Samples	Minimum Fecal Coliform (MPN/100 ml)	Mean Fecal Coliform (MPN/100 ml)	Maximum Fecal Coliform (MPN/100 ml)
C-1	12	ND	3	6
C-2	12	ND	7	8
P-7	12	ND	9	50

Table 6. Enterococcus Concentrations

Well ID	# of Samples	Minimum Enterococcus (MPN/100 ml)	Mean Enterococcus (MPN/100 ml)	Maximum Enterococcus (MPN/100 ml)
C-1	12	ND	31	649
C-2	12	ND	32	2419
P-7	12	ND	38	722

3. Circulation Improvements

Currently, the channels of the western arm are configured to receive storm flows, but are mostly sheltered from scouring by tides or streamflows due to the lack of hydraulic connectivity with the western lagoon area. The proposed project includes creating a new deepened channel along the southern edge of the western lagoon complex. This channel would serve as the single main exit and entrance for water conveyed in and out of the west lagoon complex. Under open conditions, the tidal circulation would be

expected to improve due to increases in flows around the western arms. Under closed conditions, the new channel in the western portion of the lagoon would allow for increased wind-generated wave and water movement. Upstream sources of pollutants, including nitrogen and phosphorous, would still impact water quality in the lagoon. However, the proposed project is expected to reduce eutrophic conditions due to better circulation and result in overall improved water quality. Additionally, the new configuration is expected to direct storm delivered sediments more directly to the ocean and reduce the amount of fine sediments retained within the lagoon.

4. Lagoon Dewatering for Construction

The 12 acres on the western side of the lagoon will be subject to the proposed grading operation and will require dewatering in order to allow restoration/construction activities to occur. All grading operations in the western lagoon complex will occur after the project site is dewatered to allow for construction inspection, species relocation, and to avoid turbidity. All construction and heavy equipment operation is proposed to occur in dry (dewatered) areas only.

Hydrologic connectivity a key factor in determining the quantity of water expected to be encountered during dewatering operations. The potential flow rates are variable and range between 10 ft/day and 123 ft/day. The mean flow rate between these two numbers is 2.5 cfs (66.5 ft/day) and is presented by the applicant as the basis for the dewatering calculations. Dewatering is proposed to be minimized by using a phased grading approach and the entire west area will not be open to dewatering activities all at one time. As each channel element is constructed, each side of the excavation is expected to intercept the groundwater table and daylight seepage into the work area. Typical channel elements are 400 ft. in length (800 ft. both sides) and the exposed seepage height on the back would be 4 ft. on average. This estimated flow rate will be verified by excavating test pits along the perimeter of the lagoon prior to construction.

Containment Filtration for Dewatering

Pre-filtration of the water to be transferred out of the site is proposed to be accomplished using flow through over and under design weir tanks (“Baker tanks”). Secondary filtration is proposed using a two step process with bag filtration followed by particulate filtration to remove all solids from the stream flow. The final treatment system prior to discharge of the lagoon water/effluent is proposed to be achieved using carbon and resin vessels for collection of the remaining contaminants, further explained below. **Special Condition Sixteen (16)** requires that all used filter media, sediment, and other debris collected will be disposed of outside of the Coastal Zone.

The California Regional Water Quality Control Board (“Regional Water Board”) has approved dewatering discharges into the Pacific Ocean under the General National Pollutant Discharge Elimination System (“NPDES permit”) and Waste Discharge Requirements. (NPDES No. CAG994004, CI-9573, March 9, 2010). The NPDES permit authorizes California Department of Parks and Recreation to discharge up to 1.3 million

gallons per day (MGD) of treated water into the Santa Monica Bay. Water extracted from the site will be treated by passing through activated carbon vessels to remove organic contaminants, chlorinated to destroy pathogen bacteria, and treated by passing through ion exchange resin vessels to remove heavy metals prior to discharge. The NPDES permit provides discharge limitations for specific constituents, including: total suspended solids, turbidity, biological oxygen demand (BOD), oil and grease, settleable solids, sulfides, phenols, residual chlorine, copper, and fecal coliform.

Effluent Discharge Limitations

Constituent	**Units**	**Daily Maximum**	**Monthly Average**
Total suspended solids	mg/L	150	50
Turbidity	NTU	150	50
BOD_5 20°C	mg/L	30	20
Oil and Grease	mg/L	15	10
Settleable solids	mg/L	0.3	0.1
Sulfides	mg/L	1.0	N/A
Phenols	mg/L	1.0	N/A
Residual Chlorine	mg/L	0.1	N/A
Copper	µg/l	5.8	2.9
Fecal Coliform > a long mean of 200 per 100 ml (based on a min of not less than 4 samples for any 30-day period), or > 400 per 100 ml (in more than 10% of total samples during and 30 day period)	#/ml		

The Regional Water Board's approval also requires the applicant to comply with a monitoring and reporting program (CI-9573). The monitoring and reporting program ("MRP") includes general monitoring provisions (e.g. analytical methods for each pollutant, sample collection requirements), monitoring locations, toxicity testing and reporting, monitoring periods and reporting schedules. **Special Condition Fourteen (14)** incorporates all of the waste discharge requirements into this coastal development permit. **Special Condition Fourteen (14)** also requires the applicant to immediately notify the Executive Director if monitoring indicates any violations of the NPDES permit. Any proposed changes to the plan will require a Coastal Commission approved CDP amendment unless the Executive Director determines that no amendment is required.

The beach and marine environment could also be temporarily impacted as a result of the implementation of project activities by unintentionally introducing sediment, debris, or chemicals with hazardous properties during construction activities. To ensure that construction material, debris, or other waste associated with project activities does not enter the water, the Commission finds **Special Condition Three (3)** is necessary to define the applicant's responsibility ensure proper disposal of solid debris and material unsuitable for placement into the marine environment. As provided under **Special Condition Three (3)**, it is the applicant's responsibility to ensure that the no construction materials, debris or other waste is placed or stored where it could be subject to wave erosion and dispersion. Furthermore, **Special Condition Three (3)** assigns responsibility to the applicant that any and all construction debris, sediment, or trash shall be properly contained and removed from construction areas within 24 hours. Further, construction equipment shall not be cleaned on the beach or in the beach parking lots. Additionally, **Special Condition Two (2)** requires the applicant to submit erosion control plans to reduce erosion for all disturbed portions of the project area, including grading activities. **Special Condition Two (2)** specifies that erosion control measures shall be implemented prior to and concurrent with grading operations and that all sediment shall be retained onsite. Additionally, should grading or other work cease for a period of 30 days, the site shall be stabilized with geotextiles or mats, sand bag barriers, silt fencing, temporary sediment basins or swales. **Special Condition Two (2)** requires measures to minimize the area of bare soil exposed at any one time, including phased grading.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Section 30231 of the Coastal Act and with all relevant policies of the adopted City of Malibu Local Coastal Program.

E. ENVIRONMENTALLY SENSITIVE HABITAT AND MARINE RESOURCES

Section **30230** of the Coastal Act 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.***

Section **30231** of the Coastal Act states that:

> ***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 **30236** of the Coastal Act states:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (l) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Section **30240** of the Coastal Acts 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 recreation areas.

In addition, the City of Malibu certified LUP contains policies that protect the environmentally sensitive habitat areas of the City. LUP Policy 3.8 states that Environmentally Sensitive Habitat Areas (ESHAs) shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. The LUP policies also establish the protection of areas adjacent to ESHA through the provision of buffers. Natural vegetation buffer areas must be provided around ESHA that are of sufficient size to prevent impacts that would significantly degrade these areas. Development, including fuel modification, shall not be permitted within required buffer areas.

LUP Policy 3.23 states the following:

Development adjacent to ESHAs shall minimize impacts to habitat values or sensitive species to the maximum extent feasible. Native vegetation buffer areas shall be provided around ESHAs to serve as transitional habitat and provide distance and physical barriers to human intrusion. Buffers shall be of a sufficient size to ensure the biological integrity and preservation of the ESHA they are designed to protect. All buffers shall be a minimum of 100 feet in width, except for the case addressed in Policy 3.27.

Section 30231 of the Coastal Act requires that the biological productivity and quality of coastal waters be maintained. Section 30230 requires that uses of the marine environment be carried out in a manner that will sustain the biological productivity of coastal waters for long-term commercial, recreational, scientific, and educational purposes. Section 30236 allows for alterations to streambeds when required for flood control projects where no other less damaging alternative is feasible and when necessary to protect public safety or existing development. In addition, Section 30240 of

the Coastal Act states that environmentally sensitive habitat areas shall be protected and that development within or adjacent to such areas must be designed to prevent impacts which could degrade those resources.

The Malibu Lagoon is a 31-acre shallow water embayment occurring at the terminus of Malibu Creek Watershed, the second largest watershed draining into Malibu Bay. This lagoon contains important biological resources and provide habitats for several important plant and animal species. Although in a degraded condition due to poor water quality and invasive non-native plants, the Malibu Lagoon is considered an environmentally sensitive habitat area (ESHA) and provides habitat for several sensitive aquatic and avian species, described in detail below. These species may potentially be located, at times, within or near the project area and could be adversely impacted from temporary construction impacts. Additionally, salt marsh vegetation is found at the site and constitutes important habitat for several coastal floral and faunal species. According to the March 2006 Final Environmental Impact Report, lagoon habitats do not support many mammal or reptile species because most of the available scrub habitat is very dense at ground level and the coastal salt marsh is almost entirely covered with jaumea with little ground exposed. However, some common mammals that are known to occur include the mule deer, Audubon's rabbit, coyote, black rat, deer mouse, and the meadow mouse. According to the March 2006 Final Environmental Impact Report, construction impacts to biological resources, include:

(1) the removal or disturbance of southern willow scrub vegetation, atriplex scrub vegetation, baccharis scrub, mulefat scrub, Venturan coastal sage scrub, mixed scrub, southern coastal salt marsh, brackish marsh, coastal and valley freshwater marsh;
(2) potential impacts to mudflat, sand beach/sandbar, open water, common wildlife species found to occur in the project area, California black walnut, wandering skipper, and southern steelhead trout
(3) potentially significant impacts to tidewater goby, California brown pelican, western snowy plover, Heermann's Gull, elegant tern, and California least tern.

1. Sensitive Bird Species

The 2006 FEIR reports that past studies of Malibu Lagoon have identified 200 species of birds at the lagoon. Several species of aquatic birds have been observed in the lagoon including gadwall, mallard, common yellowthroat, song sparrow, black phoebe, pied-billed grebe, black-necked stilt, black-crowned night heron, great egret, great blue heron, snowy egret, and green heron. (FEIR, p.6-11) Upland bird species including the California towhee, Anna's hummingbird, bushtit, northern mockingbird, morning dove, American crow, western scrub-jay, and house finch have been observed in upland habitats surrounding the lagoon, which consists primarily of Venturan coastal sage scrub and mixed scrub habitats. Five sensitive bird species were recorded during 2005 breeding surveys, including savannah sparrow, California brown pelican, western snowy plover, Heermann's gull, elegant tern, and California least tern. These birds are considered "sensitive" because they are protected by state and/or federal endangered

species acts, because they are recognized as threatened by the International Union for Conservation of Nature and Natural Resources (IUCN), or because they are being considered for listing as California Bird Species of Special Concern. (FEIR, p. 6-16, citing Cooper Ecological Monitoring, Inc. 2005).

Endangered California Least Tern

The California least tern (*Sterna antillarum browni*) ("least tern" or "tern"), listed as one of three subspecies of least tern in the United States, was listed as federally endangered in 1970 and listed on the California endangered species list in 1971. Although critical habitat has not been designated for the California least tern, it is a fully protected species under California law. The California least tern was historically concentrated in three southern California Counties, Los Angeles, Orange, and San Diego. At the time of listing, only 600 breeding pairs were identified, but the population was documented at approximately 7,100 pairs in 2005 (USFWS Biological Opinion 2009). Large nesting colonies have been discontinuous and are spread out along beaches at the mouths of larger estuaries. The Santa Margarita River mouth in San Diego County generally hosts the largest number of California least terns among all locations. The breeding season typically begins in April. Terns typically nest in colonies on relatively open beaches kept free of vegetation by natural scouring from tidal action. Nesting areas are relatively flat sandy beaches in close proximity to foraging habitat and are relatively secluded from disturbance and predation. Near-shore ocean waters and shallow estuaries serve as foraging habitat.

Repeated disturbance of breeding sites can have significant effects on California least tern reproductive success and can cause nest failure, re-nesting, and site abandonment. For example, the least tern colony at Ormond Beach, Ventura County was repeatedly disturbed by paragliders and ultralight aircraft. During a four year period, all nesting attempts at Ormond Beach failed ant the site was abandoned. (USFWS 2009 Biological Opinion, p.10, citing C. Dellith pers. obs. 2006)

The California least tern is a common summer resident of Malibu lagoon. Spring migrants arrive and move through the area in late April. California least terns that forage at the lagoon arrive in early to mid-May, and all summer foraging, roosting, and migrating California least terns leave the area by late August to mid-September. California least terns forage over Malibu lagoon and the ocean immediately offshore during their season migrations and during breeding. (USFWS 2009 Biological Opinion). A large concentration of least terns (up to 42) were documented at Malibu Lagoon on July 13 and 14, 2005, roosting along the southern shore and foraging in the main body of the lagoon and feeding in the west basin of the lagoon. It was documented by the 2005 Cooper Study that, on both days, a total of 14 hatch-year California least terns were present with adults, many of which were banded. These banded terns and the adults were presumed to be from a colony near Terminal Island in Los Angles Harbor, where several hundred California least terns were monitored and banded during the spring of 2005. (Cooper 2005)

The Fish and Wildlife Service has determined that the proposed project would adversely affect a small number of California least terns in the project area (USFWS 2009 Biological Opinion CON 1-8-08-F-4) Foraging and roosting least terns would be disturbed by the presence of project workers, noise from equipment and other project activities. The breeding season for the California least tern typically begins in April, with eggs laid in the first part of May and hatching in early June. State Parks has proposed a work timeframe of June 15th through October 15th, during which the California least tern foraging may be disturbed in the lagoon. No direct impacts to breeding sites on the beach are proposes. However, the Fish and Wildlife Service has determined that the foraging may be impacted due to the temporary dewatering of the lagoon and by diverting lagoon flow, thereby decreasing the foraging area or killing some of its prey. However, the USFWS expects that the individuals displaced by the actions will find ample foraging opportunities nearby.

Roosting sites of the least terns could be disturbed during the restoration activities. Chronic Disturbance to non-breeding birds can affect body condition, metabolic rate, habitat use, and subsequent reproductive success due to reduced lipid reserves. However, the USFWS has determined that the adverse effects of being flushed from roost sites will be minimal and that no California least terns are likely to be killed or injured during this work. Additionally, according to the Final Environmental Impact Report (FEIR) for the project, no work will be done in the main lagoon channel that the California least tern uses for roosting habitat, including the snags and high sand bar (FEIR, p. 6-35) and that the protected islands will create additional habitat. The FEIR also states that post-project acreages of suitable habitat for the least tern would be similar, if not identical, to pre-project acreages and did not require mitigation.

California Brown Pelican

California brown pelicans (*Pelecanus occidentalis)* are present at Malibu Lagoon year round. This species does not nest on the California mainland, but uses Malibu Lagoon for post-breeding dispersal and day and night roosting. Foraging areas are offshore of Malibu Beach. Up to 210 California brown pelicans have been observed at Malibu Lagoon, generally roosting along the sand spit separating the lagoon from the ocean or on the island in the middle of the lagoon exposed by low tide. (USFWS 2009 Biological Opinion, *citing* Cooper 2005).

The proposed project will result in the temporary loss of roosting habitat from some of the project area, which could adversely affect the species. Roosting sites are essential for the survival of California brown pelicans. California brown pelicans typically have a strong traditional use of night roots, although changes in roost site availability in southern California have resulted in use of some sites on a temporary basis.

According to the USFWS Biological Opinion, working in the vicinity of any roosting sites in Malibu Lagoon could result in California brown pelicans expending excess energy to search for new roost sites, increasing susceptibility to predation and disease (citing Strong and Jaques 2003). The proposed project could result in the incidental flushing of brown pelicans from roosting sites prior to restoration activities. However, the USFWS

has evaluated protective measures proposed by the applicant and have determined that no brown pelicans are likely to be killed or injured during the work and that opportunities for California brown pelicans to roost will remaining and around portions of the Malibu Lagoon. Additionally, according to the Final Environmental Impact Report (FEIR) for the project, no work will be done in the main lagoon channel that the Brown Pelican uses for roosting habitat, including the snags and high sand bar (FEIR, p. 6-33).

Western Snowy Plover

The Western Snowy Plover (*Charadtrius alexandrinus nivosus*) is a CDFG Species of Special Concern and a federally threatened species. Two western snowy plovers were present briefly along the southern edge of Malibu lagoon on June 14, 2005. However they were flushed by pedestrians and did not return. This bird species uses Malibu Lagoon as a major wintering site, but does not nest of the nearby beach. (FEIR p. 6-16) Additionally, according to the USFWS, snowy plovers are not known to breed within the study area and no restoration or enhancement activities will occur along the coastal portion of the project area and no habitat will be affected by the proposed project. (USFWS Biological Opinion 2009).

Heermann's Gull

The Heermann's Gull (*Larus heermanni*) is listed as near-threatened on the UUCN Red List. Up to 70 individuals were counted during the 2005 survey of the Lagoon. These birds do not nest within the project reach, but can be found roosting on the sand spit or beach. Their nesting extends from early winter into spring. (FEIR, p.6-17)

Elegant Tern

The Elegant Tern (*Sterna elegans*) is a CDFG species of special concern. Their nesting season extends from wearly winter into spring. They are numerous at Malibu Lagoon, but during the 2005 survey only a handful were observed. This species does not nest within the project area. (FEIR, p.6-17)

Effects of Noise on Bird Species

The Commission notes that the proposed project may result in potential adverse effects to sensitive avian species due to unintentional disturbance from construction equipment and activity, including grading and noise. In particular, the effects of construction noise upon birds are not well known; however, significant noise levels may impact birds in a number of ways. Continuous noise above the ambient environment or single or multiple loud impulse noises may produce changes in bird foraging and reproductive behavior; mask signals birds use to communicate; mask biological signals impairing detection of sounds of predators and/or prey; decrease hearing sensitivity temporarily or permanently; and/or increase stress and alter reproductive and other hormone levels.[1] Dooling and Popper prepared a review report in 2007 for Caltrans titled, "The Effects of

[1] Longcore, T. & C. Rich. 2001. A Review of the Ecological Effects of Road Reconfiguration and Expansion on Coastal Wetland Ecosystems. The Urban Wildlands Group

Highway Noise on Birds".[2] In this report they review the literature for studies that evaluate the impacts of traffic and construction noise on birds. They list three classes of potential effects of noise on birds: (1) physiological and behavioral effects; (2) damage to hearing from acoustic over-exposure; and (3) masking of important bioacoustic and communication signals all of which may also lead to dynamic behavioral and population effects.

Much of the information regarding impacts of noise on birds has been extrapolated from studies involving the influence of noise on humans and other mammals. A relatively small number of studies have focused directly on impacts of noise on birds and those studies have been performed on a limited number of bird species; to date no studies of noise impacts have been performed on wading bird species. Dooling and Popper (2007) state that, "Generally, humans have better auditory sensitivity (lower auditory thresholds) both in quiet and in noise than does the typical bird." Mammals in general have much greater auditory sensitivity than birds. Birds are more resistant to both temporary and permanent hearing loss or to hearing damage from acoustic overexposure than are humans and other mammals that have been tested.[3]

Sixty decibels (60 dB) is a widely used threshold for projects involving heavy equipment in areas supporting sensitive bird species. This threshold criterion is used by many agencies and consultants as the noise threshold, above which, birds may be adversely impacted. While this decibel range appears to be widely accepted and employed for projects involving potential noise impacts upon birds, its use is without well founded scientific justification.[4] Noise levels in quiet outdoor rural areas range from 40 to 45 dB(A)[5] and from 50-55 dB(A) in quiet suburban areas.[6] The 60 dB criterion stems from taking average ambient environment noise measurements and determining at what noise level, beyond that measured in the natural environment, would one expect to see adverse effects on avian vocal communication.[7] While this criterion is valuable as a starting point for it is conservative and protective, ambient environment noise levels must also be analyzed and figured into the decibel thresholds applied to projects on a case by case basis. Rural areas will have much lower exposure to significant ambient noise compared to urban areas. And while all projects have specific and unique circumstances, those with the potential to adversely impact sensitive bird species due to increased noise levels must minimize those noise impacts to the maximum extent possible.

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[2] Dooling, R.J. & A.N. Popper. 2007. The Effects of Highway Noise on Birds. Prepared for: The California Department of Transportation, Division of Analysis. Prepared by: Environmental BioAcoustics LLC, Rockville, MD

[3] Op. Cit. Dooling & Popper 2007

[4] James, R.A. 2006. California innovation with highway noise and bird issues. In: Proceedings of the 2005 International Conference on Ecology and Transportation, Eds. Irwin CL, Garrett P, McDermott KP. Center for Transportation and the Environment, North Carolina State University, Raleigh, NC: p. 569.

[5] dB(A) – a weighted decibel average

[6] Ouis, D. 2001. Annoyance from road traffic noise: a review. Journal of Environmental Psychology. Vol. 21, pgs. 101-120.

[7] Op. Cit. Dooling & Popper 2007

Dooling and Popper, in their 2007 report, present a table with guidelines for potential noise effects on birds at relative distances from the source based on a synthesis of the available literature. Hearing damage can potentially result from single impulses at or above 140 dB(A) or multiple impulses at or above 125 dB(A) when birds are close to the source. At greater distances from the noise source, where noise levels fall below 110 dB(A), birds may experience a temporary loss of hearing (known as a temporary threshold shift) from continuous noise above 93 dB(A). Masking may occur at decibels above and below 93 dB(A) depending on ambient noise levels. At even greater distances from the noise source, where the noise is still above ambient levels, masking may occur. Dooling and Popper suggest that noise levels below 50 to 60 dB(A) are unlikely to cause masking.

Although 65 dB is the noise threshold widely used for projects involving heavy equipment in areas supporting sensitive bird species, this criterion is not always warranted or attainable. Threshold noise values must be considered on a case by case basis. The setting of the proposed work is a popular public park that experiences heavy use patterns by beachgoers, noise from vehicle traffic and parking, and associated noise from the adjacent highway (Highway 1). In previous coastal development permit actions involving development in similar areas, including CDP 5-08-242 (County of Los Angeles Department of Public Works) and CDP 4-07-116 (Caltrans), the Commission has typically found that 85 dB is an appropriate threshold noise levels at construction sites in order to minimize impacts to adjacent to environmentally sensitive habitat areas. Further, given Dooling and Popper's 2007 review findings that, while masking may occur below 93 dB, it is noise above this level that presents real problems for birds. In addition, given the fact that birds, like humans, are known to compensate in a number of behavioral and physical ways to ambient noise[8]; Commission staff have determined that 85 db is an appropriate noise threshold to apply to this project given the high ambient noise levels at the project site. Therefore, to ensure that the applicant's proposed monitoring program is adequately implemented in a manner that will ensure that impacts to wildlife are avoided or minimized to the maximum extent feasible, **Special Condition One (1)** requires the applicant to retain the services of a qualified biologist or environmental resource specialist to conduct sensitive bird species surveys and monitor project operations associated with construction activities that will take place between February 15th and September 1st (the proposed project timeframe is June 1st to October 15th).

Special Condition One (1) also requires bird surveys to be conducted 30 calendar days prior to the listed activities to detect any active bird nests in all trees within 500 feet of the project site and requires a follow-up survey to be conducted 3 calendar days prior to the initiation of construction. Further, nest surveys must continue on a monthly basis throughout the nesting season or until the project is completed, whichever comes first. If an active nest of any federally or state listed threatened or endangered species, species of special concern, or any species of raptor is found within 300 ft. of construction activities (500 ft. for raptors), the applicant is required to retain the services

[8] Op. Cit. Dooling & Popper 2007

of an environmental resources specialist with experience conducting bird and noise surveys, to monitor bird behavior and construction noise levels. The environmental resources specialist is required to monitor birds and noise every day at the beginning of the project and during all periods of significant construction activities. Construction activities may occur only if construction noise levels are at or below a peak of 85 dB at the nest (s) site. If construction noise exceeds a peak level of 85 dB at the nest (s) site**,** sound mitigation measures such as sound shields, blankets around smaller equipment, mixing concrete batches off-site, use of mufflers, and minimizing the use of back-up alarms shall be employed. If these sound mitigation measures do not reduce noise levels below the above referenced threshold, construction within 300 ft. of the nesting trees/areas (500 ft. for raptors) shall cease and may not recommence until either new sound mitigation can be employed or nesting is complete. Additionally**, Special Condition One (1)** requires the applicant to notify the appropriate State and Federal Agencies within 24 hours, including the Coastal Commission, and take action to mitigate any further disturbance specific to each agencies' requirements.

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2. Sensitive Aquatic Species

Steelhead

Malibu Lagoon is within the endangered Southern California Distinct Population Segment (DPS) of steelhead (*Oncorhynchus mykiss*) and is designated critical habitat for the species. Southern steelhead are anadromous (migrating from freshwater to the ocean as juveniles and returning to freshwater as an adult to spawn). Spawning occurs from December through June when higher winter stream flows occur.

The 2006 Final Environmental Impact Report states that patterns of steelhead presence and reproduction in Malibu Creek have been studied since the 1980's and are known to occur upstream within Malibu Creek. However, no steelhead adults or smolts were documented by the 2005 fish surveys in the lagoon. It should be noted that from July 2006 to October 2006, all fish in the upper watershed of Malibu Creek, including steelhead, died from unknown causes. In March 2007, only two fish were found in Malibu Creek and subsequently in 2008 several steelhead were observed, indicating a repopulation by this species (June 30, 2008 US Army Corps approval letter, *citing* Dagit and Abramson 2007).

The Army Corps of Engineers and the National Marine Fisheries Service determined that the project is not likely to affect steelhead or critical habitat for this species because: the project takes place outside of the steelhead migration window, siltation fences and an earthen berm will prevent steelhead from entering the construction zone and will prevent sedimentation and turbidity, the project is not expected to alter the natural breaching regime of the lagoon or interfere with adult and juvenile steelhead migration, aquatic habitat will be augmented, and any vegetation removed will be replaced, and best management practices are proposed (sediment control measures). (*See* USFWS letter, dated August 18, 2008, Agency Approvals).

Tidewater Goby and Tidewater Goby Critical Habitat

The tidewater goby (*Eucyclogobius newberryi*) is a federally endangered species and CDFG Species of Special Concern that was historically known to occur within the lagoon. However, according to the March 2006 FEIR, studies conducted between the late 1960's and the early 1990's indicated that this species had been absent from the project area since 1970. The species was re-introduced to this area in 1991 and the areas of the west side of the lagoon both upstream and downstream of the Pacific Coast Highway bridge consistently host gobies year round, with size classes and densities varying seasonally year round. (FEIR, p.6-15).

According to the USFWS Biological Opinion Amendment, dated January 8, 2010, tidewater gobies exhibit some general, but highly variable trends in seasonable population abundance and can be quite high during fall periods. The USFWS "believes that encountering high densities of tidewater gobies could occur at almost any time of the year and that with the appropriate protective measures in place, adverse affects to tidewater gobies should be minimized regardless of project timing." (USFWS Biological Opinion Amendment, dated January 8, 2010).

The applicant is proposing to exclude tidewater gobies and other sensitive aquatic species from the project construction area (the western lagoon complex) through incorporating several protective measures required by the Fish and Wildlife Service and the Los Angeles District Army Corps of Engineers including: (1) pre-construction surveys of the project area conducted by a qualified biologist to determine if listed or proposed species are present, (2) when listed species are present and it is determined that they could be injured or killed by construction activities, a qualified biologist will identify methods for capture, handling, exclusion, and relocation of individuals that could be affected, (3) the project biologist will conduct, monitor, and supervise all capture, handling, exclusion, and relocation activities, (4) ensure sufficient personnel for safe and efficient collection of listed species, (5) Electrofishing may be implemented when all other standard fish capture methods would be ineffective; the project biologist must have appropriate training and experience in electrofishing techniques, (6) individual organisms will be relocated to the shortest distance possible to habitat unaffected by construction activities, (7) within occupied habitat, capture, handling, exclusion and relocation activities will be completed no earlier than 48 hours before construction begins to minimize the probability that listed species will recolonize the affected areas, (8) within temporarily drained stream channel areas, salvage activities will be initiated before or at the same time as stream area draining and completed within a time frame necessary to avoid injury and mortality of listed species, (9) a biologist will continuously monitor in-water activities (e.g. placement of cofferdams, dewatering of isolated areas) for the purpose of removing and relocating any listed species that were not detected or could not be removed and relocated prior to construction, (10) the project biologist will be present at the work site until all listed species have been removed and relocated, and (11) the project biologist will maintain detailed records of the species, numbers, life

stages, and size classes of listed species observed, collected, relocated, injured, and killed, and the date and time of each activity or observation.

Additionally, **Special Condition Four (4)**, Final Dewatering Plan, requires the applicant to incorporate all tidewater goby, southern steelhead, and other sensitive aquatic species dewatering requirements outlined in the agency approvals into a Final Dewatering Plan. Special Condition Four also lists additional special requirements for protection of aquatic species during dewatering including: requiring the applicant to hire a qualified biologist, training sessions for all construction personnel prior to the onset of work, requiring qualified biologist to inspect the dewatered areas and construction site regularly to detect whether any tidewater gobies, southern steelhead or other fish are passing through the berm and/or cofferdam and investigate whether sensitive aquatic species protection measures are being implemented; requiring the qualified biologist to be present when the berms and/or cofferdams are removed and the construction area refilled with water to relocate any fish present in the construction area before completion of removal operations and to ensure successful reintroduction of aquatic habitat in the construction area; post-construction surveys for tidewater gobies, southern steelhead, and other sensitive aquatic species; and a post-project monitoring report documenting the efforts to protect the tidewater goby, southern steelhead, and other sensitive aquatic species and the results.

3. Lagoon Vegetation

The habitat conditions within Malibu Lagoon are primarily a result of elevation and hydrology. Seventeen vegetation communities and habitats were mapped at the lagoon in a 2004 study. The diversity of vegetation is a result of several past restoration efforts. The vegetation communities include: southern willow scrub, atriplex scrub, baccharis scrub, mule fat scrub, Ventura coastal sage scrub, mixed scrub, southern coastal salt marsh, coastal and valley freshwater marsh, brackish marsh, southern sycamore alder riparian woodland, disturbed coastal dunes, non-native grassland, mudflat, sand beach/sandbar, open water and undeveloped land. (FEIR, p. 6-3) The project includes a proposal to salvage and transplant as much of the native vegetation as possible; however, much of the existing vegetation is proposed to be removed and the lagoon will be replanted with local native species. Although native vegetation will be removed, it will be replaced with more appropriate native vegetation communities appropriate to the site that that will establish highly valuable functioning ecosystem in the long-term. In total, the project will serve to increase marsh habitat from approximately 6 acres to approximately 13 acres (FEIR, p.6-19). Total available subtidal and intertidal habitat will increase by approximately 4 acres, or approximately 15% during open lagoon mouth conditions. (FEIR, p.6-19) Thus, the proposed restoration project will serve to increase the area of wetland habitat on site through the restoration and enhancement of existing disturbed areas.

The proposed revegetation plan includes the initial planting and establishment of habitats within the lagoon, as well as ongoing maintenance and management activities to ensure that the restoration habitat objectives are achieved. Vegetation restoration activities include appropriately designed slopes/elevations and sediment types, topsoil

and sediment salvage and management, restoration planting and natural establishment, maintaining unvegetated habitat areas, minimizing habitat loss from seasonal inundation, and long-term habitat maintenance elevations. The applicant has submitted a planting program, including salt panne, low marsh, mid-high marsh, high marsh transitional, and coastal scrub habitats. In order to ensure that the applicant's proposal to revegetate all areas of the site that will be disturbed as a result of the restoration/construction activities is adequately implemented, **Special Condition Six (6)** requires that, prior to issuance of the coastal development permit, the applicant shall submit a final Plant Community Restoration, Monitoring, and Reporting Plan with specifications regarding vegetation plantings, a specific monitoring protocol with performance criteria, and reporting plan to provide detailed information about the status of the habitat restoration plan to be submitted to the Executive Director. Special Condition Six (6) requires the applicant to implement a monitoring program for a period of five years after the completion of initial planting in order to ensure the success of the restoration efforts. The applicant shall submit, upon completion of the initial habitat restoration/enhancement, a written report prepared by the environmental resources specialist, for the review and approval of the Executive Director, documenting the completion of the initial restoration/enhancement work. After initial restoration/enhancement activities are completed, the applicant shall submit, for the review and approval of the Executive Director, on an annual basis for a period of five (5) years, a written monitoring report prepared by the environmental resources specialist (s) indicating the progress and relative success or failure of the restoration/enhancement. This report shall also include further recommendations and requirements for additional restoration/enhancement activities in order for the project to meet the success criteria and performance standards.

Moreover, **Special Condition Six (6)** requires a final detailed report on the habitat restoration/enhancement be submitted by the applicant for the review and approval of the Executive Director. If this report indicates that the habitat restoration/enhancement has, in part, or in whole, been unsuccessful, based on the success criteria and performance standards specified in the monitoring program, the applicant shall submit within 90 days a revised or supplemental habitat restoration/enhancement plan to compensate for those portions of the original plan which did not meet the approved success criteria and performance standards. The Executive shall determine whether implementation of the revised or supplemental plan is consistent with the terms and provisions of the Commission's approval of CDP 4-07-098 or whether the plan will require an amendment to this permit. This revised or supplemental plan shall be implemented by the applicant within 90 days after the plan is approved by the Executive Director, unless the Executive Director either: (1) grants additional time for good cause or (2) determines that an amendment is required. If the Executive Director determines that the revised or supplemental plan requires an amendment to this permit, then the applicant, shall submit a complete application for an amendment to this permit within 90 days after such determination.

Additionally, the adjacent riparian, wetland, and marine environment could be adversely impacted as a result of the implementation of project activities by unintentionally

introducing sediment, debris, or chemicals with hazardous properties. To ensure that construction material, debris, or other waste associated with project activities does not enter the water or sensitive lagoon habitat, **Special Condition Two (2)** requires the applicant to submit final erosion control plans. Additionally**, Special Condition Three (3)** is necessary to define the applicant's responsibility ensure proper erosion control and implement construction best management practices, including disposal of solid debris and construction material unsuitable for placement into the marine environment. As provided under **Special Condition Three (3),** it is the applicant's responsibility to ensure that no construction materials, debris or other waste is placed or stored where it could be subject to erosion and dispersion. Special Condition Three (3) assigns responsibility to the applicant that any and all construction debris, sediment, or trash shall be properly contained and removed from construction areas within 24 hours. Furthermore, **Special Condition (9)** requires that any herbicides, if necessary for revegetation, shall not be used in any open water areas on the project site. Herbicide use in upland areas shall be restricted to the use of Glyphosate Aquamaster™ (previously Rodeo™) herbicide for the elimination of non-native and invasive vegetation for purposes of habitat restoration only.

Moreover, to ensure that excess excavated material is moved off site so as not to contribute to unnecessary landform alternation and wetland fill, inconsistent with Section 30240 of the Coastal Act, the Commission finds it necessary to require the applicant to dispose of all excess excavated material at an appropriate disposal site or to a site that has been approved to accept fill material, as specified in **Special Condition Sixteen (16)**. In addition, **Special Condition Eleven (11)** requires the applicant obtain all other necessary State or Federal permits, including the USFWS, NMFS, Fish and Game, and Regional Water Quality Control Board, that may be necessary for all aspects of the proposed project because the proposed project includes work within within streams, wetland areas, and tidally influenced areas.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Sections 30230, 30231, 30236, and 30240 of the Coastal Act.

F. HAZARDS AND SHORELINE PROCESSES

Section **30253** of the Coastal Act, which is incorporated as part of the Malibu LCP, states in part that new development shall:

> ***(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.***
>
> ***(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs***

In addition, the following LCP policies are applicable in this case:

4.2 All new development shall be sized, designed and sited to minimize risks to life and property from geologic, flood, and fire hazard.

4.5 Applications for new development, where applicable, shall include a geologic/soils/geotechnical study that identifies any geologic hazards affecting the proposed project site, any necessary mitigation measures, and contains a statement that the project site is suitable for the proposed development and that the development will be safe from geologic hazard. Such reports shall be signed by a licensed Certified Engineering Geologist (CEG) or Geotechnical Engineer (GE) and subject to review and approval by the City Geologist.

4.10 New development shall provide adequate drainage and erosion control facilities that convey site drainage in a non-erosive manner in order to minimize hazards resulting from increased runoff, erosion and other hydrologic impacts to streams.

6.29 Cut and fill slopes and other areas disturbed by construction activities shall be landscaped or revegetated at the completion of grading. Landscape plans shall provide that:

- ***Plantings shall be of native, drought-tolerant plant species, and blend with the existing natural vegetation and natural habitats on the site, except as noted below.***
- ***Invasive plant species that tend to supplant native species and natural habitats shall be prohibited.***
- ***Non-invasive ornamental plants and lawn may be permitted in combination with native, drought-tolerant species within the irrigated zone(s) required for fuel modification nearest approved residential structures.***
- ***Lawn shall not be located on any geologically sensitive area such as coastal blufftop.***
- ***Landscaping or revegetation shall provide 90 percent coverage within five years. Landscaping or revegetation that is located within any required fuel modification thinning zone (Zone C, if required by the Los Angeles County Fire Department) shall provide 60 percent coverage within five years.***

Section 30253 of the Coastal Act mandates that new development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard. The purpose of the proposed project is to restore and

The proposed project includes extensive dredging and earthwork in order to recontour the lagoon and create appropriate channels and elevations for the purpose of wetland restoration. The project includes 51,200 cu yds. of excavation and 37,500 cu. yds. fill with 13,700 cu. yds. export. This includes earthwork necessary to create the temporary berm that will be constructed to separate the western lagoon complex from the main lagoon channel. Some of this material will be temporarily stockpiled adjacent to the lagoon in the existing parking lot area. The Commission notes that excavated materials that are placed in stockpiles are subject to increased erosion and potential adverse effects to adjacent streams and wetland areas from sedimentation and increased turbidity. The Commission also notes that additional landform alteration would result if the excavated material were to be retained on site. Therefore, in order to ensure that dredged material will not be permanently stockpiled on site and that erosion and

resedimentation of the streams on site are minimized during any temporary stockpiling activities, **Special Condition Three (3**) also requires that any stockpiled materials shall be located as far from the stream or wetland areas on site as feasible. Temporary erosion control measures (such as sand bag barriers, silt fencing; swales, etc.) shall be implemented in the event that temporary stockpiling of material is required. These temporary erosion control measures shall be monitored and maintained until all stockpiled fill has been removed from the project site. Permanent stockpiling of material on site shall not be allowed. Additionally, **Special Condition Two (2)** requires the applicant to submit final erosion control plans.

In addition, the Commission notes that the proposed development is located in a tidally influenced lagoon habitat subject to potential hazards from flooding. As such, the Commission notes that evidence exists that the project site is subject to potential risks due erosion, and flooding. The Coastal Act recognizes that certain types of development, such as the proposed project, may involve the taking of some risk. Coastal Act policies require the Commission to establish the appropriate degree of risk acceptable for the proposed development and to determine who should assume the risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public, as well as the individual's right to use his property. As such, the Commission finds that due to the unforeseen possibility of erosion and flooding, the applicant shall assume these risks as a condition of approval. Therefore, **Special Condition Twelve (12)** requires the applicant to waive any claim of liability against the Commission for damage to life or property which may occur as a result of the permitted development. The applicant's assumption of risk, will show that the applicant is aware of and appreciates the nature of the hazards which exist on the site, and which may adversely affect the stability or safety of the proposed development.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act Section 30253 and with all relevant policies of the adopted City of Malibu Local Coastal Program.

G. PUBLIC ACCESS AND VISUAL RESOURCES

Coastal Act Section **30210** states that:

> ***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.***

In addition, the City of Malibu certified LUP contains policies that protect public access:

Policy 2.23 states the following:

> ***No new structures or reconstruction shall be permitted on a bluff face, except for stairways or accessways to provide public access to the shoreline or beach or routine repair and maintenance or to replace a structure destroyed by natural disaster.***

Section 30251 of the Coastal Act, which is incorporated as part of the Malibu LCP, requires that visual qualities of coastal areas shall be considered and protected, landform alteration shall be minimized, and where feasible, degraded areas shall be enhanced and restored. Section 30251 of the Coastal Act states that:

> ***The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinated to the character of its setting.***

In addition, the following LCP visual resource policies are applicable in this case:

> ***6.1 The Santa Monica Mountains, including the City, contain scenic areas of regional and national importance. The scenic and visual qualities of these areas shall be protected and, where feasible, enhanced.***
>
> ***6.2 Places on and along public roads, trails, parklands, and beaches that offer scenic vistas are considered public viewing areas. Existing public roads where there are views of the ocean and other scenic areas are considered Scenic Roads. Public parklands and riding and hiking trails which contain public viewing areas are shown on the LUP Park Map. The LUP Public Access Map shows public beach parks and other beach areas accessible to the public that serve as public viewing areas.***
>
> ***6.4 Places on, along, within, or visible from scenic roads, trails, beaches, parklands and state waters that offer scenic vistas of the beach and ocean, coastline, mountains, canyons and other unique natural features are considered Scenic Areas. Scenic Areas do not include inland areas that are largely developed or built out such as residential subdivisions along the coastal terrace, residential development inland of Birdview Avenue and Cliffside Drive on Point Dume, or existing commercial development within the Civic Center and along Pacific Coast Highway east of Malibu Canyon Road.***
>
> ***6.5 New development shall be sited and designed to minimize adverse impacts on scenic areas visible from scenic roads or public viewing areas to the maximum feasible extent. If there is no feasible building site location on the proposed project site where development would not be visible, then the development shall be sited and designed to minimize impacts on scenic areas visible from scenic highways or public viewing areas, through measures including, but not limited to, siting development in the least visible portion of the site, breaking up the mass of new structures, designing structures to blend into the natural hillside setting, restricting the building maximum***

size, reducing maximum height standards, clustering development, minimizing grading, incorporating landscape elements, and where appropriate, berming.

6.6 Avoidance of impacts to visual resources through site selection and design alternatives is the preferred method over landscape screening. Landscape screening, as mitigation of visual impacts shall not substitute for project alternatives including resiting, or reducing the height or bulk of structures.

6.13 New development in areas visible from scenic roads or public viewing areas shall incorporate colors and exterior materials that are compatible with the surrounding landscape. The use of highly reflective materials shall be prohibited.

6.15 Fences, walls, and landscaping shall not block views of scenic areas from scenic roads, parks, beaches, and other public viewing areas.

6.23 Exterior lighting (except traffic lights, navigational lights, and other similar safety lighting) shall be minimized, restricted to low intensity fixtures, shielded, and concealed to the maximum feasible extent so that no light source is directly visible from public viewing areas. Night lighting for sports courts or other private recreational facilities in scenic areas designated for residential use shall be prohibited.

Coastal Act sections 30210 and 30211 mandate that maximum public access and recreational opportunities be provided and that development not interfere with the public's right to access the coast. In addition, Coastal Act Section 30251 requires that visual qualities of coastal areas shall be considered and protected, landform alteration shall be minimized, and where feasible, degraded areas shall be enhanced and restored.

The proposed project will be located adjacent to and within public recreational areas including Malibu Lagoon State Beach and adjacent to Surfrider Beach. This area is a popular area for recreational uses, including nature walks, surfing, sunbathing, and other coastal activities. A major part of the proposed project includes several public access, educational/interpretative improvements. The existing pathway connecting the existing parking lot and landward area to the beach in the middle of the lagoon will be relocated along the western and southern perimeter of the property in order to allow the lagoon habitat to be restored while maintaining existing levels of public beach access. As part of the proposed public access plan, a perimeter wall is proposed along this area adjacent to the existing location of several gates separating the lagoon from the Malibu Colony residential area. The 6 ft. tall, and approximately 880 ft. long masonry wall will extend the length of the southern boundary of the State Park property. It is designed to match the perimeter wall of the historic Adamson House. At this time, there is no proposal for access gateways to be part of the wall.

Additionally, the proposed restoration activities will result in some potential temporary disruption to the public's ability to use the area, including the temporary closure of the public beach access trail during demolition and relocation and potentially portions of the public parking lot during construction. In addition, the Commission notes that the restoration activities are proposed during the summer and fall months when visitor-use of Malibu Lagoon State Beach is high. However, the timing of operations, from June 1st

to October 15th, is necessary in order to allow work to occur with the least biological and hydrological impacts while the lagoon mouth is closed, including avoiding steelhead migrating season as noted above. In order to minimize these temporary impacts to public access, the applicant proposes to maintain beach access on site during construction via an alternate route around the lagoon. The parking lot is expected to be partially open during construction; however, signage will direct the public to alternative parking locations along the street nearby. Therefore, to ensure that maximum access is maintained for the public in the project area consistent with Coastal Act Section 30210, **Special Condition One (1)** requires that all dewatering, grading, and restoration, including any restrictions on public access, be prohibited on any part of the lagoon in the project area on Saturdays and Sundays, thereby removing the potential for construction-related disturbances to conflict with weekend visitor activities. In this way, scheduling operations outside of peak recreational times will serve to minimize potential impacts on public access.

Furthermore, to ensure the safety of recreational users of the project site and to ensure that the interruption to public access of the project site is minimized, the Commission requires the applicant to submit a public access plan, pursuant to **Special Condition Eight (8),** to the Executive Director for review and approval. **Special Condition Ten (10)** requires a description of the methods (including signs, fencing, posting or security guards, etc.) by which safe public access to and around the receiver site shall be maintained during and after restoration activities. Where use of public parking spaces is unavoidable, the minimum number of public parking spaces that are occupied for the staging of equipment, machinery and employee parking shall be used. Additionally, excavated material will be temporarily stockpiled in designated areas. Stockpiled materials be temporarily visible from several public viewing areas including Pacific Coast Highway, but will not result in any significant adverse impacts to public views.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Sections 30210, 30211, and 30251 of the Coastal Act and with all relevant policies of the adopted City of Malibu Local Coastal Program.

H. ARCHAEOLOGICAL RESOURCES

Coastal Act Section 30244 of the Coastal Act states that:

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

In addition, the following Malibu LCP archeological resource policies are applicable in this case:

> ***5.60 New development shall protect and preserve archaeological, historical and paleontological resources from destruction, and shall avoid and minimize impacts to such resources.***

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

5.62 The City should coordinate with appropriate agencies, such as the UCLA Archaeological Center, to identify archaeologically sensitive areas. Such information should be kept confidential to protect archaeological resources.

5.63 Coastal Development Permits for new development within archaeologically sensitive areas shall be conditioned upon the implementation of the appropriate mitigation measures.

5.64 New development on sites identified as archaeologically sensitive shall include on-site monitoring of all grading, excavation and site preparation that involve earth moving operations by a qualified archaeologist(s) and appropriate Native American consultant(s).

The LIP contains an archaeological/cultural resource chapter (chapter 11) that lays out a Cultural Resource Review process that is required for all projects. It is essentially the typical prelim review, phase I inventory, phase II evaluation stuff that is required by State law anyway. In the case of Malibu Lagoon, the process State Parks followed is consistent with the Malibu LIP. The LIP chapter is really long and wordy so you may just want to say that Chapter 11 of the LIP requires that a Cultural Resource Review be conducted for all projects prior to the issuance of a planning approval or development permit to assure that archaeo/cultural resources are protected.

Archaeological resources are significant to an understanding of cultural, environmental, biological, and geological history. The Coastal Act requires the protection of such resources to reduce the potential adverse impacts through the use of reasonable mitigation measures. Degradation of archaeological resources can occur if a project is not properly monitored and managed during earth moving activities and construction. Site preparation can disturb and/or obliterate archaeological materials to such an extent that the information that could have been derived would be permanently lost. In the past, numerous archaeological sites have been destroyed or damaged as a result of development. As a result, the remaining sites, even though often less rich in materials, have become increasingly valuable as a resource. Further, because archaeological sites, if studied collectively, may provide information on subsistence and settlement patterns, the loss of individual sites can reduce the scientific value of the sites which remain intact.

Malibu Lagoon is located within the historic territory of Chumash Native Americans. A historic Chumash village, *Humaliwo*, was located beyond the northeastern side of the lagoon on a small rise overlooking the lagoon at the present site of the Adamson House (a historic residence on the National Register of Historic Places and listed as California Historical Landmark No.966). (FEIR, p.7-3) Various cultural remains have been documented at this site including an extensive shell midden, glass and shell bgeads, fish and whale effigies, as well as more than 200 human burial grounds. The village is documented as archeological site CA-LAN-264, which dates back at least 3,000 years. (FEIR, p. 7-4) The project area was mapped in relation to the known boundaries of CA-

LAN-264 and the archeological site lies immediately east of the main lagoon channel, adjacent to the Adamson House boat house. In order to minimize the potential for adverse effects to cultural resources that could be buried in lagoon sediment adjacent to the site, the proposed restoration activities will be conducted only using hand tools in this area. However, the Commission notes that potential adverse effects to those resources may still occur due to inadvertent disturbance during dredging activity. To ensure that impacts to archaeological resources are minimized, **Special Condition Fifteen (15)** requires that if project activities are undertaken within an area known to have archaeological resources, the applicant agrees to have a qualified archaeologist(s) and appropriate Native American consultant(s) present on-site during all restoration activities which occur within or adjacent to the archaeological sites in the project area. Specifically, if required as described above, the restoration operations on the project site shall be controlled and monitored by the archaeologist(s) with the purpose of locating, recording and collecting any archaeological materials. In the event that any significant archaeological resources are discovered during operations, all work in this area shall be halted and an appropriate data recovery strategy be developed, subject to review and approval of the Executive Director, by the applicant's archaeologist and the native American consultant consistent with CEQA guidelines.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Section 30244 of the Coastal Act.

I. CEQA

Section 13096(a) of the Commission's administrative regulations requires Commission approval of Coastal Development Permit application to be supported by a finding showing the application, as conditioned 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 CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission incorporates its findings on Coastal Act and City of Malibu LCP consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed in detail above, project alternatives and mitigation measures have been considered and incorporated into the project. Five types of mitigation actions include those that are intended to avoid, minimize, rectify, reduce, or compensate for significant impacts of development. Mitigation measures required as part of this coastal development permit include the avoidance of impacts to ESHA through timing and operational constraints limiting the time of work, sediment analysis, biological monitoring, operational constraints relating to grading and project monitoring. The following special conditions are required to assure the project's consistency with Section 13096 of the California Code of Regulations:

Special Conditions 1 through **16**

As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

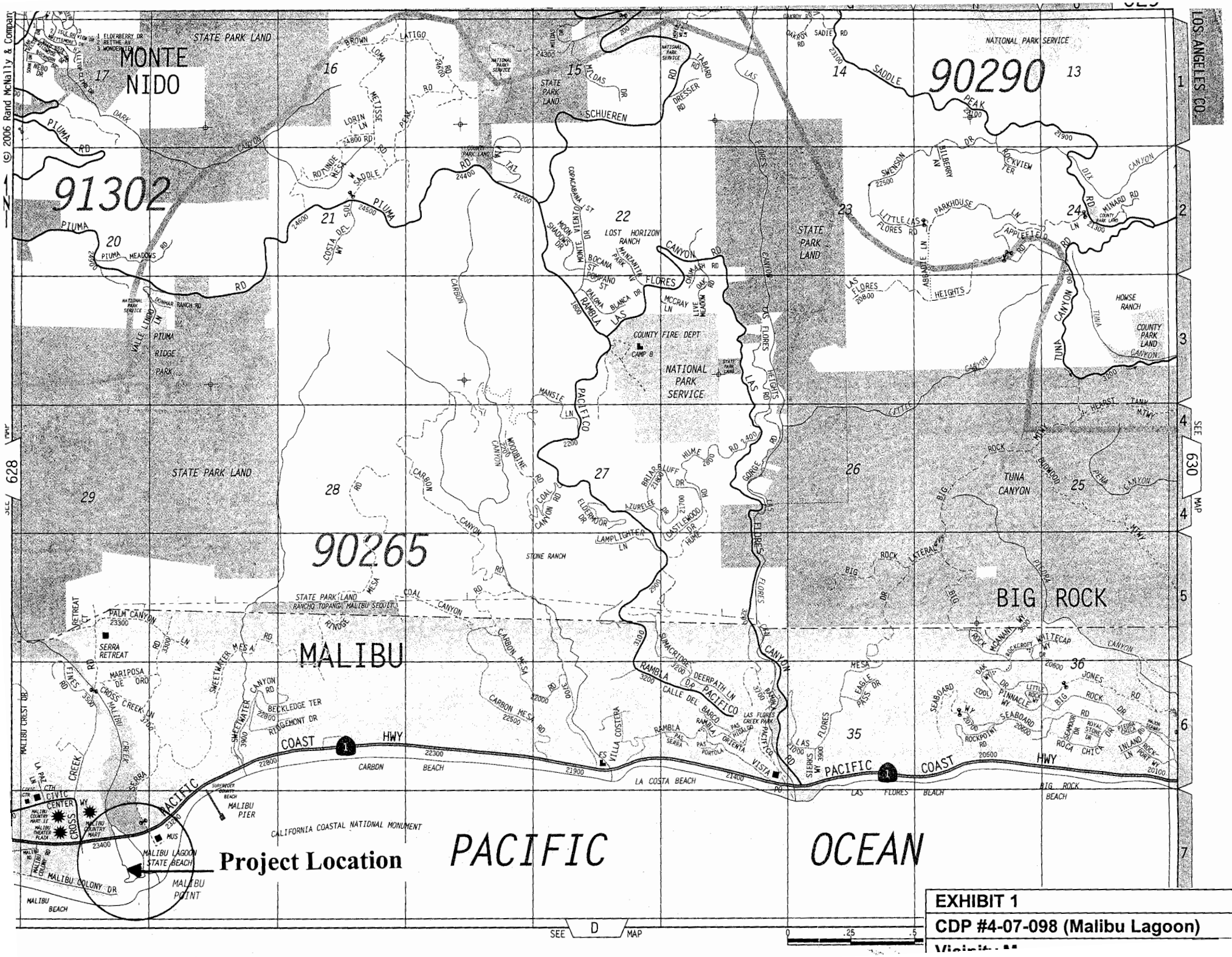

EXHIBIT 1

CDP #4-07-098 (Malibu Lagoon)

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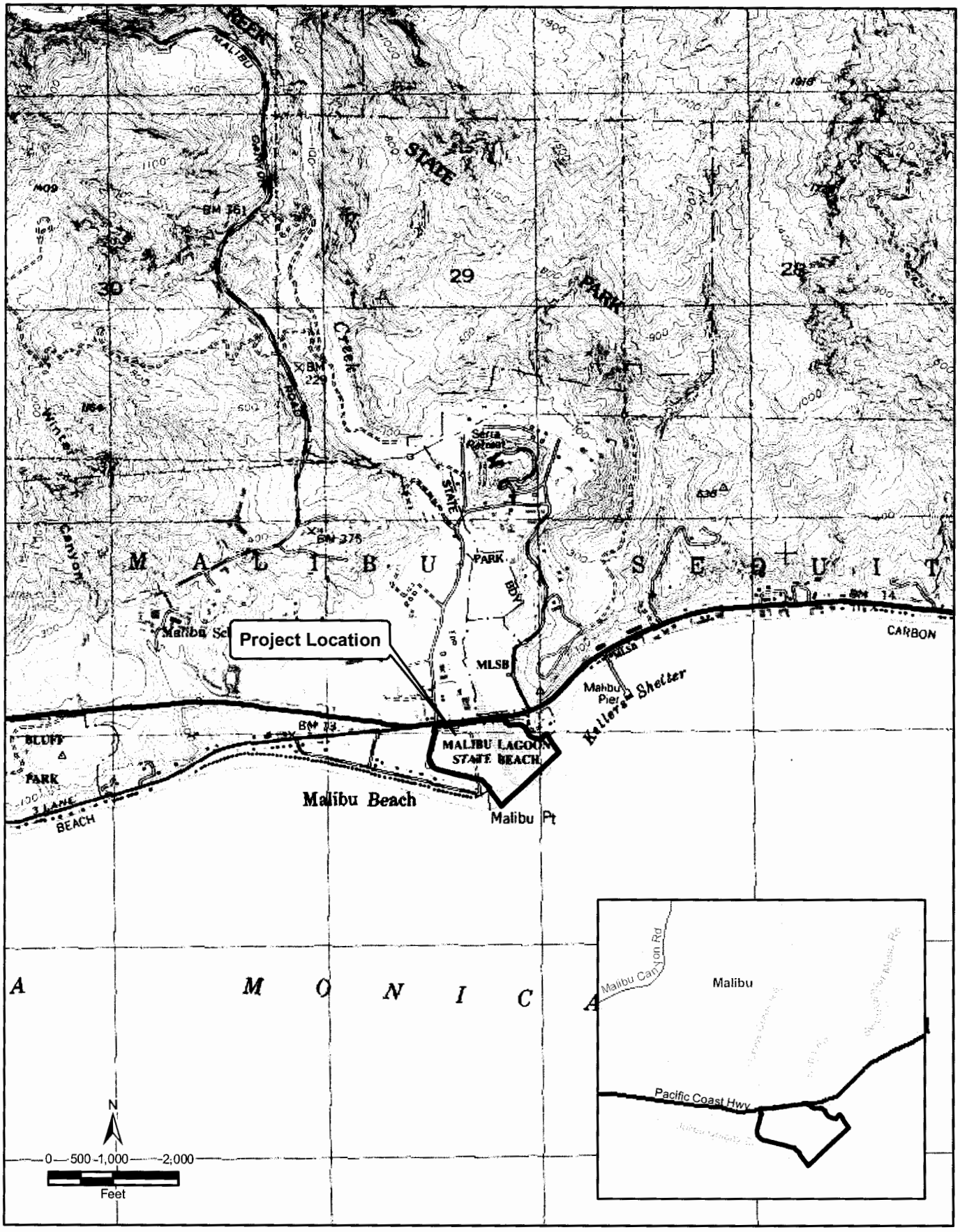


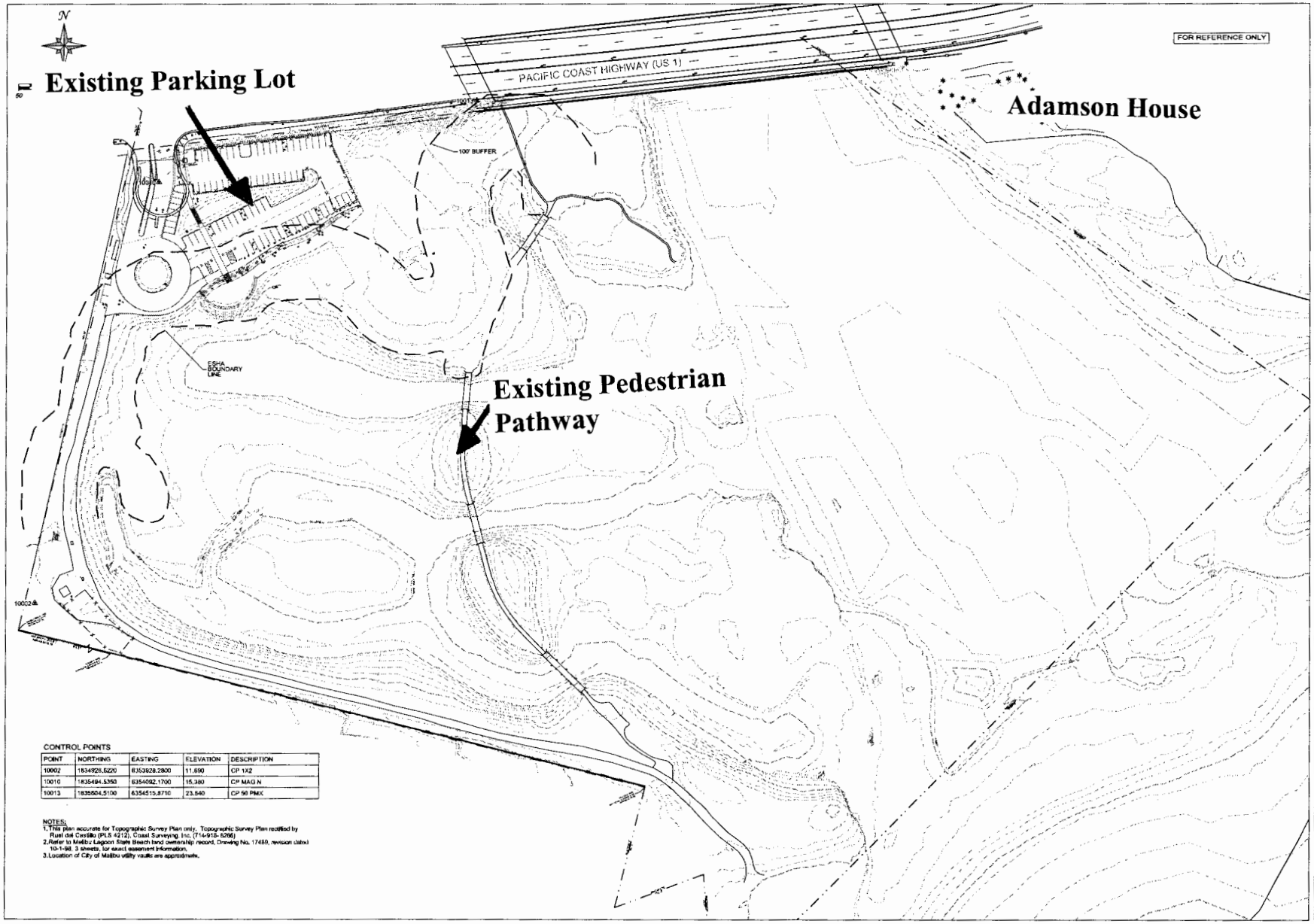
SOURCE: USGS 7.5' Quad., California: Malibu (1982)

Figure 1
Project Location

Jones & Stokes

Malibu Lagoon Restoratio

EXHIBIT 2
CDP #4-07-098 (Malibu Lagoon)
Project Location Map



CONTROL POINTS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
10002	1834926.5220	6353928.2800	11.690	CP 1X2
10010	1835494.5350	6354092.1700	15.380	CP MAG N
10013	1835504.5100	6354515.8710	23.840	CP 50 PMX

NOTES:
1. This plan accurate for Topographic Survey Plan only. Topographic Survey Plan rectified by Ruel del Castillo (PLS 4212), Coast Surveying, Inc. (714-918- 6266)
2. Refer to Malibu Lagoon State Beach land ownership record, Drawing No. 17489, revision date 10-1-98. 3 sheets, for exact easement information.
3. Location of City of Malibu utility vaults are approximate.

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Reviewed by Date

DPR ACCESS COMPLIANCE REVIEW
ACCESSIBILITY SECTION
CERTIFICATION #
Reviewed by Date
ACCESSIBILITY COMPLIANCE AND STATE FIRE MARSHAL SIGNED ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATION, NORTHERN SERVICE CENTER.

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DRAWN:	JS/KT
CHECKED:	SS
DATE:	10/05/07

REVISIONS
DATE

Jones & Stokes
2600 V Street, Sacramento, CA 95818

PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

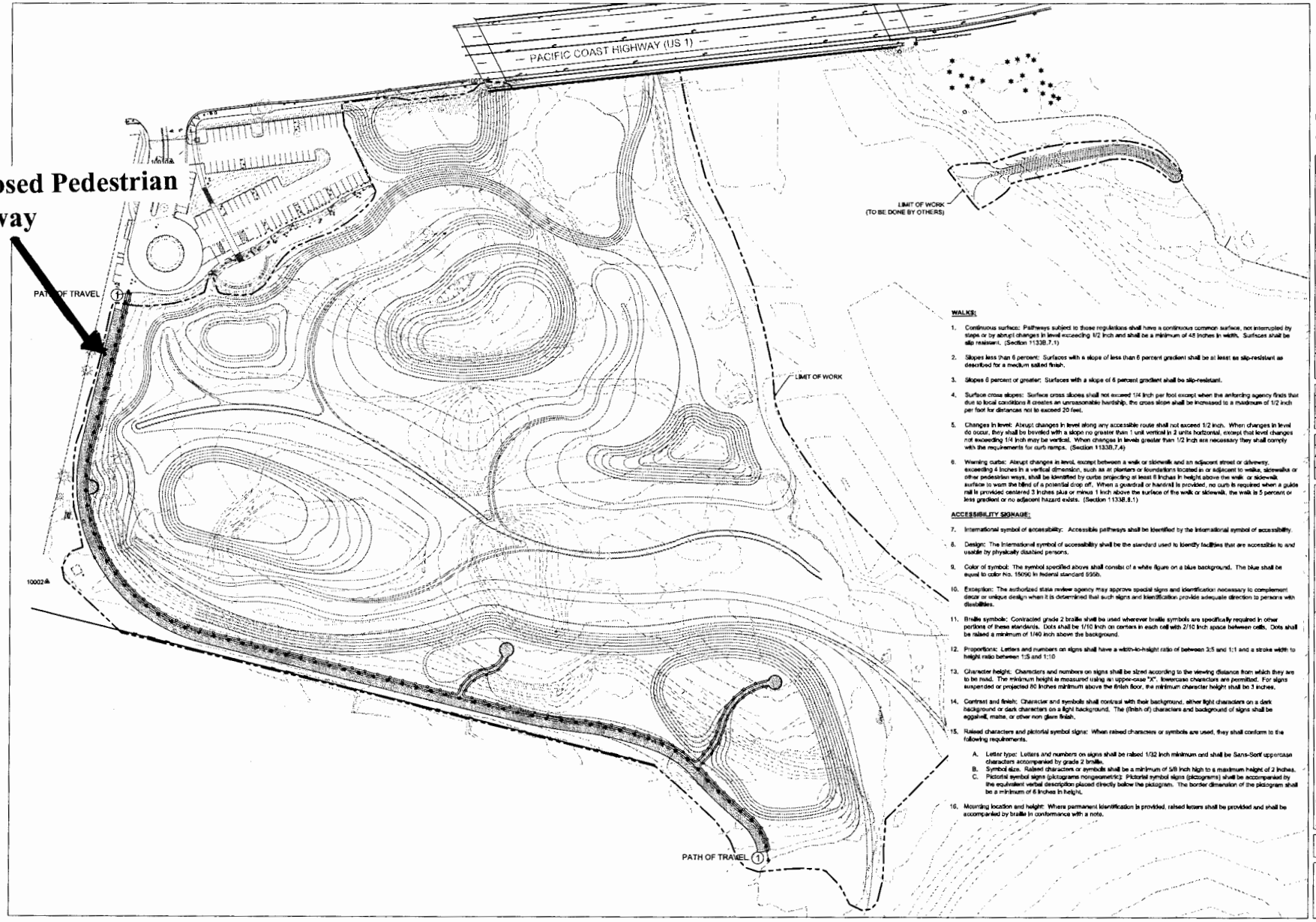
SHEET TITLE: TOPOGRAPHIC SURVEY (FOR REFERENCE ONLY)

ADDRESS: MALIBU LAGOON STATE BEACH
23200 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO.
T-4

SHEET NO.
4
OF
24

EXHIBIT 3
CDP #4-07-098 (Malibu Lagoon)
Existing Site



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San Diego, CA. 92108

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	DATE

Jones & Stokes
2600 V Street, Sacramento, CA 95818

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MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

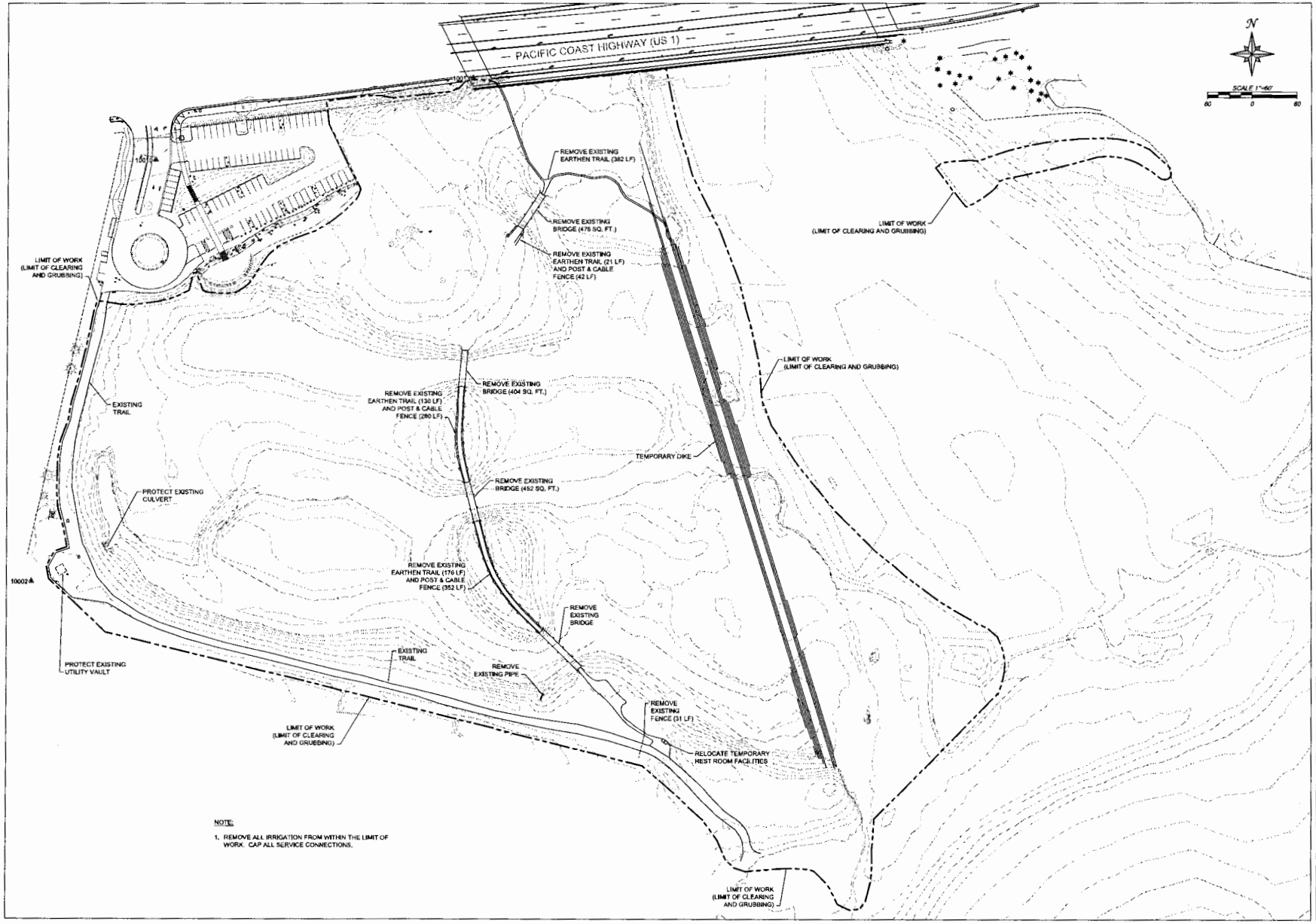
SHEET TITLE: ACCESSIBILITY COMPLIANCE

ADDRESS: MALIBU LAGOON STATE BEACH
23200 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO. T-3

SHEET NO. 3 OF 24

EXHIBIT 4
CDP #4-07-098 (Malibu Lagoon)
Site Plan



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2600 V Street, Sacramento, CA 95818

PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

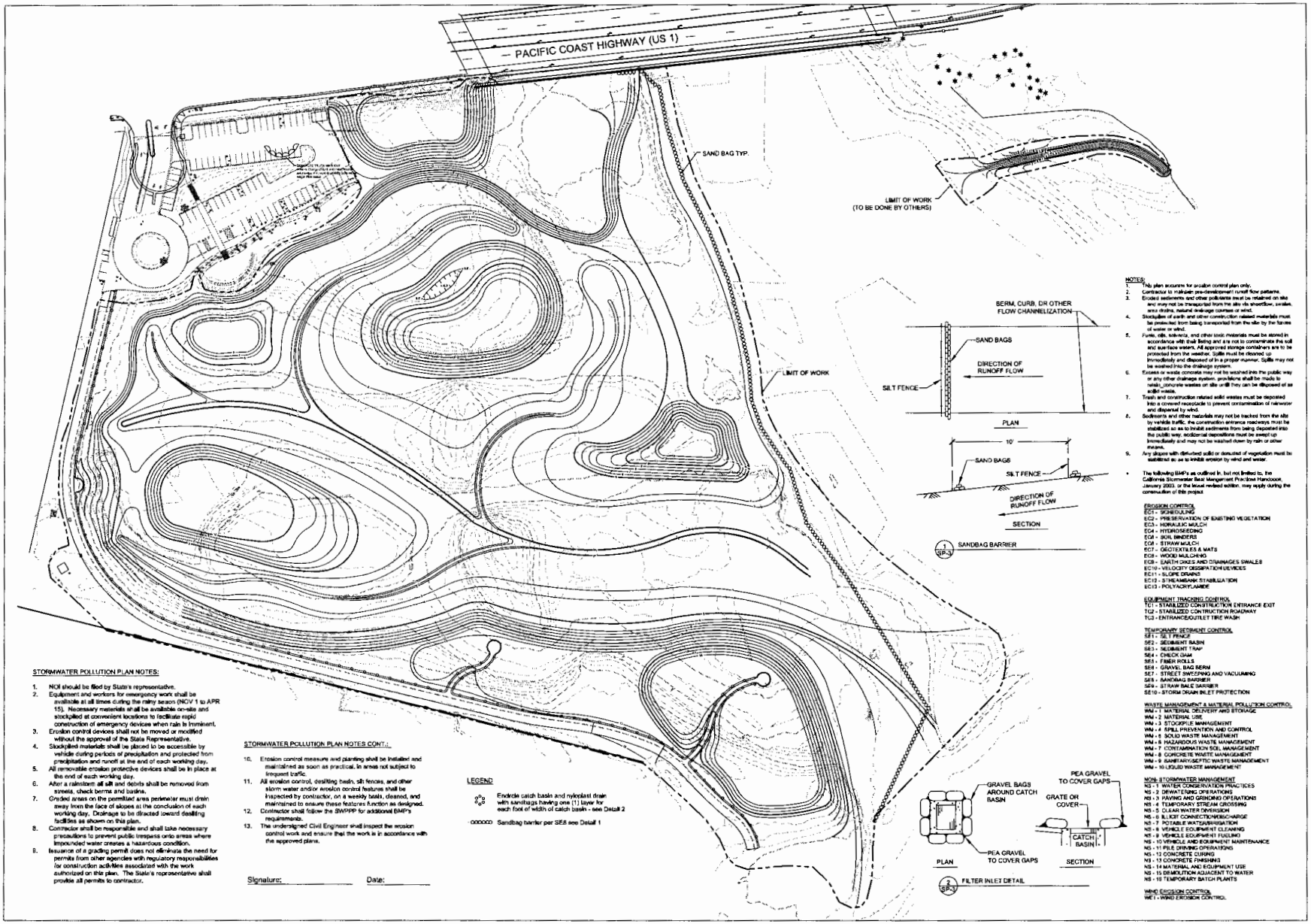
SHEET TITLE: SITE PREPARATION - DEMOLITION PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
23400 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO. SP-2

SHEET NO. 6 OF 24

EXHIBIT 5
CDP #4-07-098 (Malibu Lagoon)
Trail Demolition Plan



STORMWATER POLLUTION PLAN NOTES:

1. NOI should be filed by State's representative.
2. Equipment and workers for emergency work shall be available at all times during the rainy season (NOV 1 to APR 15). Necessary materials shall be available on-site and stockpiled at convenient locations to facilitate rapid construction of emergency devices when rain is imminent.
3. Erosion control devices shall not be moved or modified without the approval of the State Representative.
4. Stockpiled materials shall be placed to be accessible by vehicle during periods of precipitation and protected from precipitation and runoff at the end of each working day.
5. All removable erosion protective devices shall be in place at the end of each working day.
6. After a rainstorm all silt and debris shall be removed from streets, check berms and basins.
7. Graded areas on the permitted area perimeter must drain away from the face of slopes at the conclusion of each working day. Drainage to be directed toward desilting facilities as shown on this plan.
8. Contractor shall be responsible and shall take necessary precautions to prevent public trespass onto areas where impounded water creates a hazardous condition.
9. Issuance of a grading permit does not eliminate the need for permits from other agencies with regulatory responsibilities for construction activities associated with the work authorized on this plan. The State's representative shall provide all permits to contractor.

STORMWATER POLLUTION PLAN NOTES CONT.:

10. Erosion control measure and planting shall be installed and maintained as soon as practical, in areas not subject to frequent traffic.
11. All erosion control, desilting basin, silt fences, and other storm water and/or erosion control features shall be inspected by contractor, on a weekly basis, cleaned, and maintained to ensure these features function as designed.
12. Contractor shall follow the SWPPP for additional BMP's requirements.
13. The undersigned Civil Engineer shall inspect the erosion control work and ensure that the work is in accordance with the approved plans.

Signature: _____ Date: _____

LEGEND

Endrick catch basin and nylaplast drain with sandbags having one (1) layer for each foot of width of catch basin - see Detail 2

Sandbag barrier per SE6 see Detail 1

NOTES:

1. This plan accounts for erosion control plan only.
2. Contractor to maintain pre-development runoff flow patterns.
3. Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses or wind.
4. Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of water or wind.
5. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
6. Excess or washings of concrete may not be washed into the public way or any other drainage system. provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
7. Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
8. Sediments and other materials may not be tracked from the site by vehicle traffic. the construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. accidental depositions must be swept up immediately and may not be washed down by rain or other means.
9. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
10. The following BMP's as outlined in, but not limited to, the California Stormwater Best Management Practices Handbook, January 2003, or the latest revised edition, may apply during the construction of this project

EROSION CONTROL
EC0 - SCHEDULING
EC2 - PRESERVATION OF EXISTING VEGETATION
EC3 - HYDRAULIC MULCH
EC4 - HYDROSEEDING
EC5 - SOIL BINDERS
EC6 - STRAW MULCH
EC7 - GEOTEXTILES & MATS
EC8 - WOOD MULCHING
EC9 - EARTH DIKES AND DRAINAGES SWALES
EC10 - VELOCITY DISSIPATION DEVICES
EC11 - SLOPE DRAINS
EC12 - STREAMBANK STABILLIZATION
EC13 - POLYACRYLAMIDE

EQUIPMENT TRACKING CONTROL
TC1 - STABILIZED CONSTRUCTION ENTRANCE EXIT
TC2 - STABILIZED CONTRUCTION ROADWAY
TC3 - ENTRANCE/OUTLET TIRE WASH

TEMPORARY SEDIMENT CONTROL
SE1 - SILT FENCE
SE2 - SEDIMENT BASIN
SE3 - SEDIMENT TRAP
SE4 - CHECK DAM
SE5 - FIBER ROLLS
SE6 - GRAVEL BAG BERM
SE7 - STREET SWEEPING AND VACUUMING
SE8 - SANDBAG BARRIER
SE9 - STRAW BALE BARRIER
SE10 - STORM DRAIN INLET PROTECTION

WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL
WM - 1 MATERIAL DELIVERY AND STORAGE
WM - 2 MATERIAL USE
WM - 3 STOCKPILE MANAGEMENT
WM - 4 SPILL PREVENTION AND CONTROL
WM - 5 SOLID WASTE MANAGEMENT
WM - 6 HAZARDOUS WASTE MANAGEMENT
WM - 7 CONTAMINATION SOIL MANAGEMENT
WM - 8 CONCRETE WASTE MANAGEMENT
WM - 9 SANITARY/SEPTIC WASTE MANAGEMENT
WM - 10 LIQUID WASTE MANAGEMENT

NON- STORMWATER MANAGEMENT
NS - 1 WATER CONSERVATION PRACTICES
NS - 2 DEWATERING OPERATIONS
NS - 3 PAVING AND GRINDING OPERATIONS
NS - 4 TEMPORARY STREAM CROSSING
NS - 5 CLEAR WATER DIVERSION
NS - 6 ILLICIT CONNECTION/DISCHARGE
NS - 7 POTABLE WATER/IRRIGATION
NS - 8 VEHICLE EQUIPMENT CLEANING
NS - 9 VEHICLE EQUIPMENT FUELING
NS - 10 VEHICLE AND EQUIPMENT MAINTENANCE
NS - 11 PILE DRIVING OPERATIONS
NS - 12 CONCRETE CURING
NS - 13 CONCRETE FINISHING
NS - 14 MATERIAL AND EQUIPMENT USE
NS - 15 DEMOLITION ADJACENT TO WATER
NS - 16 TEMPORARY BATCH PLANTS

WIND EROSION CONTROL
WE1 - WIND EROSION CONTROL

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ACCESSIBILITY SECTION
CERTIFICATION #

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DESIGNED:	SS
DRAWN:	JS/KT
CHECKED:	SS
DATE:	10/05/07

REVISIONS	
	DATE

Jones & Stokes
2600 V Street, Sacramento, CA 95818

PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

SHEET TITLE: SITE PREPARATION - EROSION CONTROL PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
23400 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

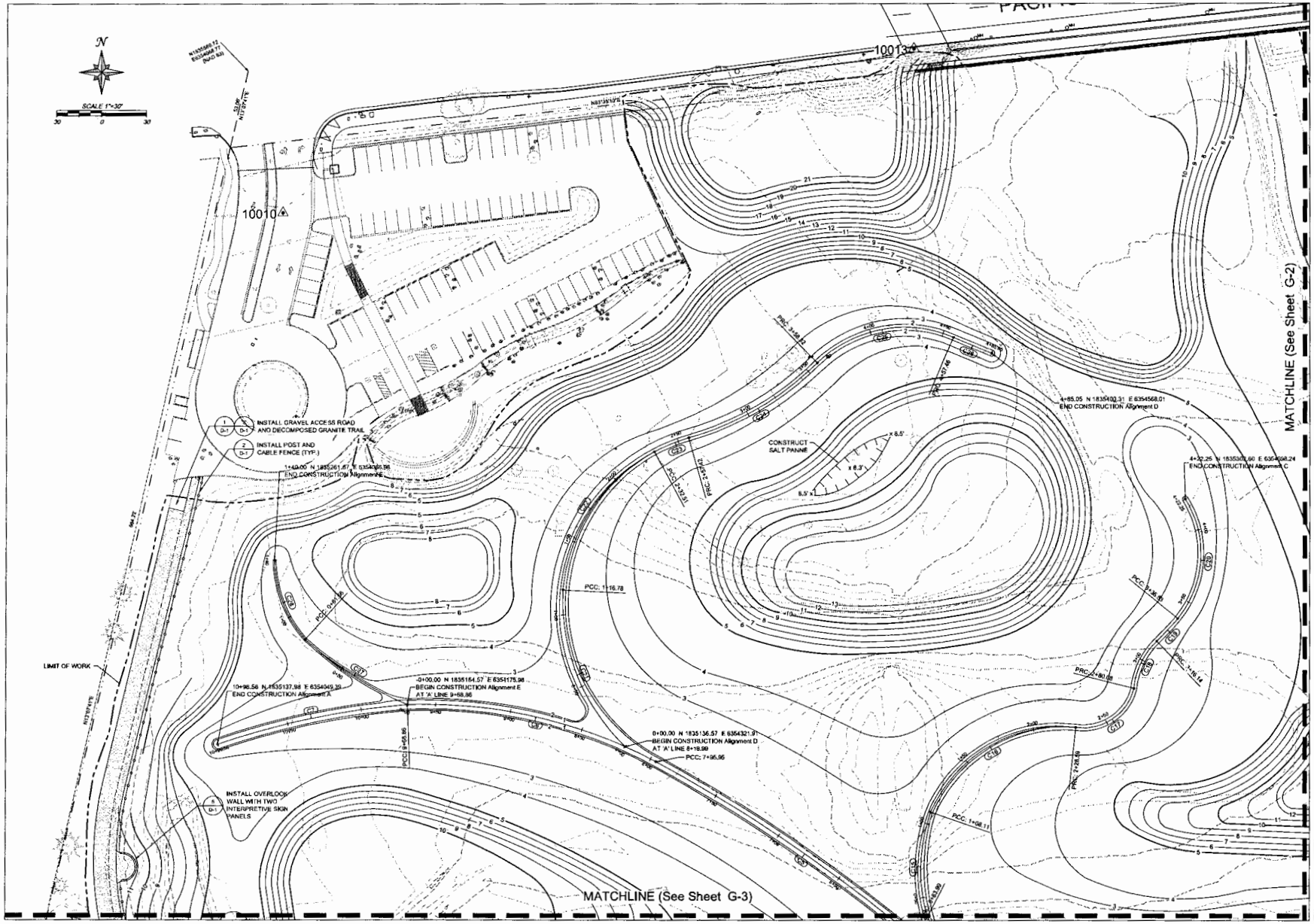
DRAWING NO. SP-3

SHEET NO. 7 OF 24

EXHIBIT 6

CDP #4-07-098 (Malibu Lagoon)

Erosion Control Plan



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San Diego, CA. 92108

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CHECKED:	SS
DATE:	10/05/07

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7600 V Street, Sacramento, CA 95818

PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

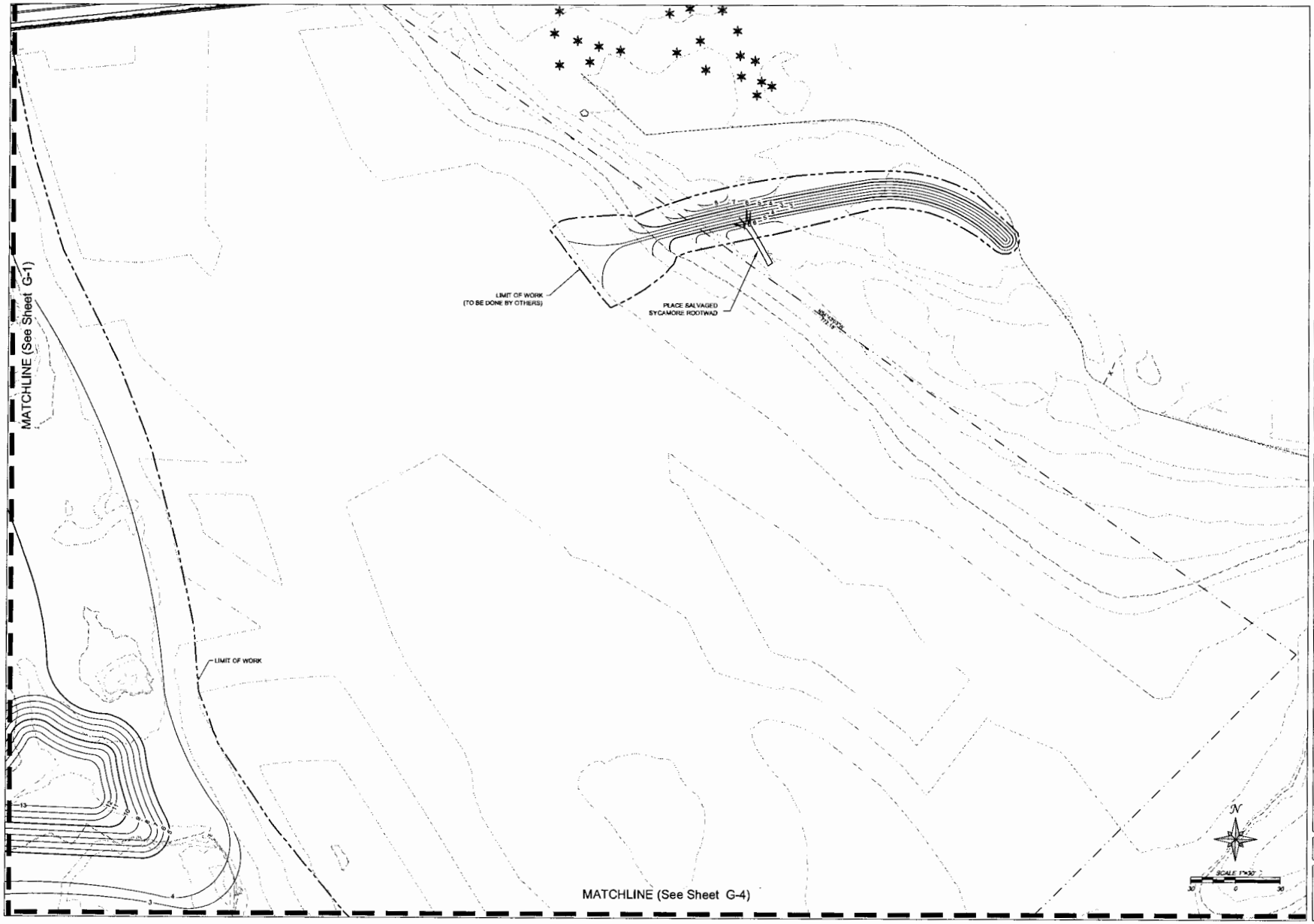
SHEET TITLE: GRADING PLAN

ADDRESS: MALIBU LAGOON/SURFRIDER STATE BEACH
23200 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO. G-1

SHEET NO. 10 OF 24

EXHIBIT 7
CDP #4-07-098 (Malibu Lagoon)
Grading Plan Sheet 1



CALIFORNIA STATE PARKS SINCE 1864

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Southern Service Center
8885 Rio San Diego Dr. # 270
San Diego, CA. 92108

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ACCESSIBILITY SECTION

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REVISIONS

	DATE

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2600 V Street, Sacramento, CA 95818

PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

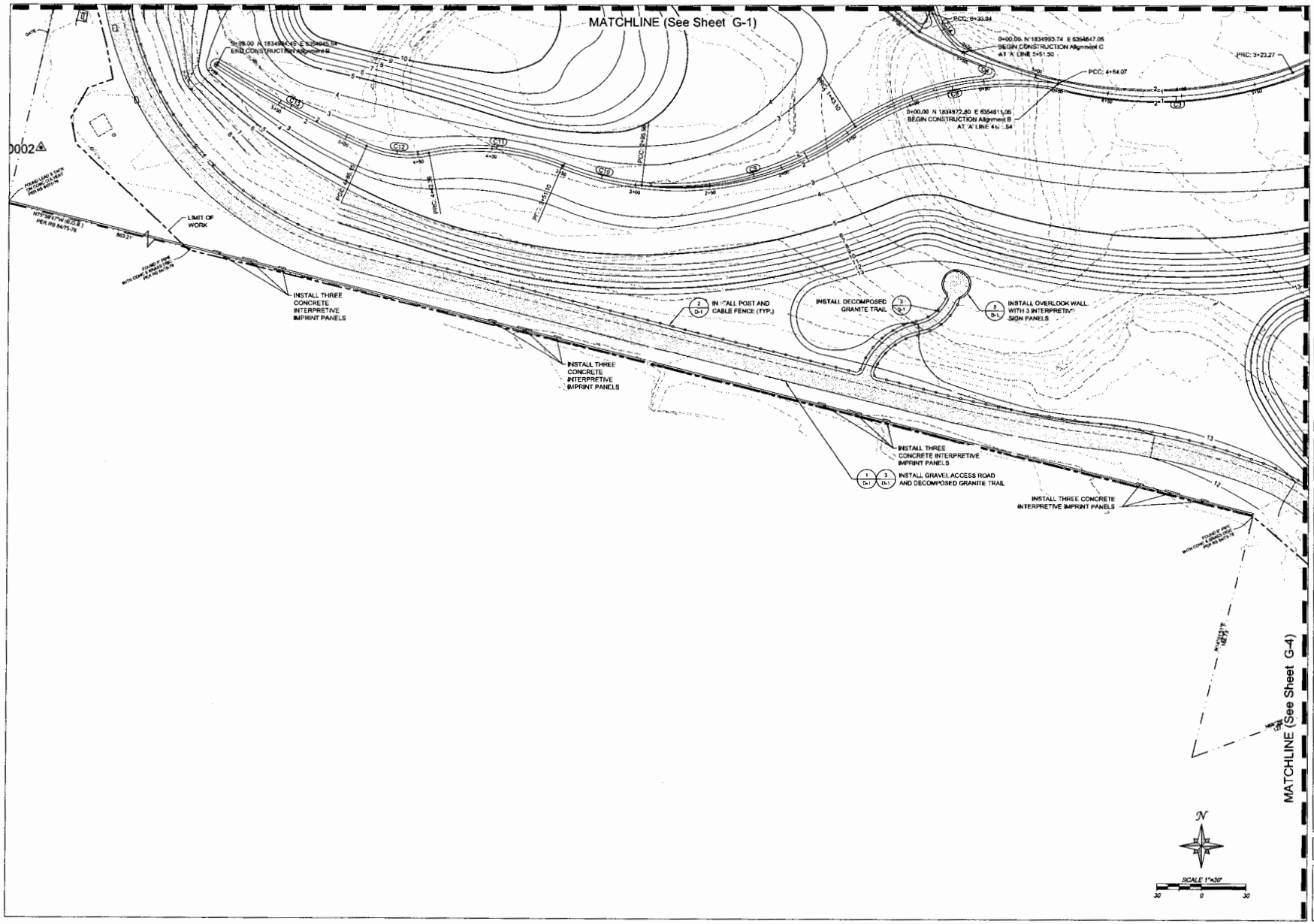
SHEET TITLE: GRADING PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
23200 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO.
G-2

SHEET NO.
10
OF
24

EXHIBIT 8
CDP #4-07-098 (Malibu Lagoon)
Grading Plan Sheet 2



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REVISIONS	DATE

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PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

SHEET TITLE: GRADING PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
23400 PACIFIC COAST HIGHWAY
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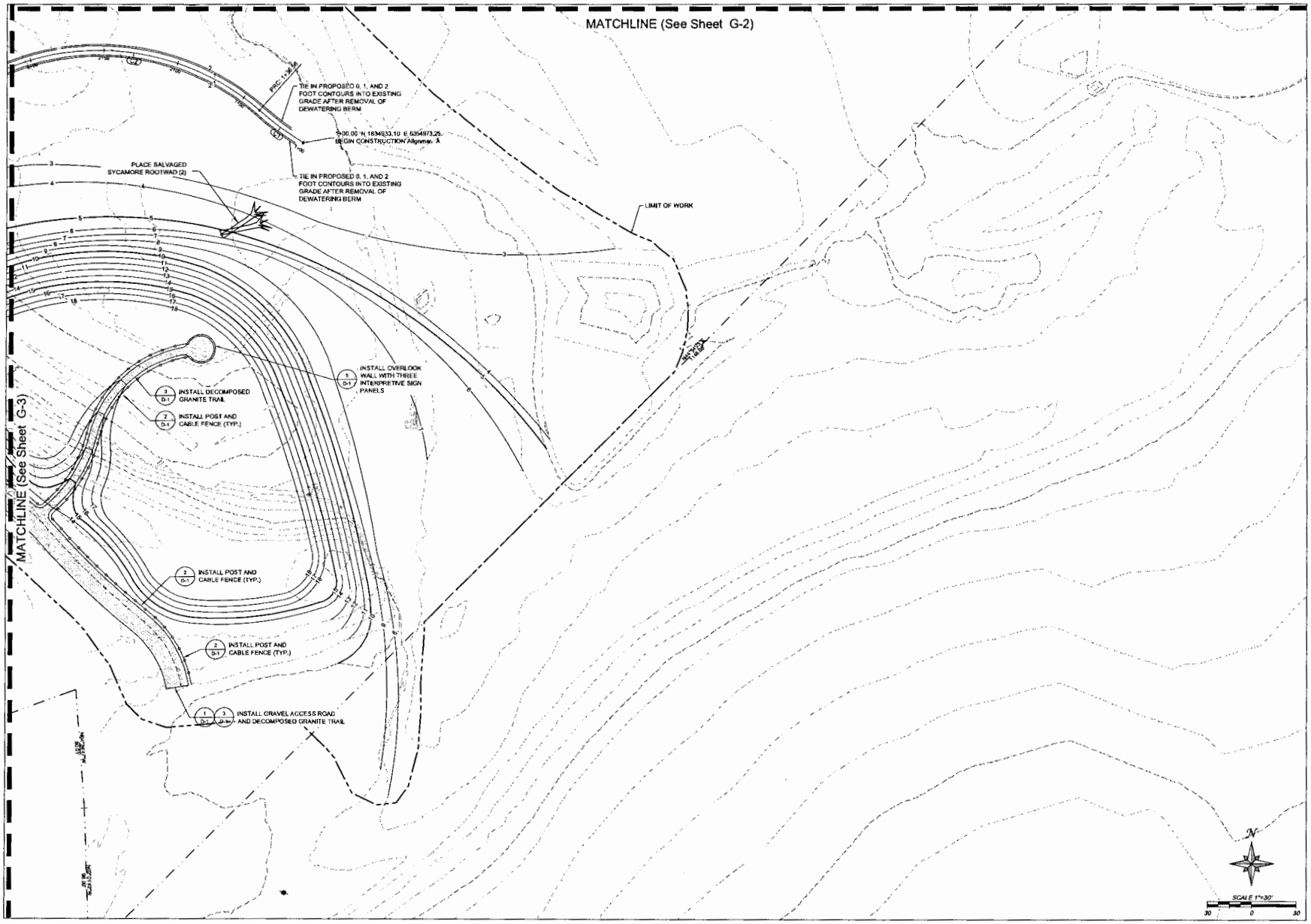
DRAWING NO.
G-3

SHEET NO.
11
OF
24

EXHIBIT 9
CDP #4-07-098 (Malibu Lagoon)
Grading Plan Sheet 3



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MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

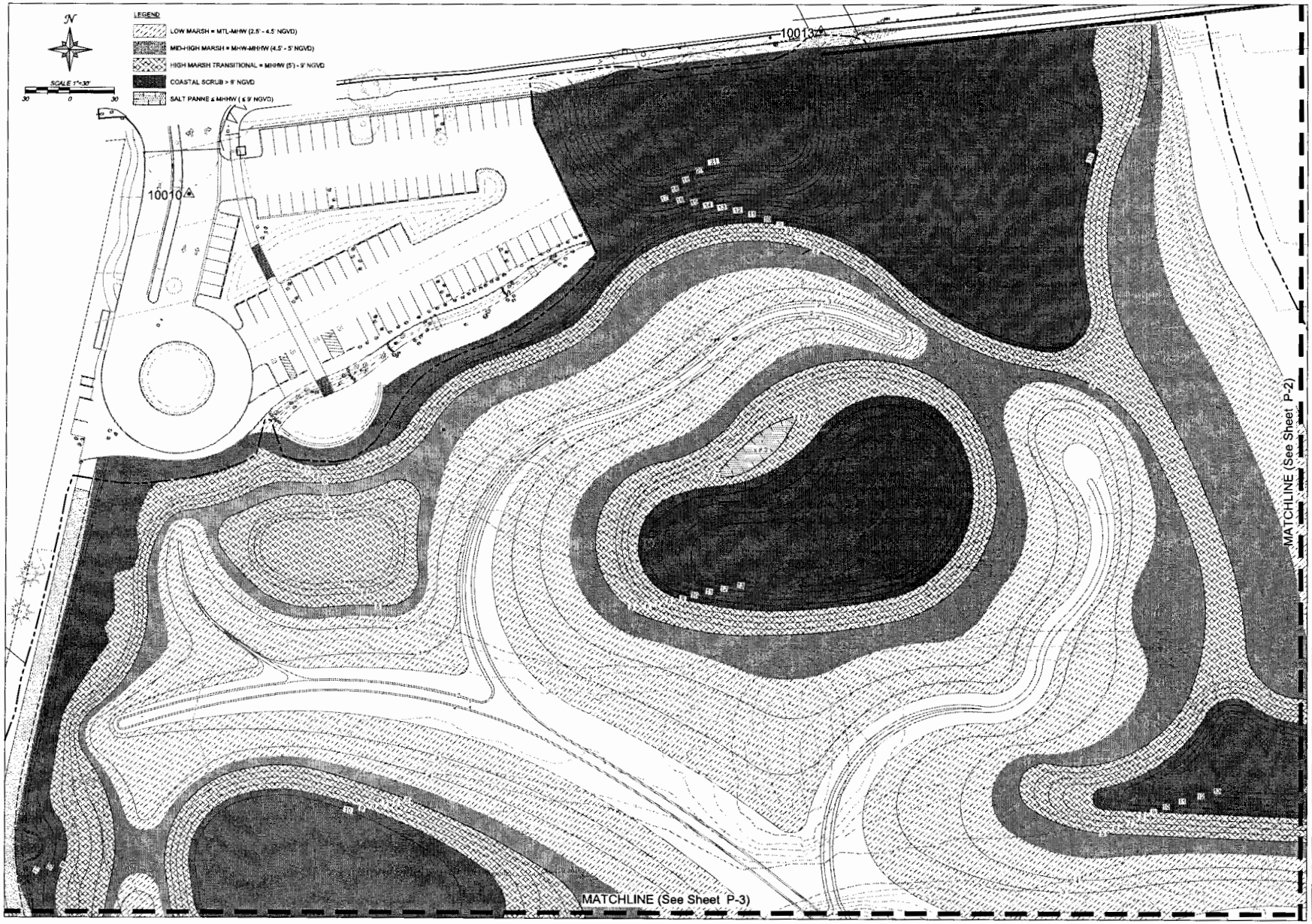
SHEET TITLE: GRADING PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
ADJACENT TO PCH AT SURFRIDER
MALIBU, CA 90265

DRAWING NO.
G-4

SHEET NO.
12
OF
24

EXHIBIT 10
CDP # 4-07-098 (Malibu Lagoon)
Grading Plan Sheet 4



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PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

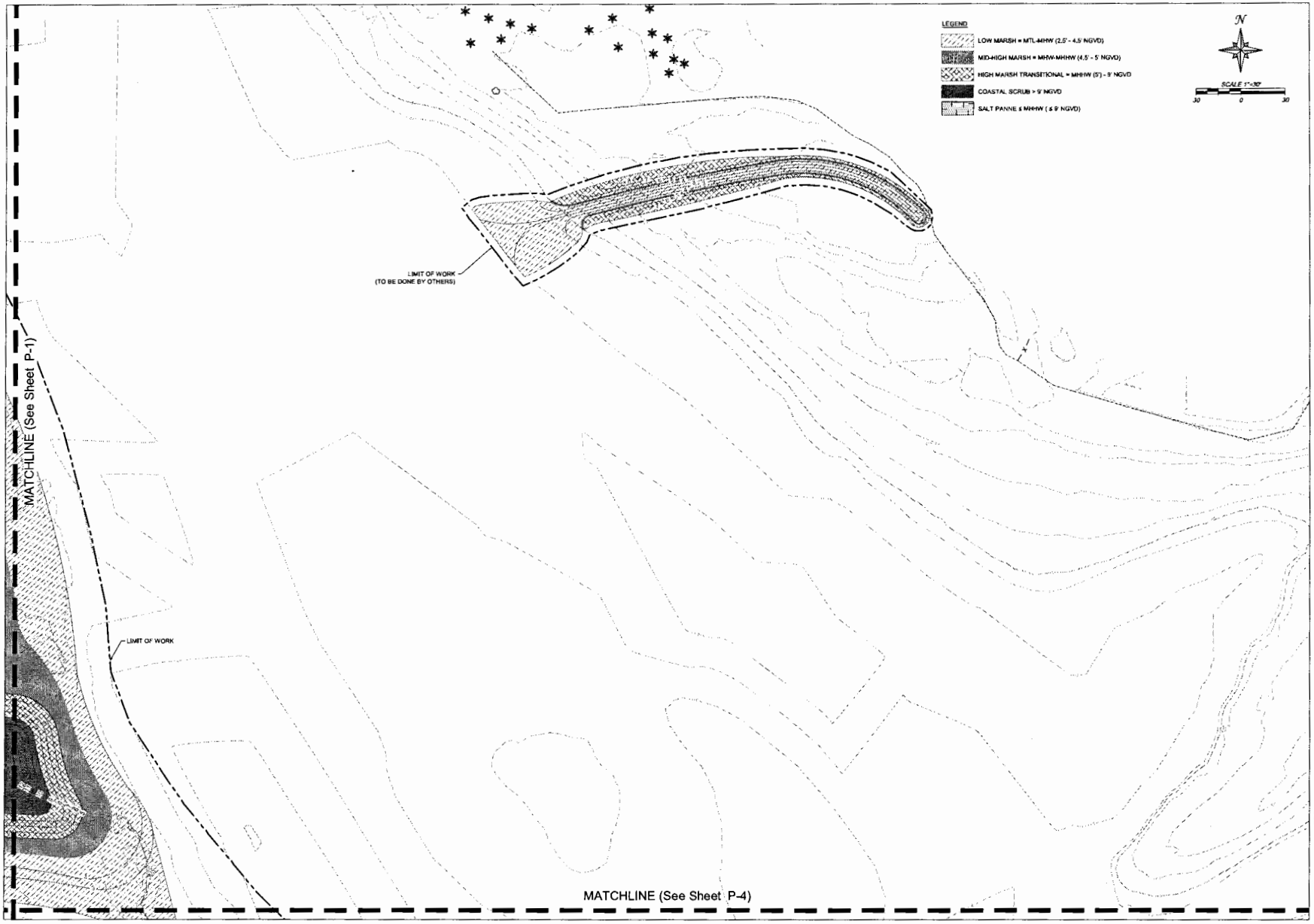
SHEET TITLE: PLANTING PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
23400 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO. P-1

SHEET NO. 13 OF 24

EXHIBIT 11
CDP # 4-07-098 (Malibu Lagoon)
Planting Plan Sheet 1



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	DATE

Jones & Stokes
2600 V Street, Sacramento, CA 95818

PROJECT:
65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

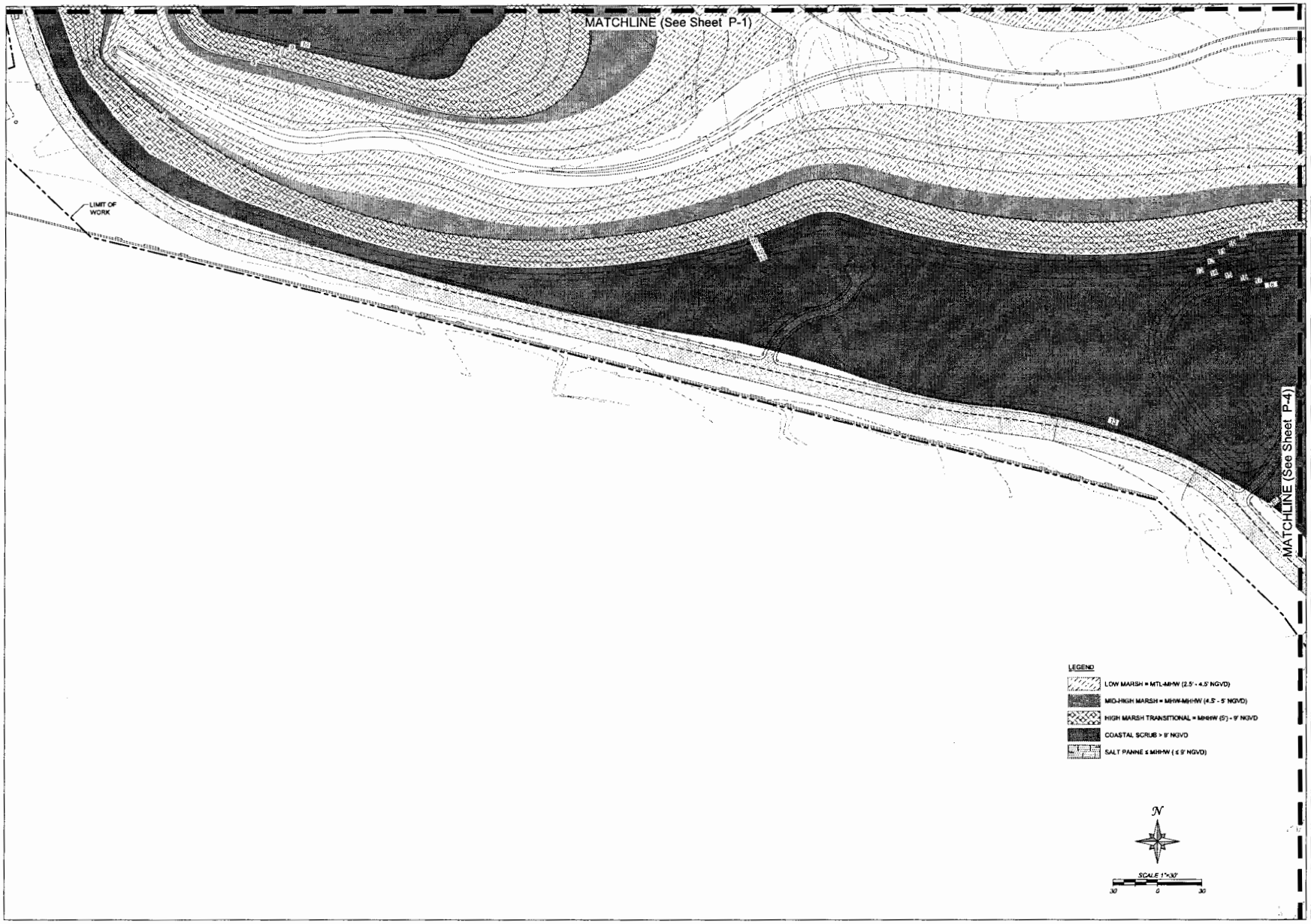
SHEET TITLE:
PLANTING PALN

ADDRESS:
MALIBU LAGOON STATE BEACH
MALIBU LAGOON / SURFRIDER STATE PARK
MALIBU, CA 90265

DRAWING NO.
P-2

SHEET NO.
14
OF
24

EXHIBIT 12
CDP #4-07-098 (Malibu Lagoon)
Planting Plan Sheet 2



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San Diego, CA. 92108

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3500 V Street, Sacramento, CA 95816

PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

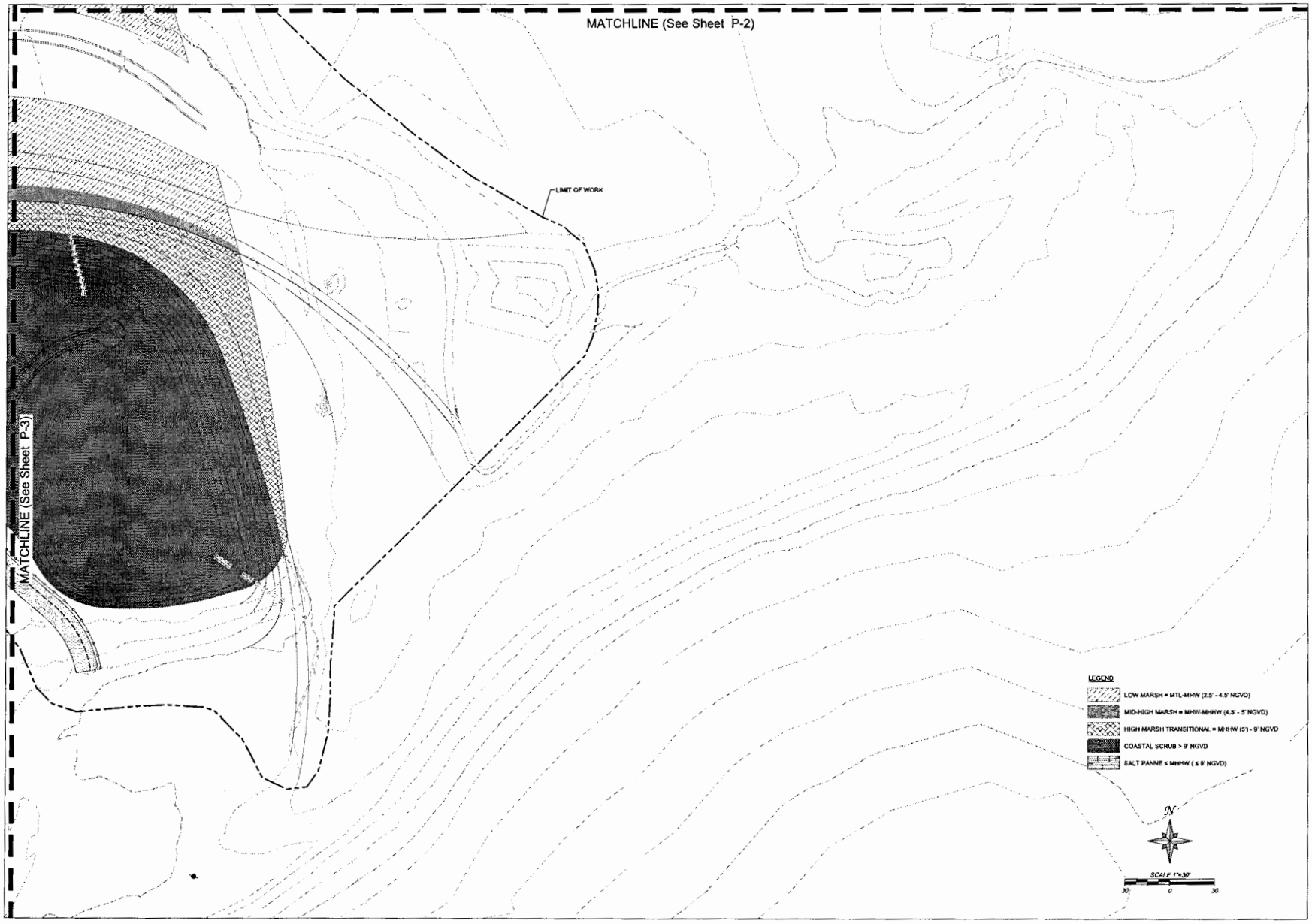
SHEET TITLE: PLANTING PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
ADJACENT TO PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO.
P-3

SHEET NO.
15
OF
24

EXHIBIT 13
CDP #4-07-098 (Malibu Lagoon)
Planting Plan Sheet 3



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2600 V Street, Sacramento, CA 95818

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MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

SHEET TITLE: PLANTING PLAN

ADDRESS: MALIBU LAGOON STATE BEACH
23400 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO.
P-4

SHEET NO.
16
OF
24

EXHIBIT 14
CDP # 4-07-098 (Malibu Lagoon)
Planting Plan Sheet 4

PLANTING PROGRAM

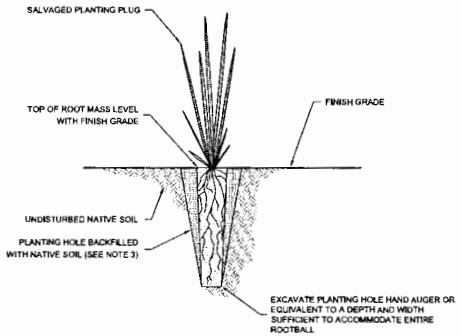
SYMBOL	PLANTING ZONE AND TIDAL RANGE	DETAIL REFERENCE	SPECIES NAME		CONTAINER PLANT		SALVAGED PLUGS
			BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	QUANTITY
	LOW MARSH MTL-MHW (2.5'-4.5' NGVD)	1 D-2	*JUNCUS BALTICUS*	BALTIC RUSH			X
			JUNCUS MEXICANUS	TULE			X
			SCIRPUS ACUTUS	BULRUSH			X
			SCIRPUS CALIFORNICUS	MEXICAN RUSH			X
	MID-HIGH MARSH MHW-MHHW (4.5'-5' NGVD)	1 D-2	*BATIS MARITIMA*	SALTWORT	DEEPOT	X	
			DISTICHLIS SPICATA	SALTGRASS			X
			FRANKENIA SALINA	ALKALAI HEATH			X
		2 D-2	*JAUMEA CARNOSA*	MARSH JAUMEA			X
			SALICORNIA VIRGINICA	PERENNIAL PICKLEWEED			X
	HIGH MARSH TRANSITIONAL MHHW-9' NGVD	1 D-2	*CORDYLANTHUS MARITIMUS*	SALT MARSH BIRD'S BEAK	DEEPOT	X	
			DISTICHLIS SPICATA	SALTGRASS			X
			FRANKENIA SALINA	ALKALAI HEATH			X
			GRINDELIA ROBUSTA	GUM PLANT	DEEPOT	X	
		2 D-2	*JAUMEA CARNOSA*	MARSH JAUMEA			X
			LIMONIUM CALIFORNICUM	SEA LAVENDER	DEEPOT	X	
			MONANTHOSCHLOE LITTORALIS	SHOREGRASS			X
			SUAEDA ESTEROA	ESTUARY SEA BLITE	DEEPOT	X	
	COASTAL SCRUB > 9' NGVD	1 D-2	*ABRONIA UMBELLATA*	PURPLE SAND VERBENA			X
			ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	DEEPOT	X	
			ATRIPLEX TRIANGULARIS	SPEARSCALE	DEEPOT	X	
			BACCHARIS PILULARIS	COYOTE BUSH	DEEPOT	X	
			BACCHARIS SALICIFOLIA	MULE FAT	DEEPOT	X	
		2 D-2	*ISOMERIS ARBOREA*	BLADDERPOD	DEEPOT	X	
			LEYMUS CONDENSATUS	GIANT WILDRYE			X
			LYCIUM CALIFORNICUM	CALIFORNIA BOX THORN	DEEPOT	X	
			MALOSMA LAURINA	LAUREL-LEAF SUMAC	DEEPOT	X	
			RHUS INTEGRIFOLIA	LEMONADEBERRY	DEEPOT	X	
	HORTICULTURAL	2 D-2	*MALOSMA LAURINA*	LAUREL-LEAF SUMAC	DEEPOT	X	
			PLATANUS RACEMOSA	WESTERN SYCAMORE	TREEPOT 4	X	
			RHUS INTEGRIFOLIA	LEMONADEBERRY	DEEPOT	X	
			SAMOBUCAS MEXICANA	MEXICAN ELSERBERRY	TREEPOT 4	X	

NOTE:
1. QUANTITIES AND SPACING TO BE DETERMINED.

SEED MIX

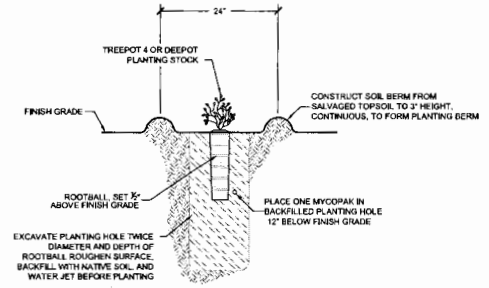
SYMBOL	PLANTING ZONE AND TIDAL RANGE	SPECIES NAME		APPLICATION RATE (PLS/ACRE)
		BOTANICAL NAME	COMMON NAME	
	MID-HIGH MARSH MHW-MHHW (4.5'-5' NGVD)	*SALICORNIA BIGELOVII*	DWARF GLASSWORT	
		SALICORNIA SUBTERMINALIS	PARISH'S GLASSWORT	
	COASTAL SCRUB > 9' NGVD	*CALYSTEGIA SOLDANELLA*	BEACH MORNING GLORY	
		ERIOGONUM FASCICULATUN	CALIFORNIA BUCKWHEAT	
		LUPINUS LONGIFOLIUS	BUSH LUPINE	

NOTE:
1. APPLICATION RATE TO BE DETERMINED.



NOTES:
1. PLANTING HOLES FOR PLUGS SHALL BE DEEP ENOUGH TO ACCOMMODATE ROOTS WITHOUT BENDING ROOTS. PLANTING HOLE SHALL ONLY BE LARGE ENOUGH TO ACCOMMODATE ROOT MASS. DO NOT OVER-EXCAVATE.
2. INSTALL SALVAGED PLUG, BACKFILL PLANTING HOLE WITH NATIVE SOIL, AND TAMP WITHOUT DAMAGING OR CRUSHING ROOTS OR PLANT.
3. ROCKS, TRASH OR DEBRIS FOUND IN EXCAVATED SOIL SHALL NOT BE USED TO BACKFILL THE PLANTING HOLE. BACKFILL SOIL SHALL MAKE GOOD CONTACT WITH THE ROOT MASS, LEAVING NO AIR POCKETS.
4. THOROUGHLY WATER IN EACH PLUG WITHIN 4 HOURS OF PLANT INSTALLATION.
5. REFER TO PLANTING SPECIFICATIONS FOR ADDITIONAL INFORMATION.

1 P-5 SALVAGED PLUG PLANTING
SCALE: 1"=3"



NOTE:
1. REFER TO PLANTING SPECIFICATIONS FOR ADDITIONAL INFORMATION.

2 P-5 CONTAINER PLANTING
SCALE: 1"=1'

CALIFORNIA STATE PARKS SINCE 1864
ACQUISITION & DEVELOPMENT DIVISION
Southern Service Center
8885 Rio San Diego Dr. # 270
San Diego, CA. 92108

CALIFORNIA STATE FIRE MARSHAL APPROVED

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by Date

DPR ACCESS COMPLIANCE REVIEW ACCESSIBILITY SECTION

CERTIFICATION #

Reviewed by Date

ACCESSIBILITY COMPLIANCE AND STATE FIRE MARSHAL SIGNED ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATION, NORTHERN SERVICE CENTER

DESIGNED:	SS
DRAWN:	JS/KT
CHECKED:	SS
DATE:	10/05/07

REVISIONS

	DATE

Jones & Sokes
2600 V Street, Sacramento, CA 95818

PROJECT: 65% SUBMITTAL - NOT FOR CONSTRUCTION
MALIBU LAGOON STATE BEACH
RESTORATION & ENHANCEMENT- PHASE 2

SHEET TITLE: PLANTING PROGRAM AND DETAILS

ADDRESS: MALIBU LAGOON STATE BEACH
23400 PACIFIC COAST HIGHWAY
MALIBU, CA 90265

DRAWING NO. P-5

SHEET NO. 17 OF 24

EXHIBIT 15
CDP # 4-07-098 (Malibu Lagoon)
Plant Pallette

MALIBU LAGOON RESTORATION AND INTERPRETIVE PROGRAM

MALIBU LAGOON INTERPRETIVE MAP

THE STORY BEGINS HERE

(1) Shade Structure
- A shade structure can be built since this is a prime gathering space and discussions occur here on Plankton, Fish anatomy, and the Watershed.
- The shade structure could be designed to help orient everyone to cardinal directions and situate the site within a larger framework.

(2) Watershed Drinking Fountain
- We were thinking that here is where a watershed fountain would be located. It would be both a drinking fountain and a scaled bronze model of the watershed.

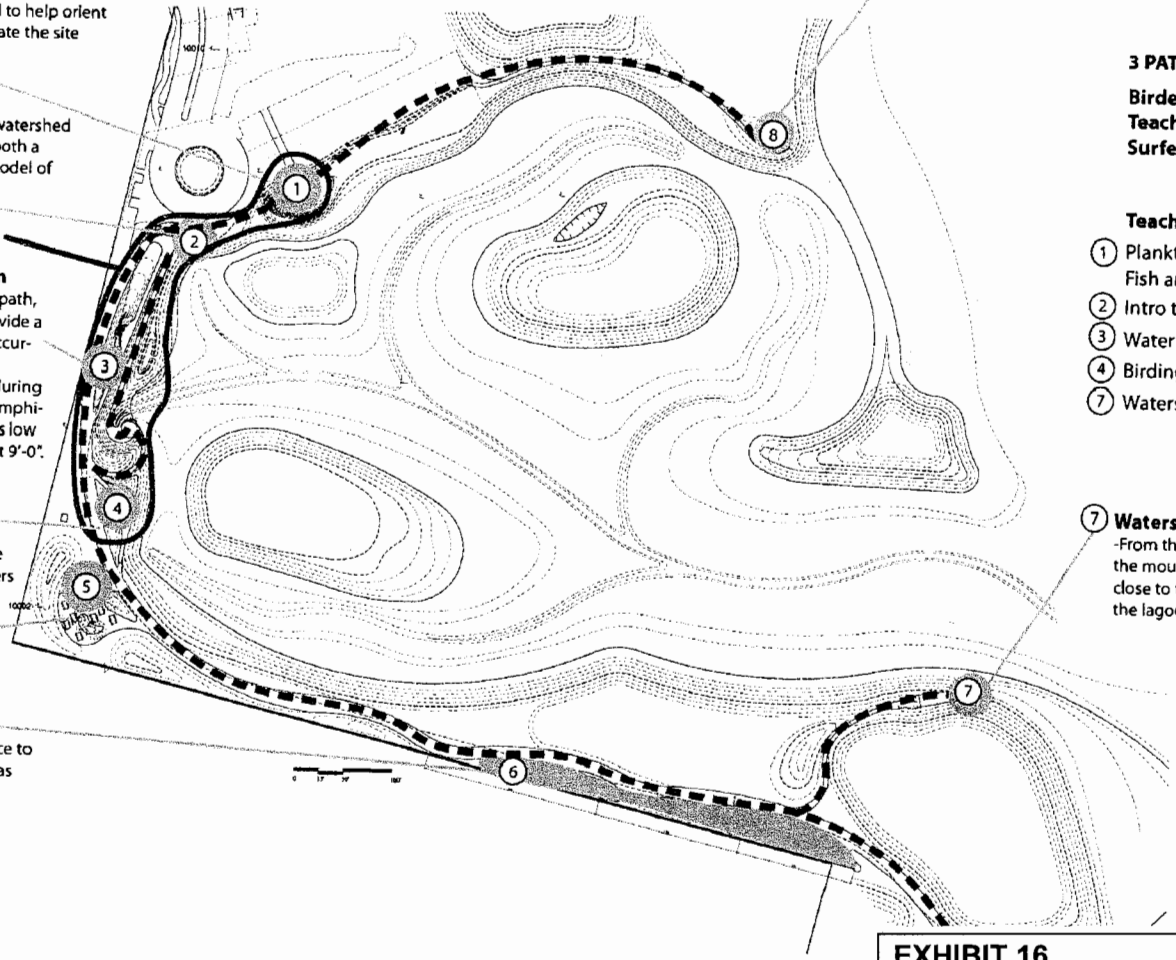
PRIMARY INTERPRETIVE AREA

(3) Summer Clock & Winter Platform
-The first major stop on the interpretive path, this area's terrain can be adjusted to provide a living version of the types of plant life occurring in the high, low marsh.
- The path is designed to fill with water during the summer months. Adjacent are two amphitheaters one for the winter when water is low and one for the summer when water is at 9'-0".

(4) Bird Blind
-This sheltered blind is designed to serve both birders and students. Care would be given to allow birders, students and surfers their space.

(5) Picnic Area
Riparian forest of Sycamore and Oaks

(6) Surfer Wall / Estuary History
-We can use the new wall surface as a place to illuminate the rich history that this area has from the Chumash to Surf culture.



(8) Observation Platform

3 PATHS:

Birder Stalk
Teacher's Path
Surfer PassThru

Teacher's Path:
(1) Plankton Station w/ microscope
Fish anatomy w/ the fish wagon
(2) Intro to Watershed
(3) Water Level
(4) Birding w/ binocuars & walk
(7) Watershed View

(7) Watershed Overlook
-From this location a great view back toward the mountains can be had. Observation is close to the water, but out of the main flow of the lagoon.

EXHIBIT 16
CDP #4-07-098 (Malibu Lagoon)
Public Access and Interpretive Plan

City of Malibu

23815 Stuart Ranch Road · Malibu, California · 90265-4861
Phone (310) 456-2489 · Fax (310) 456-3356 · www.ci.malibu.ca.us

October 25, 2007

Ms. Barbara J. Carey
California Coastal Commission
89 South California Street, Suite 200
Ventura CA 93001

Re: California Coastal Commission CDP No. 4-07-098 – Application by California Department of Parks and Recreation for Phase 2 of Malibu Lagoon Restoration, filed August 10, 2007

Dear Ms. Carey:

It appears that the above-referenced project includes development which would require coastal development permits from both the City of Malibu and the Coastal Commission. The City is in agreement that the project is appropriate for a consolidated coastal development permit review to be conducted by the Coastal Commission, pursuant to Section 30601.3(a) of the Coastal Act, and hereby consents to the consolidated permit action.

Please let me know if there are questions or additional information is needed.

Sincerely,

Stacey Rice, PhD, AICP
Acting Planning Manager

RESOURCE CONSERVATION DISTRICT
OF THE
SANTA MONICA MOUNTAINS

P.O BOX 638 AGOURA HILLS, CALIFORNIA 91376-0638
(818) 597-8627 FAX (818) 597-8630

DANIEL C. PREECE
District Manager

Deanna Christensen
California Coastal Commission
South Central Coast Area
89 S. California Street, Ste. 200
Ventura, CA 93001-2801

RE: Consolidation of Coastal Development Permit Review File No. 4-07-098 Malibu Lagoon Restoration

The Malibu Lagoon restoration project File No. 4-07-098 includes a small area of the project site that is under the jurisdiction of the City of Malibu while the majority of the project site falls within the jurisdiction of the California Coastal Commission. The proposed Malibu Lagoon Restoration Project includes restoration activities that would require a Coastal Development Permit (CDP) from the City of Malibu and the California Coastal Commission. The project team believes that a thorough review of the entire project site will best protect the sensitive resources and make for the best possible restoration project. The Project Team agrees that consolidating the review into a single CDP to be processed by the California Coastal Commission would be the best course of action.

Sincerely,

Mark Abramson
Malibu Lagoon Project Manager

EXHIBIT 18
CDP # 4-07-098 (Malibu Lagoon)
Applicant Consolidation Agreement

FORM FOR DISCLOSURE OF EX-PARTE COMMUNICATIONS

Name or description of the project::	Malibu Lagoon Restoration
Time/Date of communication:	6/30/2010, 1 pm
Location of communication:	22350 Carbon Mesa Rd, Malibu
Person(s) initiating communication:	Shelly Luce, Mark Abramson
Person(s) receiving communication:	Sara Wan
Type of communication:	meeting

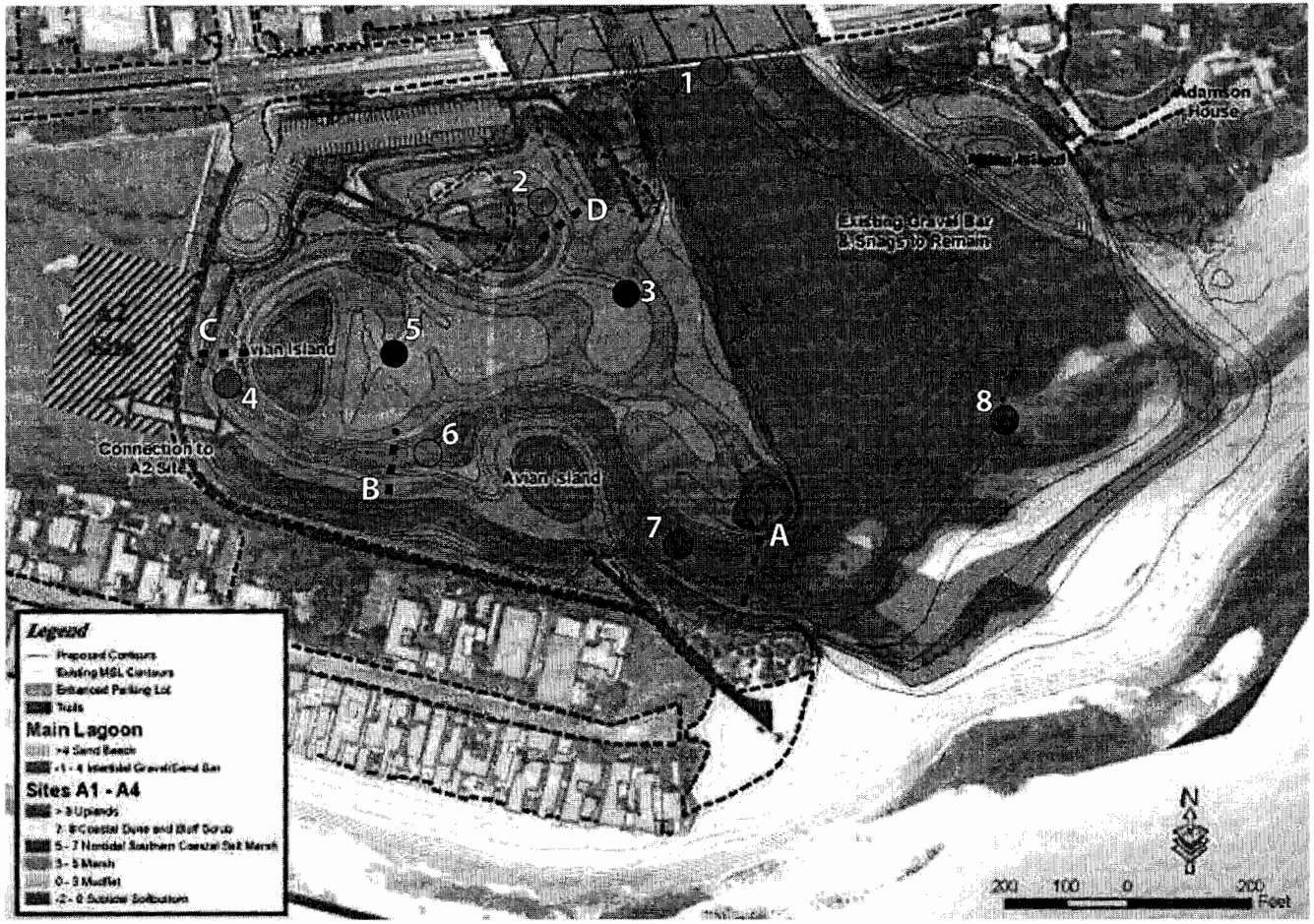
Expect this to be on in August.
Phase I- parking lot is in
Phase II- water quality is main issue. - history back to the '83 initial restoration when they moved the ball fields- resulted in some problems- one of the goals is to increase tidal flushing
EIR was certified in '96- Colony homeowners concerns about the design- they don't want people behind their homes
There will be a path, 2 bird decks, observation decks, picnic tables and a bird blind
will have a masonry wall at read end- 6 ft. Now the homeowners have access through their gates out onto State Park Property- they use this area as their own- throw their trash there, let their dogs out and have planted this as their own gardens- now claim need gates in wall for fire- but should not allow- they have adequate access for escape- main road goes in front of their homes and easy distance to the beach. Fire is always possible but not likely to jump PCH.
There are also 2 pipes form the Colony to the lagoon- there are no permits for them- one of which was recently installed. They claim that State Parks gave them permission but the only permission was in 1997 from a flap gate and nothing from the Coastal Commission.

Date: 7/3/2010

Sara J Wan

Commissioner's Signature

EXHIBIT 19
CDP # 4-07-098 (Malibu Lagoon)
Ex-Parte Comminication Disclosure



MONITORING LOCATION LEGEND

- Cross-section Monitoring, Velocity Measurements, Sediment Sampling
- Vertical Profiles, Surface and Bottom Water Nutrients, Surface Chlorophyll
- YSI 600XLM Continuous Monitoring
- SAV/Percent Algal Cover Monitoring, Benthic Invertebrate Sampling

Malibu Lagoon Restoration Monitoring Project
RESTORED CONDITONS MONITORING LOCATIONS (adapted from Malibu Lagoon Restoration and Enhancer

EXHIBIT 20
CDP # 4-07-098 (Malibu Lagoon)
Sampling Location Map (Approx. Location of Monitoring Sites)