

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800

Th2.6a

Filed: 5/21/08
180th Day: 11/17/08
270th Day: 2/15/09
Staff: D. Christensen
Staff Report: 1/22/09
Hearing Date: 2/5/09



STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-98-024

APPLICANT: Mariposa Land Company

PROJECT LOCATION: 3728 Cross Creek Road, City of Malibu, Los Angeles County

ASSESSOR PARCEL #: 4452-011-036

PROJECT DESCRIPTION: Follow-up to Emergency Coastal Development Permit No. 4-98-024-G for placement of rock rip-rap revetment along an approximately 500 foot long section of the west bank of lower Malibu Creek. The proposed project also includes revegetation of the revetment site to create approximately 0.59 acres of riparian and upland habitat.

MOTION & RESOLUTION: Page 3

STAFF NOTE: ***DUE TO PERMIT STREAMLINING ACT REQUIREMENTS, THE COMMISSION MUST ACT ON THIS PERMIT APPLICATION AT THE FEBRUARY 2009 HEARING.***

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **APPROVAL** of CDP No. 4-98-024 with **thirteen (13) special conditions** relating to assumption of risk, revised bank protection plans, revised revegetation plans, revegetation implementation and monitoring, construction timing and best management practices, dewatering plan, aquatic species protection, required approvals, future alterations, deed restriction, site inspection, condition compliance, and State Parks permission. The proposed project area lies within the City of Malibu, but falls within the Commission's area of retained original permit jurisdiction because development is proposed on lands that are below the mean high tide line and/or on public trust lands. The standard of review for the project is the Chapter 3 policies of the Coastal Act. In addition, the policies of the certified Malibu Local Coastal Program (LCP) serve as guidance.

The applicant is requesting authorization to permanently retain approximately 500 linear feet of rock rip-rap revetment that was installed along the west bank of lower Malibu Creek to protect an existing commercial development from flood waters pursuant to Emergency CDP No. 4-98-024-G. The revetment consists of 1,500 tons of 0.5 to 8-ton granite boulders placed at approximately 1:1 to 1.5:1 (H:V) slope and 14-16 feet in height (2-4 foot toe below stream bed). The applicant is also proposing to revegetate the revetment site by inserting willow bundles among spaces in the rock rip-rap and to plant the slope above the revetment with riparian plant species.

Continued on next page

In past permit actions concerning rock rip-rap in streams, the Commission has approved such development only where there is no feasible alternative to protect existing development and where revegetation with willows and other riparian species is incorporated into the actual construction. Given that the un-engineered revetment proposed here was not designed to accommodate plantings and was constructed at a very steep angle, it is not assured that the applicant's proposed revegetation will ensure that water quality, stability, scenic quality, and habitat value of the bank are all protected, consistent with the requirements of Chapter 3. It has not been demonstrated that the proposed project is the least environmentally damaging alternative or that it is sited and designed to be consistent with the Chapter 3 requirements for protection of habitat and scenic values of the riparian stream corridor of Malibu Creek.

However, an alternative has been identified that would function to adequately protect existing development in the floodplain as well as render the project consistent with the Chapter 3 protections for Malibu Creek ESHA, water quality, and visual resources. If the proposed project were revised, pursuant to the recommended special conditions, to re-construct the rock slope protection at a less steep slope in conjunction with incorporating filter fabric and willow stakes into the reconstructed rip rap design, the proposed project can be found consistent with Section 30230, 30231, 30236, 30251, 30253, and 30240 of the Coastal Act and the relevant policies of the Malibu LCP, which the Commission uses as guidance.

SUBSTANTIVE FILE DOCUMENTS: Certified City of Malibu LCP; City of Malibu Approval-in-Concept, dated June 28, 2007; Emergency Coastal Development Permit No. 4-98-024-G (Mariposa Land Company); U.S. Army Corps of Engineers Regional General Permit No. 98-00315-AOA for emergency placement of rip-rap revetment, issued February 13, 1998; U.S. Army Corps of Engineers Jurisdictional Determination letter for the proposed vegetation restoration plan, dated March 6, 2008; Notification of Emergency Streambed Alteration Work for revetment sent to California Department of Fish & Game February 19, 1998 (no agency response); California Department of Fish & Game letter stating statutory deadline had lapsed to issue an agreement regarding Streambed Alteration Notification No. 1600-2005-0503-R5 (vegetation restoration plan), dated January 13, 2008; "Emergency Regional General Permit No. 52," Regional Water Quality Control Board, Los Angeles Region; "City of Malibu Initial Study 03-003 and Mitigated Negative Declaration 04-002, dated July 7, 2005; "Lower Malibu Creek and Lagoon Resource Enhancement and Management Plan," by Richard Ambrose and Anthony Orme, dated May 2000; "Preliminary Engineering Design Study for Lower Malibu Creek Emergency Revetment," prepared by Pacific Advanced Civil Engineering Inc. (PACE), dated March 28, 2006; "Addendum to the Preliminary Engineering Design Study for Lower Malibu Creek Emergency Revetment," prepared by PACE, dated May 25, 2007; "Response to Comments" Memo, by PACE, dated October 18, 2007; "Evaluation of Biological Impacts of Bank Stabilization Project," prepared by Hunt & Associates Consulting Biologists, dated September 5, 2000; "Floodplain Analysis for Rock Levee along Malibu Creek," prepared by Land Design Consultants Inc., dated September 23, 1998; "Vegetation Restoration Plan," prepared by Impact Sciences Inc., dated August 2007; January 9, 2009 Letter from Impacts Sciences, Inc. Regarding Modification to the "Vegetation Restoration Plan"; Riprap Installation Letter by Roy Brothers' Drilling Company, dated January 7, 2009; Memorandum by Commission Ecologist Dr. Jonna Engel, dated January 9, 2009; Memorandum by Commission Coastal Engineer Lesley Ewing, dated January 7, 2009.

I. JURISDICTION AND STANDARD OF REVIEW

The proposed project area lies within the City of Malibu, but falls within the Commission's area of retained original permit jurisdiction because development is proposed on lands that are below the mean high tide line and/or on public trust lands. The standard of review for the project is the Chapter 3 policies of the Coastal Act. In addition, the policies of the certified Malibu Local Coastal Program (LCP) serve as guidance.

II. STAFF RECOMMENDATION

MOTION: *I move that the Commission approve Coastal Development Permit No. 4-98-024 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 Coastal Development Permit No. 4-98-024 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 will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. 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.

III. 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 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.

IV. SPECIAL CONDITIONS

1. **Assumption of Risk**

By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from 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 arising from any injury or damage due to such hazards.

2. **Revised Bank Protection Plans**

Prior to issuance of the Coastal Development Permit, the applicant shall submit, for the review and approval of the Executive Director, two (2) sets of revised rock slope protection/grading plans with representative cross-sections. The plans shall be prepared and stamped by a registered engineer. The revised plans shall demonstrate the following:

1. That the rock slope protection has been re-engineered to be laid back to a maximum 2:1 (H:V) slope. However, the toe of the slope protection shall not extend further into the creek than currently exists. If determined feasible, the footing portion of the rock slope protection may remain in place and only the upper portion of the rock shall be laid back to a maximum 2:1 slope.
2. That geotextile filter fabric and live willow stakes are incorporated into the re-engineered rock slope protection during construction, consistent with the Revised Revegetation Plan required as part of **Special Condition No. 3** below.

The permittee shall undertake the development in accordance with the final approved plans. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission approved

amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

3. Revised Revegetation Plan

Prior to issuance of the Coastal Development Permit, the applicant shall submit, for the review and approval of the Executive Director, a revised "Vegetation Restoration Plan," that incorporates the following changes.

1. The "Vegetation Restoration Plan" (by Impact Sciences Inc., dated 8/2007 and amended 1/2009) shall be revised pursuant to the approved rock slope protection plan required by **Special Condition 2** above. The revised plan shall indicate that geotextile filter fabric with holes for willow plantings will be placed on the graded slope of the bank prior to rock placement to stabilize the soil. As the rock revetment is being installed, live willow stakes shall be inserted among the voids, making sure the stakes penetrate the fabric filter and underlying soil. Interstitial spaces in the rip rap shall be partially filled with a fine gravel, sand, and soil combination. In addition, mugwort (*Artemisia douglasiana*) and yerba mansa (*Anemopsis californica*) shall be added to the plant palatte for revegetation of the revetment.

The permittee shall undertake development in accordance with the approved final plan. 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 Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. Revegetation Implementation and Monitoring

By acceptance of this permit, the applicant agrees to implement the approved "Vegetation Restoration Plan" (Impact Sciences Inc.) that is revised per Special Condition No. 3 above. The plan shall be carried out under the direction of qualified biologist or resource specialist. Successful site restoration shall be determined if the revegetation of native plant species on site is adequate to provide 90% coverage by the end of the five (5) year monitoring period and is able to survive without additional outside inputs, such as supplemental irrigation.

The applicant shall submit, upon completion of the initial planting, a written report prepared by a qualified resource specialist, for the review and approval of the Executive Director, documenting the completion of the initial planting/revegetation 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 planting/revegetation work.

Five years from the initial planting completion date, the applicant shall submit for the review and approval of the Executive Director, a Revegetation Monitoring Report, prepared by a qualified biologist or resource specialist, that certifies whether the on-site revegetation is in conformance with the revegetation plan approved pursuant to Special Condition 3 and has been implemented consistent with, and restoration has been

successful as defined by, this Special Condition. The monitoring report shall include photographic documentation of plant species and plant coverage.

If the monitoring report indicates the revegetation is not in conformance with or has failed to meet the performance standards specified in this condition or in the revegetation plan approved pursuant to this permit, the applicant, or successors in interest, shall submit a revised or supplemental revegetation plan for the review and approval of the Executive Director. The revised revegetation plan must be prepared by a qualified biologist or resource specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan. The approved revised revegetation plan shall then be immediately implemented.

5. Construction Timing and Best Management Practices

The permittee shall comply with the following construction-related requirements:

- a. Grading and rock slope protection work shall take place only during the dry season (April 1 – October 31). This period may be extended for a limited period of time if the situation warrants such a limited extension, if approved by the Executive Director. If the approved project requires construction dewatering or work within the waters of Malibu Creek, then work shall also be confined to the months of April and May to the extent feasible, which is the estimated non-breeding period of tidewater gobies and non-migration period of steelhead trout.
- b. No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion.
- c. No demolition or construction equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers.
- d. Any and all debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project.
- e. Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters.
- f. All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day.
- g. The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction.
- h. Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required.

- i. All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil.
- j. Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems.
- k. The discharge of any hazardous materials into any receiving waters shall be prohibited.
- l. Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible.
- m. Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity.
- n. All BMPs shall be maintained in a functional condition throughout the duration of construction activity.
- o. Silt screens, filter fabric covers, coffer damming, silt curtains, and/or other dewatering method appropriate for use in estuary and intertidal setting applications shall be installed at the toe of the slope and around the perimeter of the area to be graded prior to the initiation of the grading activities and shall be maintained throughout project construction to minimize erosion and sediment from runoff waters during construction. Additional siltation barrier materials shall be kept at the site and deployed as needed to reinforce sediment containment structures should unseasonable rainfall occur. All sediment shall 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.

6. Dewatering Plan

If it is determined that construction dewatering is required to reconstruct the rock slope protection, ***prior to issuance of the Coastal Development Permit***, the applicant shall submit a dewatering plan to the Executive Director for review and approval, and evidence that the dewatering plan has been approved by the Regional Water Quality Control Board, California Department of Fish and Game, and California Department of Parks and Recreation, or evidence that any such approval is not necessary. The dewatering plan shall detail the provisions and Best Management Practices that will be used for the diversion and/or removal of water within the construction site, and indicate the location, size, and details of all dewatering devices that will be utilized. The plan shall also detail the location, size, and capacity of the settling basin utilized to remove sediments prior to the discharge of water.

The permittee shall undertake development in accordance with the approved final plan. 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 Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

7. Aquatic Species Protection

By acceptance of this permit, the applicant agrees to retain the services of a qualified aquatic species specialist to implement the following aquatic species protection measures if the approved project requires construction dewatering or work within the waters of Malibu Creek:

1. The qualified resource specialist shall survey for sensitive aquatic species (tidewater gobies and steelhead trout) within 100 feet of the project area prior to commencement of construction site dewatering work. If sensitive aquatic species are present, the qualified resource specialist and a crew working under his/her direction shall move, by hand, sensitive species from the area to be dewatered to safe locations elsewhere along the reach of Malibu Creek.
2. The qualified resource specialist shall inspect the dewatered areas and construction site regularly to detect whether any tidewater gobies or other fish are passing through the cofferdam/silt curtain and investigate whether tidewater goby protection measures are being implemented.
3. The qualified resource specialist shall be present when the 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.
4. The applicant shall cease work should the qualified resource specialist determine that any breach in permit compliance has occurred, or if any unforeseen sensitive habitat issues arise. If the Executive Director determines that significant impacts or damage have occurred to sensitive habitats or to wildlife species, the Executive Director may require the applicant to revise the project to adequately mitigate such impacts, which shall be processed as an amendment to this coastal development permit or a new coastal development permit.

8. Required Approvals

By acceptance of this permit, the applicant agrees to obtain all other Local, State, and/or Federal permits that may be necessary for all aspects of the approved project (including any necessary permits from the City of Malibu, California Department of Fish and Game, Regional Water Quality Control Board, and the U.S. Army Corps of Engineers).

9. Maintenance Activities and Future Alterations

The permittee shall maintain the permitted bank protection in its approved state. Any change in the design of the project or future additions/reinforcement of the approved structure beyond exempt maintenance as defined in Public Resources Code section 30610(d) and Section 13252 of Title 14 of the California Code of Regulations to restore the structure to its original condition as approved herein will require a coastal development permit. However, if (after inspection) it is apparent that repair and maintenance is necessary, the permittee shall contact the Executive Director to determine whether a coastal development permit or an amendment to this permit is legally required, and, if required, shall subsequently apply for a coastal development permit or permit amendment for the required maintenance.

10. Deed Restriction

Prior to issuance of the Coastal Development Permit, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against the parcel governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

11. Site Inspection

- A. By acceptance of this permit, the applicant irrevocably authorizes, on behalf of itself and its successors-in-interest with respect to the subject property, Coastal Commission staff and its designated agents to enter onto the property to undertake site inspections for the purpose of monitoring compliance with the permit, including the special conditions set forth herein, and to document their findings (including, but not limited to, by taking notes, photographs, or video), subject to Commission staff providing 24 hours advanced notice to the contact person indicated pursuant to paragraph B prior to entering the property, unless there is an imminent threat to coastal resources, in which case such notice is not required. If two attempts to reach the contact person by telephone are unsuccessful, the requirement to provide 24 hour notice can be satisfied by voicemail, email, or facsimile sent 24 hours in advance or by a letter mailed three business days prior to the inspection. Consistent with this authorization, the applicant and its successors: (1) shall not interfere with such inspection/monitoring activities and (2) shall provide any documents requested

by the Commission staff or its designated agents that are relevant to the determination of compliance with the terms of this permit.

- B. ***Prior to issuance of the Coastal Development Permit***, the applicant shall submit to Commission staff the email address and fax number, if available, and the address and phone number of a contact person authorized to receive the Commission's notice of the site inspections allowed by this special condition. The applicant is responsible for updating this contact information, and the Commission is entitled to rely on the last contact information provided to it by the applicant.

12. Condition Compliance

Within 90 days of Commission action on this coastal development permit application, or within such time as the Executive Director may grant for good cause, the applicant shall satisfy all requirements specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit. Failure to comply with this requirement may result in the institution of enforcement action under the provisions Chapter 9 of the Coastal Act.

13. California Department of Parks & Recreation Permission

Prior to issuance of the Coastal Development Permit, the applicant shall provide to the Executive Director evidence that California State Parks has granted permission to undertake the portion of the project that is on State Parks property, or evidence that no permission is required.

V. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION AND BACKGROUND

Background

On February 20, 1998, the Executive Director authorized Emergency Coastal Development Permit No. 4-98-024-G. The permit authorized Mariposa Land Company (Grant Adamson) to place approximately 500 linear feet of rock rip-rap revetment along the west bank of lower Malibu Creek, about 300 feet upstream of the Pacific Coast Highway bridge. The revetment consists of 1,500 tons of 0.5 to 8-ton granite boulders placed at approximately 1:1 to 1.5:1 (H:V) slope and 14-16 feet in height (2-4 foot toe below stream bed). The contractor who installed the rock used a backhoe to cut back the eroded vertical bank slope and notched a key at the toe of the slope to allow for a stable base surface for the rock. Rocks were then placed individually with the backhoe, starting at the key, and working upwards in sections. In the several months following the initial installation, boulders were adjusted and additional rocks were added to enhance the stability of the emergency revetment.

In the application for Emergency Permit 4-98-024-G, the applicant stated that the revetment was necessary to protect the subject property and an adjacent commercial

development from further severe stream bank erosion in the face of potential continuing winter storms. Prior to placement of the revetment, approximately 20 feet of lateral erosion occurred along the subject stretch of creek bank following significant storm flows in February 1998. Conditions of approval of Emergency CDP No. 4-98-024-G required the applicant to apply for a regular CDP within 60 days in order to seek permanent authorization for the emergency work, and that the regular CDP application was to include an analysis of stream bank protection alternatives prepared by a qualified engineer (**Exhibit 10**).

On June 3, 1998, Mariposa Land Co. submitted the subject regular CDP application requesting permanent authorization for the rock rip-rap revetment that was installed under the emergency permit. However, the CDP application did not contain enough information to deem the application "complete" under the applicable regulations, and Commission staff sent the applicant an "incomplete" letter on June 24, 1998, outlining the needed application items. Additional information was not received from the applicant until July 2000. However, again, not all of the information requested in staff's 1998 letter was included. Commission staff sent a follow-up letter in September 2000 outlining the outstanding items. Over the next eight years the applicant submitted portions of the requested application items and numerous contacts were made by Commission staff to the applicant attempting to obtain the necessary information, particularly in regards to an engineering analysis of alternatives. In July 2006 and June 2007, the applicant provided an engineering design study/alternatives analysis for the proposed project. And in October 2007, the applicant revised the proposed project description to include planting of the rip-rap stream bank and top of bank with riparian and upland species, and submitted a "Vegetation Restoration Plan", prepared by Impact Sciences, Inc.

On May 21, 2008, the CDP application was deemed complete, and Commission staff tentatively scheduled the application for the Commission's November, 2008 hearing. In August 2008, it was brought to the attention of Commission staff that the as-built project plans submitted by the applicant and analyzed by their engineer were not based upon a detailed survey and therefore are not a reliable depiction of the actual configuration of the rip-rap slope across the project area. Commission staff requested the applicant provide accurate, detailed surveyed plans of the proposed project, prepared by a licensed land surveyor, to facilitate staff's analysis of the as-built project. The applicant provided staff with surveyed plans on October 10, 2008.

This application (4-98-024) was filed on May 21, 2008, and would have had to have been acted on by the Commission at its November 2008 meeting in order to comply with the Permit Streamlining Act. However, in order to allow staff adequate time to analyze the recently submitted surveyed as-built plans, the applicant extended the Commission's review time by 90 days. Since the deadline for Commission action on this application has now been extended to the 270th day (February 15, 2009), the Commission must act on this application by the February 4-6, 2009 Commission meeting.

Environmental Setting

The Malibu Creek watershed covers approximately 110 square miles. It is the second largest watershed draining into Santa Monica Bay and the largest draining from the Santa

Monica Mountains. Lower Malibu Creek watershed includes the steep and rugged Malibu Canyon, which cuts through the central axis of the Santa Monica Mountains. Downstream of Malibu Canyon the watershed emerges onto a coastal plain where channel slopes and flow velocities reduce and the Malibu Creek fluvial system begins to transition to a coastal estuarine lagoon system. Malibu Lagoon is a 31-acre shallow embayment at the terminus of Malibu Creek that empties into the Pacific Ocean at Surfrider Beach. However, depending on hydrologic conditions of the estuary system, the mouth of the lagoon may either be “open” with no barrier beach, or “closed” by the presence of a barrier beach and lack of tidal inlet channel. When the lagoon is closed, the water level in the subject reach of creek ranges between 6 and 7 feet in depth.

Malibu Creek and its estuary provide habitat for a diversity of wildlife, including waterfowl, shorebirds, wading birds, songbirds, and raptors. A smaller number of mammals, amphibians and reptiles also inhabit the area. The significant species of fish that are known to utilize lower Malibu Creek are southern steelhead trout (*Oncorhynchus mykiss*), a state-listed threatened species, and tidewater goby (*Eucyclogobius newberryi*), federally listed as endangered and a California species-of-special-concern.

The subject 500 linear foot section of the west bank of lower Malibu Creek is situated along a westward meander cut bank approximately 300 feet upstream from the Pacific Coast Highway bridge and Malibu Lagoon (**Exhibits 1-3**). The project site is located on a narrow, relatively flat, 2.5-acre strip of vacant land owned by the applicant that is bound by a commercial shopping center development to the west and Malibu Creek to the east (**Exhibit 2**). The site is located within the 100-year floodplain for Malibu Creek, as designated by the Federal Emergency Management Agency (FEMA). Prior to severe storm erosion and subsequent placement of the proposed rip rap revetment on the property in the late 1990's, the subject stretch of creek bank was primarily disturbed and did not possess a well-developed riparian canopy due to its close proximity to a commercial shopping center and Pacific Coast Highway. Currently, the subject bank and rip rap is largely devoid of vegetation, with the exception of a small amount of arroyo willow at the northern end of the revetment and a small amount of mulefat at the southern end. The upland area above the revetment is dominated by weeds and non-native annual grasses. A footpath also exists on the upland area above the revetment. The width between the top of revetment and the fence/wall that delineates edge of shopping center parking lot varies between 18 feet and 60 feet (**Exhibits 3-4**).

Lower Malibu Creek in the project vicinity has changed significantly over time according to historic aerial photographs dating back to 1932. Stream flows had historically been confined to a rather straight channel leading up to the Pacific Coast Highway bridge, since much of the floodplain was in agricultural production, particularly the west side of the creek. In the 1960's, a shopping center was built in close proximity to the subject stretch of the west bank. An old rip rap revetment that extends along the west creek bank at least a thousand feet upstream from the Pacific Coast Highway bridge is evident in a 1972 aerial photograph. It appears this old revetment was constructed to protect the adjacent shopping center prior to 1972. The sinuosity of the lower Malibu Creek stream channel increased substantially between 1976 and 1985, which increasingly directed flows against the west bank in the project location. By 1998, it appears that most of the old rip rap revetment had fallen away due to changes in channel morphology. However,

there still exists some grouted rip rap on either side of a storm drain outlet located on an adjacent parcel approximately 100 feet north of the proposed rip rap revetment. A canopy of healthy riparian vegetation is growing on the bank above the grouted rip rap section. The storm drain and grouted rip rap were installed by Los Angeles County Flood Control District in the 1970's. Although this grouted rip rap is connected to the stretch of proposed rip rap, it is not a part of the subject permit application since it is located on an adjacent parcel under separate ownership and appears to have been constructed prior to the Coastal Act. However, according to the applicant's site plan, it appears a small portion of the proposed rip rap is located on an adjacent parcel owned by California Department of Parks & Recreation (4452-011-903). As such, **Special Condition No. Thirteen (13)** is required to ensure that State Parks permission is obtained prior to issuance of the permit.

Description of Proposed Project

The applicant is requesting authorization to permanently retain in its "as-built" condition approximately 500 linear feet of rock rip-rap revetment that was installed along the west bank of lower Malibu Creek to protect an existing commercial development from flood waters pursuant to Emergency CDP No. 4-98-024-G. The revetment consists of 1,500 tons of 0.5 to 8-ton granite boulders placed at approximately 1:1 to 1.5:1 (H:V) slope and 14-16 feet in height (2-4 foot toe below stream bed) (**Exhibits 5-6**). The applicant is also proposing to revegetate the revetment site to create approximately 0.59 acres of riparian and upland habitat ("Vegetation Restoration Plan," prepared by Impact Sciences, Inc., dated August 2007, amended January 2009). To vegetate the existing rock revetment, the applicant had proposed to secure fascines of willow cuttings to the rip rap with wire. The willow bundles would be oriented at a 45-degree angle, facing downstream, with one end placed into the creek. Once the willow fascines produced sufficient roots, the interstitial spaces would be filled with sand and fine gravel as a substrate for additional plantings. The applicant also proposes to plant the upland area above the revetment with a mixture of native shrubs and trees, such as mulefat, sycamore, black walnut, cottonwood, and elderberry (**Exhibits 7-8**).

In a letter dated January 9, 2009, Impact Sciences Inc. revised the proposed Vegetation Restoration Plan to omit the willow fascine element and to instead place willow cuttings that are at least one inch in diameter and six feet long into the interstitial spaces between rocks (**Exhibit 9**). Once the willows establish, the interstitial spaces would be filled with sand and fine gravel as a substrate for additional plantings. In researching examples where the concept of securing willow fascines to rock had been used successfully per the request of Commission staff, Impact Sciences found that willow fascines were not appropriate for use atop a rock slope protection and that the willows needed contact with moist soil beneath the rock. After consulting with the Natural Resources Conservation Service, Impact Sciences revised their revegetation plan to instead place willow cuttings into the spaces of the rip rap.

Agency Review/Approvals

The Commission has received the following agency correspondence from the applicant regarding the proposed project:

- U.S. Army Corps of Engineers Regional General Permit No. 98-00315-AOA (with concurrence from the U.S. Fish & Wildlife Service) for emergency placement of rip rap revetment, issued February 13, 1998;
- U.S. Army Corps of Engineers Jurisdictional Determination letter for the proposed vegetation restoration plan, dated March 6, 2008;
- Notification of Emergency Streambed Alteration Work for emergency placement of rip rap revetment, sent to California Department of Fish & Game February 19, 1998 (no agency response);
- California Department of Fish & Game letter stating statutory deadline had lapsed to issue an agreement regarding Streambed Alteration Notification No. 1600-2005-0503-R5 (vegetation restoration plan), dated January 13, 2008;
- Emergency Regional General Permit No. 52, Regional Water Quality Control Board, Los Angeles Region;
- City of Malibu Approval-in-Concept, dated June 28, 2007.

Correspondence Received

Commission staff has received correspondence from the following interested parties (letters attached as **Exhibit 13**):

- Letter from Ron Schafer, California Dept. of Parks and Recreation District Superintendent, dated November 14, 2008, expressing concern regarding the proposed project. The letter states that the un-engineered revetment continues to contribute to an unstable site for establishment of riparian vegetation. Now that the emergency has passed, State Parks believes that the rip rap should be removed and the bank should be laid back at a less steep slope that is soft bio-engineered for greater water quality, stability, and habitat benefits.
- Letter from Dr. J. Robert Hatherill, former faculty member of the UCSB Environmental Studies Program, dated August 11, 2008, expressing support for the proposed restoration plans to enhance the habitat value of the creek bank for tidewater goby and other native fauna.
- Letter from Heal the Bay, dated August 4, 2005, and addressed to the City of Malibu, expressing opposition to the proposed armoring of the stream bank. Heal the Bay states that stream bank armoring is an ineffective method for long-term bank stabilization and a major cause for downstream bank erosion and sedimentation. Heal the Bay recommends the rip rap be removed, the bank slope laid back and re-vegetated, and a floodwall installed next to the shopping center as far back as possible. Heal the Bay also believes that grouted rip rap at an upstream storm drain outlet is contributing to the bank scour at the project site and should be included in the scope of work for the subject permit.

B. WATER QUALITY, STREAM ALTERATION, HAZARDS, AND SENSITIVE HABITAT

The proposed project area lies within the City of Malibu, but falls within the Commission's area of retained original permit jurisdiction because development is proposed on lands that are below the mean high tide line and/or on public trust lands. The standard of review for the project is the Chapter 3 policies of the Coastal Act. In addition, the policies of the certified Malibu Local Coastal Program (LCP) serve as guidance.

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 (1) 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 30253 of the Coastal Act states, in pertinent 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.***

Section 30233(a) of the Coastal Act provides as follows, in applicable part:

The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.***
- (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.***
- (3) In 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.***

Coastal Act Section 30240 affords protection of environmentally sensitive habitat areas as follows:

- (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.***

Section 30107.5 of the Coastal Act defines an environmentally sensitive area as:

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Sections 30230 and 30231 of the Coastal Act mandate that marine resources and coastal water quality shall be maintained and, where feasible, restored through, among other means, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flows, maintaining natural buffer areas that protect riparian habitats, and minimizing alteration of natural streams. Special protection shall be given to areas and species of special significance, and uses of the marine environment shall be carried out in a manner that will sustain biological productivity of coastal waters. Section

30236 limits channelizations, dams, or other substantial alterations of rivers and streams to flood control projects necessary to protect public safety and existing development and two other types of projects, any of which must incorporate the best mitigation measures available and where there are no feasible alternatives. 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 significantly degrade those resources.

In addition, the City of Malibu certified Local Coastal Program contains the following policy that specifically pertains to lower Malibu Creek:

LUP Policy 3.34

Bioengineering methods or "soft solutions" should be developed as an alternative to constructing rock revetments, vertical retaining walls or other "hard structures" along lower Malibu Creek. If bioengineering methods are demonstrated to be infeasible, then other alternatives may be considered. Any applications for protective measures along lower Malibu Creek shall demonstrate [1] that existing development in the Civic Center is in danger from flood hazards, [2] that the proposed protective device is the least environmentally damaging alternative, [3] that it is sited and designed to avoid and minimize impacts to the habitat values of the riparian corridor along the creek and the recreational and public access use of State Park property along the creek, and [4] that any unavoidable impacts have been mitigated to the maximum extent feasible.

The proposed project site is situated along a 500 linear foot section of the west bank of lower Malibu Creek, approximately 300 feet upstream from the Pacific Coast Highway bridge and Malibu Lagoon. The lower Malibu Creek watershed emerges onto a coastal plain where channel slopes and flow velocities reduce and the Malibu Creek fluvial system begins to transition to a coastal estuarine lagoon system. Malibu Lagoon is a 31-acre shallow embayment at the terminus of Malibu Creek that empties into the Pacific Ocean at Surfrider Beach. Malibu Creek and its estuary provide habitat for a diversity of wildlife, including waterfowl, shorebirds, wading birds, songbirds, and raptors. A smaller number of mammals, amphibians and reptiles also inhabit the area. The significant species of fish that are known to utilize lower Malibu Creek are southern steelhead trout (*Oncorhynchus mykiss*), a state-listed threatened species, and tidewater goby (*Eucyclogobius newberryi*), federally listed as endangered and a California species-of-special-concern. Malibu Creek is a U.S.G.S. designated blue-line stream that supports a well-developed riparian corridor which constitutes ESHA. Malibu Creek and its riparian corridor is also designated as ESHA in the certified Malibu LCP.

Riparian habitats and their associated streams form important connecting links in the Santa Monica Mountains. These habitats connect all of the biological communities from the highest elevation chaparral to the sea with a unidirectional flowing water system, one function of which is to carry nutrients through the ecosystem to the benefit of many different species along the way. The streams themselves provide refuge for sensitive species including: the coast range newt, the Pacific pond turtle, tidewater goby, and southern steelhead trout. The health of the streams is dependent on the ecological functions provided by the associated riparian woodlands. These functions include the

provision of large woody debris for habitat, shading that controls water temperature, and input of leaves that provide the foundation of the stream-based trophic structure.

The project site is located on a narrow, approximately 2.5-acre strip of vacant land owned by the applicant that is bound by a commercial shopping center development to the west and Malibu Creek to the east. Prior to severe storm erosion and subsequent placement of the proposed emergency rip rap revetment on the property in the late 1990's, the subject stretch of creek bank was primarily disturbed due to modifications to the creek's west bank and floodplain that created a highly disturbed riparian environment of limited habitat value. Currently, the subject bank and proposed as-built rip rap remains largely devoid of vegetation, with the exception of a small amount of arroyo willow at the northern end of the revetment and a small amount of mulefat at the southern end. The upland area above the revetment is dominated by weeds and non-native annual grasses. A footpath also exists on the upland area above the revetment. The width between the top of revetment and the fence/wall that delineates the edge of a commercial shopping center varies between 18 feet and 60 feet.

The Commission finds that Malibu Creek itself meets the definition of ESHA under the Coastal Act, but the disturbed west bank in the area of the proposed project does not meet the definition of ESHA under the Coastal Act.

The applicant is requesting authorization to permanently retain approximately 500 linear feet of rock rip-rap revetment that was installed along the west bank of lower Malibu Creek to protect an existing commercial development from flood waters pursuant to Emergency CDP No. 4-98-024-G. The revetment consists of 1,500 tons of 0.5 to 8-ton granite boulders placed at approximately 1:1 to 1.5:1 (H:V) slope and 14-16 feet in height (2-4 foot toe below stream bed). The applicant is also proposing to revegetate the revetment site to create approximately 0.59 acres of riparian and upland habitat. At the time of installation, the proposed rock was placed outside the stream channel and within the footprint of the excavated/eroded stream bank following a severe El Nino storm event. Therefore, no fill of wetland areas occurred at the time of installation.

Pursuant to Coastal Act Section 30236, the substantial alteration of coastal streams is limited to necessary water supply projects, habitat improvement projects, and flood control projects where flood protection is necessary for public safety or to protect existing structures in the floodplain and no other method of protecting the structures is feasible. In this case, prior to placement of the emergency revetment, approximately 20 feet of lateral erosion occurred along the subject stretch of creek bank following significant storm flows in February 1998. The revetment was deemed a necessary measure to temporarily protect an adjacent commercial development from damage as a result of further severe stream bank erosion in the face of potential continuing winter storms. The applicant asserts that the existing rock slope protection is permanently needed in the project location to continue to protect adjacent development from future erosion and flooding. The subject 500 linear foot section of the west bank of lower Malibu Creek is situated along a westward meander cut bank. The hydraulics of the creek will likely erode the west bank, perhaps significantly during a severe storm event, and threaten the existing development if some form of bank protection is not utilized. In this case, the proposed flood control project is allowed to protect existing development consistent with Section

30236. However, Section 30236 further limits streambed alterations for flood control to situations where no other method for protecting the existing structures in the floodplain is feasible. In addition, Policy 3.34 of the Malibu LCP requires that bioengineering methods should be developed as an alternative to constructing rock revetments, vertical retaining walls or other "hard structures" along lower Malibu Creek. If bioengineering methods are demonstrated to be infeasible, then other alternatives may be considered provided they are demonstrated to be the least environmentally damaging alternatives and are sited and designed to avoid and minimize impacts to the habitat values of the riparian corridor along the creek. In other words, under the policies of the Coastal Act and the Malibu LCP, the project must be the least environmentally damaging feasible alternative.

Alternatives Analysis

The various alternatives to the proposed project that have been analyzed are discussed below:

1. **Revegetation of Creek Bank:** This alternative would involve removing the temporary emergency revetment that is in place and revegetating the subject bank with riparian vegetation. The applicant's engineer has indicated that this alternative is not hydraulically suitable to protect the bank because stream power and velocity values along this reach of cut bank exceed what re-vegetation alone is capable of resisting. Staff finds this conclusion to be valid. Therefore, this would not be a feasible alternative that is consistent with all Chapter 3 policies of the Coastal Act.
2. **Revegetation of Upper Bank with Rip Rap in Low Flow Channel:** This alternative would involve removing the temporary emergency revetment that is in place except for the rip rap in the low flow channel and revegetating the upper bank with riparian vegetation. The applicant's engineer has indicated that this alternative is not hydraulically suitable to protect the bank because erosion would occur within the channel behind the rip rap, which would eventually undermine the rip rap and cause it to fail. Staff finds this conclusion to be valid. Therefore, this would not be a feasible alternative that is consistent with all Chapter 3 policies of the Coastal Act.
3. **Revegetation of Creek Bank Using Geotextiles:** This alternative would involve removing the temporary emergency revetment that is in place, with the exception of a rock or concrete footing upon which to anchor geotextile fabric to the bank. The geotextile slope would then be vegetated. The applicant's engineer has indicated that this alternative is not hydraulically suitable to protect the bank because stream power and velocity values along this reach of cut bank exceed what geotextiles are capable of withstanding in the long-term. Concrete block-based geotextiles have a higher velocity and shear tolerance, but due to the steep bank slope and constrained space, this alternative would require more grading and likely placing fill into the creek to achieve sufficient grade. Staff finds this conclusion to be valid. Therefore, this would not be a feasible alternative that is consistent with all Chapter 3 policies of the Coastal Act.

4. **Construction of Concrete Levee or Soil Cement Levee:** This alternative would involve removing the temporary emergency revetment that is in place, and installing a concrete or soil cement levee along the bank. The applicant's engineer has indicated that this alternative would be hydraulically feasible, but would require significant grading and costs to install. Staff finds this conclusion to be valid. Due to the intensive cost and environmental impacts associated with this alternative, it is not a feasible alternative that is consistent with all Chapter 3 policies of the Coastal Act.
5. **Construction of Crib Wall:** This alternative would involve removing the temporary emergency revetment that is in place, and installing crib walls (a three dimensional structure created from untreated timbers, fill, and live cuttings). Live cribwalls provide a means of long-term streambank stabilization and are best used as part of a system which includes a component to deter undercutting at the bed/bank interface, such as rock riprap or gabions. The applicant's engineer has indicated that this alternative is not hydraulically suitable for banks that experience lateral migration or in locations where bank roughness is an issue, such as the subject site. Staff finds this conclusion to be valid. Therefore this alternative is not a feasible alternative that is consistent with all Chapter 3 policies of the Coastal Act.
6. **Construction of Concrete Floodwall and Revegetation of Creek Bank:** This alternative would involve removing the temporary emergency revetment that is in place, installing a concrete floodwall next to the commercial development, lay back the bank between wall and channel, and revegetate bank. While this alternative would protect the adjacent development from flood waters permanently, the cut bank would continue to erode until there was no longer a natural bank between wall and channel. Such a solution is high cost and in the long run could result in the loss of any vegetated streambank area along this stretch of Malibu Creek. Therefore this alternative is not a feasible alternative that is consistent with all Chapter 3 policies of the Coastal Act.
7. **Laid-back Revetment with Revegetation:** This alternative would involve deconstructing the temporary emergency revetment that is in place, and reconstructing it at a more gradual 2:1 slope and revegetating. The applicant's engineer has indicated that this alternative would significantly alter the hydraulics of the creek and increase turbidity/sediment delivery. The applicant's engineer also states that the subject bank was steep before and after placement of the emergency rip rap, which is a natural equilibrium slope for the cut bank. However, Commission Staff Coastal Engineer, Lesley Ewing, disagrees with the analysis of the applicant's engineer in regard to this alternative. In her memo dated January 7, 2009, Ms. Ewing states that based on all information provided by the applicant it appears feasible that the bank slope can be rebuilt at a more gradual 2:1 slope (**Exhibit 11**). Further, she states:

“...This would require that the revetment be disassembled from the top, the bank be sloped back, and rock be placed again along the bank at a more gradual slope. The Preliminary Engineering Design Study by PACE (May 25, 2007) asserts that laying the top portion of the existing revetment back at a

2:1 (h:v) slope would result in increased turbidity. But, based the provided information, no evidence has been submitted to support this assertion. There is the potential for some temporary turbidity during construction; however this could be minimized through project scheduling, good work practices and implementation of best management practices. If the revetment were to be reconstructed along the bank at a more gradual slope, a bottom layer of filter fabric should be installed to reduce soil piping and reduce turbidity from high flow events. While it may be necessary to cut root holes into the filter fabric, the soil loss through these openings in the bottom layer would not be significant. Additionally, turbidity should be greatly reduced from the current revetment with rock covering a bare soil slope with no fabric filter layer at all...”

Additionally, Commission Staff Ecologist Dr. Jonna Engel, in her memo dated January 9, 2009, states that a less steep revetment slope than is proposed, in conjunction with incorporating filter fabric and willow stakes into the reconstructed rip rap design, would be more likely to result in successful riparian restoration along this stretch of Malibu Creek (**Exhibit 12**). As such, from both a biological and engineering standpoint, a bioengineered rip rap slope protection that is laid back at a less steep slope is a feasible and preferred alternative, as discussed in more detail below.

Analysis of Proposed Project: The applicant is requesting permanent authorization for an un-engineered, as-built rip rap revetment, consisting of 1,500 tons of 0.5 to 8-ton granite boulders placed at approximately 1:1 to 1.5:1 (H:V) slope and 14-16 feet in height (2-4 foot toe below stream bed). Since the revetment site is almost completely devoid of native riparian vegetation, the applicant is also proposing to revegetate the revetment site to create approximately 0.59 acres of riparian and upland habitat. To vegetate the existing rock revetment, the applicant had, until recently, proposed to secure fascines of willow cuttings to the rip rap with wire. These willow bundles would be oriented at a 45-degree angle, facing downstream, with one end placed into the creek. Once the willow fascines produced sufficient roots, the interstitial spaces would be filled with sand and fine gravel as a substrate for additional plantings. The applicant also proposes to plant the upland area above the revetment with a mixture of native shrubs and trees, such as mulefat, sycamore, black walnut, cottonwood, and elderberry. In a letter dated January 9, 2009, Impact Sciences Inc. revised the proposed “Vegetation Restoration Plan” to omit the willow fascine element and to instead place willow cuttings that are at least one inch in diameter and six feet long into the interstitial spaces between rocks. Once the willows establish, the interstitial spaces would be filled with sand and fine gravel as a substrate for additional plantings. In researching examples where the concept of securing willow fascines to rock had been used successfully per the request of Commission staff, Impact Sciences found that willow fascines were not appropriate for use atop a rock slope protection and that the willows needed contact with moist soil beneath the rock. After consulting with the Natural Resources Conservation Service, Impact Sciences revised their revegetation plan to instead place willow cuttings into the spaces of the as-built rip rap.

Technical studies prepared for the project have concluded that channel hydraulics of lower Malibu Creek are not significantly impacted by the proposed project and that the

project will not cause erosion or other adverse impacts to adjacent banks. The applicant's engineer asserts that the subject bank was steep before and after placement of the emergency rip rap, and its steepness is a natural equilibrium slope for the cut bank. As mentioned previously, Commission Staff Engineer, Lesley Ewing, disagrees with the applicant engineers' assertion that a less steep bank in this location would significantly alter stream hydraulics. In her memo dated January 7, 2009, Ms. Ewing states that based on all information provided by the applicant it appears feasible that the bank slope can be rebuilt at a more gradual 2:1 slope (Exhibit 11). In fact, laying the revetment back at a 2:1 slope and incorporating a more bio-engineered design would substantially reduce turbidity and increase riparian and in-stream habitat value compared to the proposed un-engineered design. In the ten years that the existing revetment has been in place, vegetation has been unable to naturally establish along the majority of the rip rap, most notably along the steepest portions. It is the opinion of Commission Staff Ecologist, Dr. Engel, that site restoration would be more successful if the rip rap revetment were to be laid back at a lesser slope angle, such as 2:1, which is more typical for vegetated rip rap stabilization designs.

The existing un-engineered revetment has resulted in adverse indirect impacts to aquatic and semi-aquatic habitats through loss of shade and cover along the bank. Loss of shade and cover results in increased water temperatures and loss of areas to seek shelter from predators. In addition, without filter fabric stabilizing the bank soils beneath the revetment, sediment transport and turbidity are increased during winter flows. As discussed above, the applicant is proposing to carry out a re-vegetation effort to install willows within the rock rip-rap and to plant the slope above the revetment with riparian plant species. In past permit actions concerning rock rip-rap in streams, the Commission has approved such development only where there is no feasible alternative to protect existing development and where revegetation with willows and other riparian species is incorporated into the actual construction. Such projects can be designed to include planting areas in the interstitial spaces between individual rocks in order to accommodate the planting of willows and other riparian plants. It is much more difficult to retrofit an existing revetment that has not been designed to accommodate plantings. Given that the revetment proposed here was not designed to accommodate plantings and was constructed at a very steep angle, it is by no means assured that the applicant's proposed revegetation will be successful. While the proposed insertion of willow cuttings into the existing rock revetment may serve to improve stream and riparian habitat value to an extent, the steepness of the revetment and the unconventional methodology for bioengineering it will not ensure that water quality, stability, and habitat value of the bank are all protected consistent with the requirements of Chapter 3 of the Coastal Act. It has not been demonstrated that the proposed project is the least environmentally damaging alternative and is sited and designed to avoid and minimize impacts to the habitat values of the riparian stream corridor of Malibu Creek. As such, the Commission finds that the proposed project is *not* the least environmentally damaging alternative and does not protect Malibu Creek ESHA from significant disruption of habitat values or restore the biological productivity and water quality of Malibu Creek to maintain optimum aquatic populations. The project is therefore not consistent with Section 30230, 30231, 30236, and 30240 of the Coastal Act. In addition, the proposed project cannot be found consistent with Policy 3.34 of the Malibu LCP, which the Commission uses as guidance.

However, an alternative has been identified that would function to adequately protect existing development in the floodplain as well as render the project consistent with the Chapter 3 protections for water quality and ESHA. As discussed previously, this alternative would involve deconstructing the temporary emergency revetment that is in place, and reconstructing the revetment at a more gradual slope along the bank (no steeper than 2:1 (H:V)). This would also include incorporating filter fabric and willow stakes into the reconstructed rip rap design, and revegetating the riparian corridor. The Commission's staff Coastal Engineer, Ms. Ewing, has stated that this alternative is feasible from an engineering standpoint.

Therefore, in order to protect Malibu Creek ESHA from significant disruption of habitat values and to restore the biological productivity and water quality of Malibu Creek to maintain optimum aquatic populations, **Special Condition No. Two (2)** requires revised rock slope protection plans demonstrating that the rock slope protection has been re-engineered to be laid back to a maximum 2:1 (H:V) slope. However, the toe of the slope protection shall not extend further into the creek than currently exists. If determined feasible, the footing portion of the rock slope protection may remain in place and only the upper portion of the rock shall be laid back to a maximum 2:1 slope. **Special Condition No. Two (2)** also requires that geotextile filter fabric with holes for willow plantings be placed on the graded slope of the bank prior to rock placement in order to stabilize soils. **Special Condition No. Three (3)** requires revised revegetation plans for the re-engineered bank protection that incorporates live willow cutting stakes among the rock voids, making sure the stakes penetrate the fabric filter and underlying soil. Installing willow cutting into the soil as the revetment is being constructed is a typical design for bioengineered rock slope protection, as it ensures the vegetation has a good foundation to root in throughout the slope. Pursuant to the recommendations of Commission Ecologist, Dr. Engel, the interstitial spaces in the rip rap shall be partially filled with a fine gravel, sand, and soil combination, and mugwort (*Artemisia douglasiana*) and yerba mansa (*Anemopsis californica*) shall be added to the plant palette for revegetation of the revetment in order to add to the species diversity within the riparian corridor. The revised plans required by **Special Conditions 2 and 3** will serve to minimize impacts to the habitat values of the riparian stream corridor of Malibu Creek to the maximum extent feasible.

To ensure that the revegetation plan is successful and that the subject area is adequately revegetated, **Special Condition No. Four (4)** requires implementation of the revised revegetation plan, monitoring for a five year period, submission of a Revegetation Monitoring Report at the end of the five year period for the review and approval of the Executive Director, and supplemental planting/seeding be implemented as necessary, to ensure successful restoration that is in compliance with the specified guidelines and performance standards outlined in the revegetation plan.

Although the conditions described above render the project sufficiently stable to satisfy the requirements of Section 30253, no project is wholly without risks. Due to the fact that the project is located in an area subject to an extraordinary potential for damage or destruction from erosion and flood flows, those risks remain substantial here. If the applicant nevertheless chooses to proceed with the project, the Commission requires the applicant to assume the liability from these associated risks. Through the assumption of

risk condition, the applicant acknowledges the nature of the flood flow and erosion hazard that exists on the site and that may affect the safety of the development. Therefore, **Special Condition No. One (1)** is required, as determined in the findings above, to assure the project's consistency with Section 30253 of the Coastal Act and as a response to the risks associated with the project.

At the time of installation, the proposed rock was placed outside the stream channel and within the footprint of the excavated/eroded stream bank following a severe El Nino storm event. Therefore, no fill of wetland areas occurred at the time of installation. However, if it is determined that the toe portion of the revetment must be reconstructed pursuant to the revised bank protection plans specified in Special Condition No. 2, the revised revetment toe may not extend further into the creek than currently exists, as required in **Special Condition No. Two (2)**. Extending the toe of the revetment streamward would constitute fill of wetlands for flood control, which is not an allowable use of wetland fill under the requirements of Section 30233 of the Coastal Act.

The project, as revised, would involve some soil disturbance and vegetation removal along the bank during the revetment re-construction. The work will take place along a bank that has obviously been disturbed over the years, both by the erosive forces of Malibu Creek and by disturbance from adjacent development in the floodplain. As such, the subject bank is not considered ESHA. However the project area is adjacent to the Malibu Creek channel that is considered to be ESHA and the potential exists for impacts to the water quality of the creek, particularly from erosion of sediment from the site. Although implementing the revised project will ultimately enhance the habitat value of lower Malibu Creek, there is potential for temporary adverse impacts to water quality and biological productivity of Malibu Creek through the release of sediment. Soil disturbance and vegetation removal adjacent to the creek could result in the discharge of sediment into Malibu Creek, causing increased turbidity and adversely affecting fish and other sensitive aquatic species. Sediment is considered a pollutant that affects visibility through the water, and affects plant productivity, animal behavior (such as foraging) and reproduction, and the ability of animals to obtain adequate oxygen from the water. Sediments may physically alter or reduce the amount of habitat available in a watercourse by replacing the pre-existing habitat structure with a stream-bottom habitat composed of substrate materials unsuitable for the pre-existing aquatic community. In addition, sediment is the medium by which many other pollutants are delivered to aquatic environments, as many pollutants are chemically or physically associated with the sediment particles. It is particularly critical that these impacts are avoided given the presence of endangered southern steelhead and tidewater goby in Malibu Creek and Lagoon during certain times of the year. Conducting work for the revised rock slope protection plan when stream flows are minimal during the dry season will minimize erosion into the creek, associated turbidity, and will minimize the potential for disturbing local amphibians and fishes. As such, **Special Condition No. Five (5)** outlines construction timing and best management practices to be implemented during all approved work activities.

If it is determined that the approved revised rock slope protection plans will require work within stream waters, **Special Condition No. Six (6)** requires that the applicant submit a dewatering plan, for the review and approval of the Executive Director, and evidence that

the dewatering plan has been approved by the Regional Water Quality Control Board (RWQCB), California Department of Fish & Game, and California State Parks, or evidence that such approvals are not required. In order to minimize potential impacts to tidewater gobies and southern steelhead, **Special Condition No. Five (5)** also limits grading and rock slope protection work to the months of April and May (the species' estimated non-breeding/non-migration season) in the event work is required within stream waters.

If the revised project requires construction dewatering or work within the waters of Malibu Creek, measures to protect sensitive aquatic species are necessary. Therefore, **Special Condition No. Seven (7)** requires that a qualified resource specialist survey for sensitive aquatic species (tidewater gobies and steelhead trout) within 100 feet of the project area prior to commencement of construction site dewatering work. If sensitive aquatic species are present, the qualified resource specialist and a crew working under his/her direction shall move, by hand, sensitive species from the area to be dewatered to safe locations elsewhere along the reach of Malibu Creek. The qualified resource specialist shall inspect the dewatered areas and construction site regularly and be present when the dewatering device is removed. The qualified resource specialist 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 applicant shall be required to revise the project to adequately mitigate such impacts, which shall be processed as an amendment to this coastal development permit or a new coastal development permit.

In addition, the revised project may require review by other regulatory agencies such as RWQCB, U.S. Army Corps of Engineers, California Dept. of Fish & Game, or City of Malibu. Therefore, **Special Condition No. Eight (8)** requires the applicant to obtain all other permits that may be necessary for the approved project.

To ensure that the permitted bank protection is maintained in its approved state and future repairs or additions to the approved structure receive the appropriate approvals, **Special Condition No. Nine (9)** requires the applicant to contact the Executive Director for a determination of whether a coastal permit or permit amendment are legally required when it is apparent that repair and maintenance is necessary. **Special Condition Ten (10)** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and thereby provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

In order to ensure that the project, as required to be revised, is implemented in a timely manner, **Special Condition No. Twelve (12)** requires that the applicant satisfy all conditions of this permit which are prerequisite to the issuance of this permit within 90 days of Commission action or within such additional time as the Executive Director may grant for good cause.

Finally, in order to ensure that the terms and conditions of this permit are adequately implemented, **Special Condition Eleven (11)** authorizes Commission staff to enter onto

the property (subject to 24 hour notice to the property owner) to undertake site inspections for the purpose of monitoring compliance with the permit.

As such, the Commission finds that, with the mitigation measures discussed above, the project will (a) protect the ESHA from any significant disruption of habitat values, (b) not significantly degrade adjacent ESHA, (c) be compatible with the continuance of the habitat area, (d) restore the biological productivity and water quality of Malibu Creek to maintain optimum aquatic populations, and (e) minimize risks to life and property and assure stability. Therefore, the project, as conditioned, is consistent with Section 30230, 30231, 30233, 30236, 30253, and 30240 of the Coastal Act. In addition, the project, as conditioned, is consistent with Policy 3.34 of the Malibu LCP, which the Commission uses as guidance.

C. VISUAL RESOURCES

Section 30251 of the Coastal Act states, in part:

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.

Section 30251 of the Coastal Act requires scenic and visual qualities to be considered and preserved. Section 30251 also requires that development be sited and designed to protect views of scenic areas, minimize alteration of landforms, and be visually compatible with the surrounding area.

The project is located along a 500-foot section of the west bank of lower Malibu Creek, approximately 300 feet upstream from Pacific Coast Highway and Malibu Lagoon State parkland. The project site is located on a narrow, approximately 2.5-acre strip of vacant land owned by the applicant that is bound by a commercial shopping center development to the west and Malibu Creek and State parkland to the east. The subject site is visible from State parkland to the east, as well as Pacific Coast Highway to the south, a designated scenic highway.

The proposed as-built rock revetment is composed of light-colored granite boulders that was not constructed to encourage natural recruitment of riparian vegetation. As such, the stream bank is almost entirely devoid of natural vegetation that would have acted to screen views of the armored stream bank from public viewing areas. While the proposed insertion of willow cuttings into the existing revetment may serve to soften public views of the rock to an extent, it has not been demonstrated that the steepness of the revetment and the unconventional methodology for bioengineering it will maximize revegetation success. As discussed above, an alternative project design is required to render the project consistent with the Chapter 3 protections for water quality and ESHA. The revised revetment design, will result in the slope of the revetment being no steeper than 2:1, and is required to utilize filter fabric, and to incorporate planting areas in the interstitial spaces

between the rocks. Finally, this alternative will include the revegetation of these planting areas with willows or other riparian plant species, and the planting of the area above the revetment with riparian and associated native plants. As conditioned, the revised revetment will be vegetated and the area landward of the revetment will be vegetated with plants appropriate for the riparian and upland areas of the project site. This will reduce the reflective effect of the light colored rocks and soften, if not obscure, the view of the revetment from Malibu Creek State Beach and other public viewing areas.

The following special conditions are required to assure the project's consistency with Section 30251 of the Coastal Act:

Special Condition 2. Revised Bank Protection Plans

Special Condition 3. Revised Revegetation Plans

Special Condition 4. Revegetation Implementation and Monitoring

For the reasons set forth above, the Commission finds that the proposed project, as conditioned, is consistent with Section 30251 of the Coastal Act.

D. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a 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 that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act 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 to minimize impacts include requiring best management practices (water quality and ESHA), limitations on construction timing (water quality and ESHA), revegetation plans (ESHA and visual resources), and dewatering plan with aquatic species protection measures (ESHA).

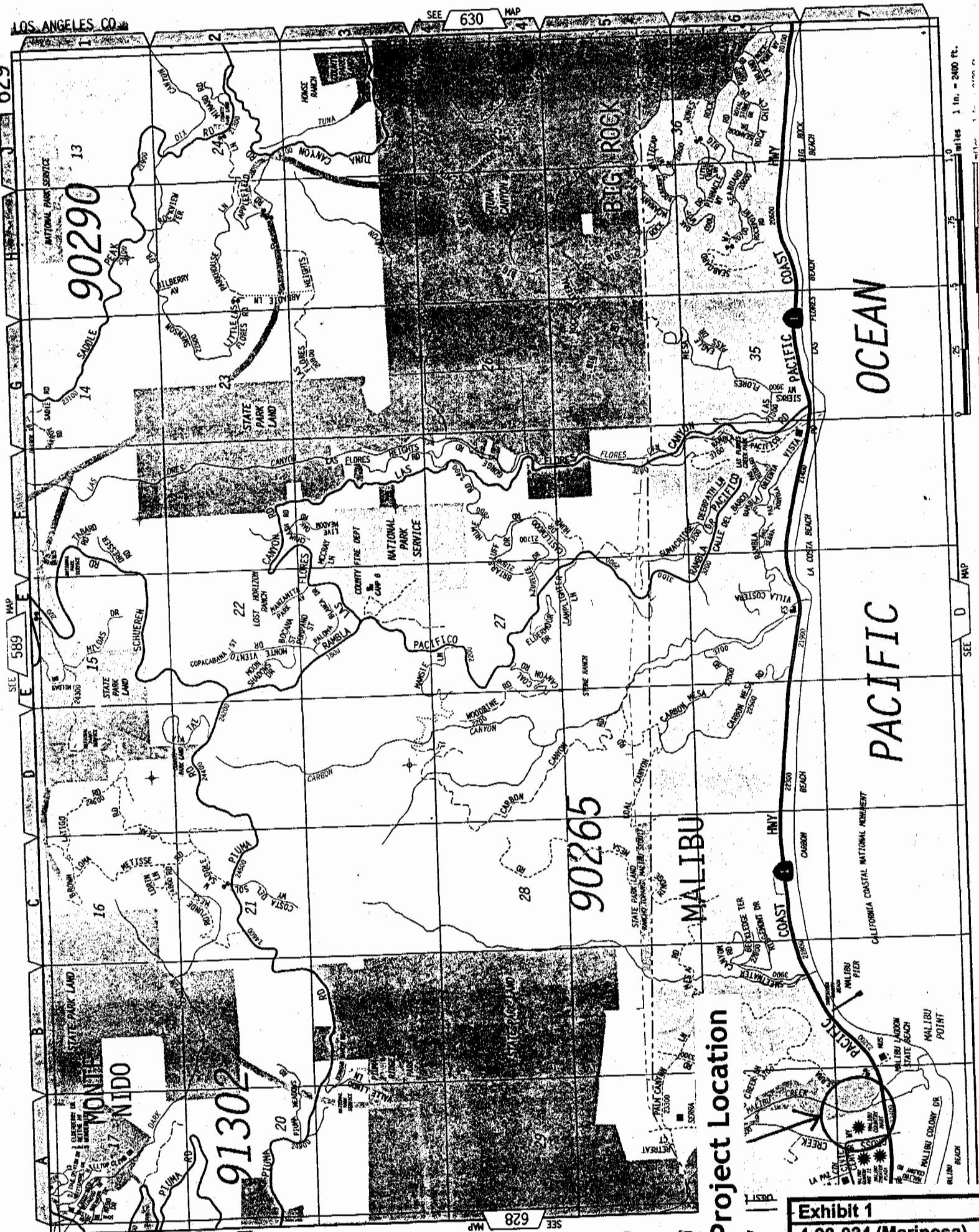
The following special conditions are required to assure the project's consistency with Section 13096 of the California Code of Regulations:

Special Conditions 1 through 13

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

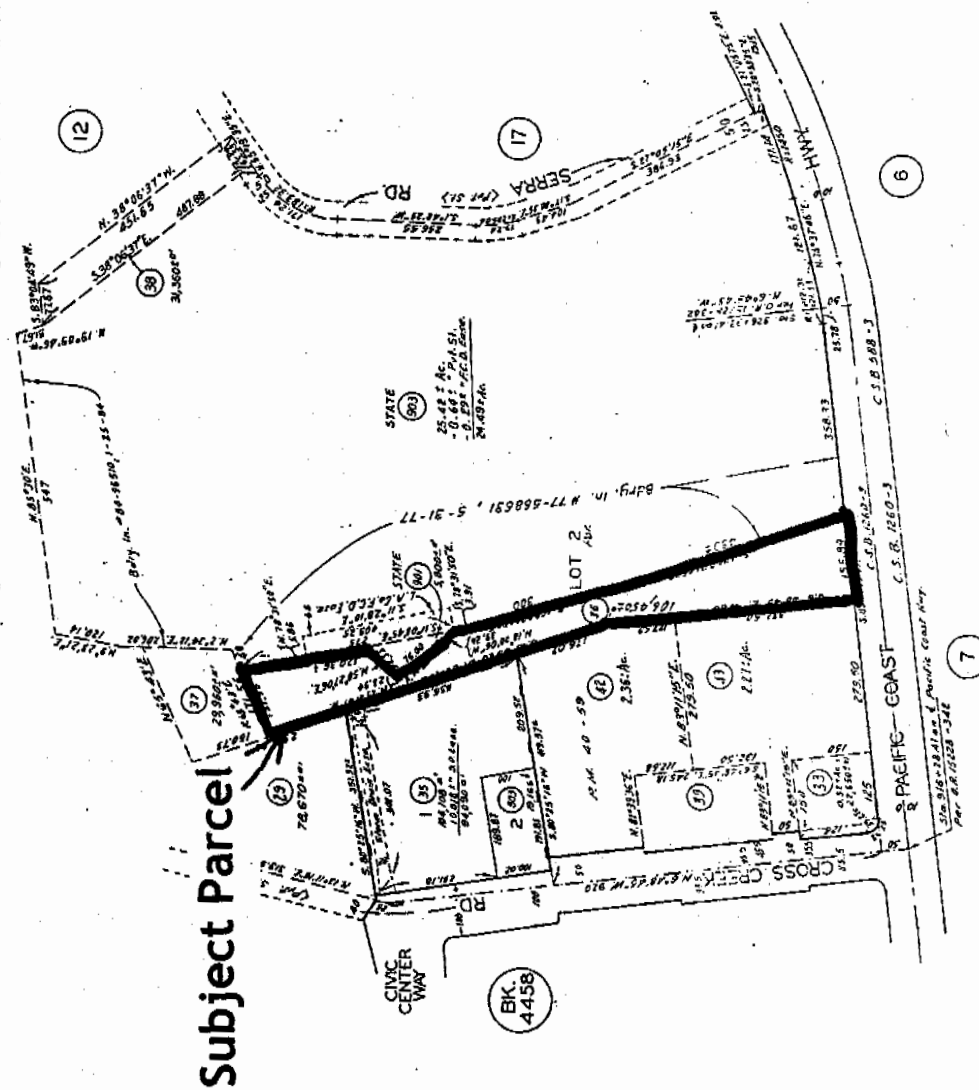
Commission finds that the project, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

Exhibit 1
4-98-024 (Mariposa)
Vicinity Map



9300191
2001007052188
1001080510088
000408080827018
58-30950048
58-308048
4-30404048
4-304121218
38018
20218
250121096
115091017
22017
01804067

THE UNIVERSITY OF CHICAGO



PARCEL MAP - P. M. 166 - 6 - 7
LAND OF MATTHEW KELLER IN THE RANCHO
TOPANGA MALIBU SEQUIT R.F. 534

10 OF: PRIV. ASSESS. SEE:
4452-14 & 12

05801
7-14-15

4452 11 200' 1992

721

Exhibit 2
4-98-024 (Mariposa)
Parcel Map



Storm Drain Outlet

Subject Stretch of Bank

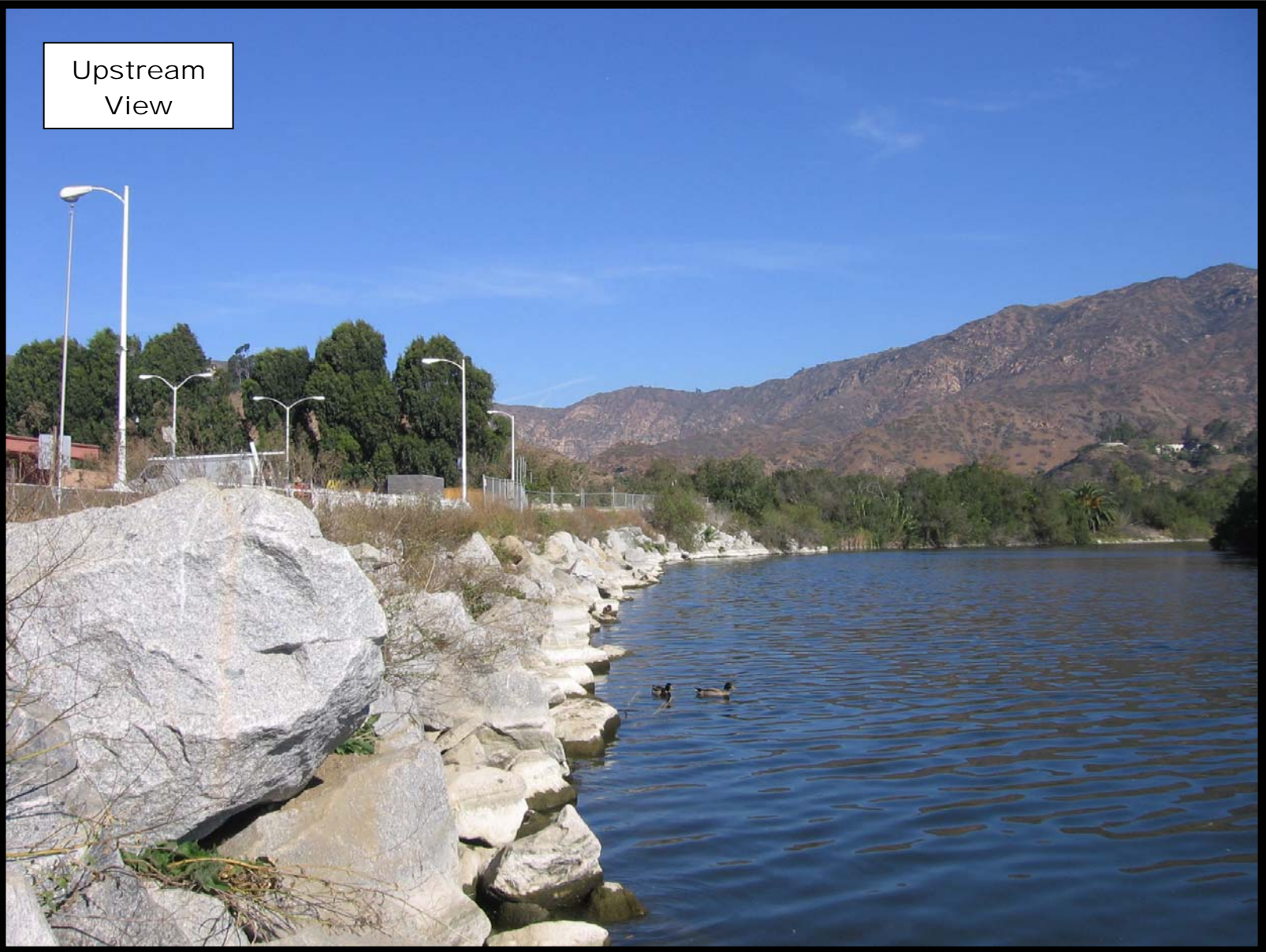
Malibu Lagoon

Pointer 34°02'10.42" N 118°41'00.85" W elev 8 ft Streaming 100% Eye alt 1923 ft



Exhibit 3
4-98-024 (Mariposa)
Aerial View (2 of 2)

Upstream
View



Downstream
View



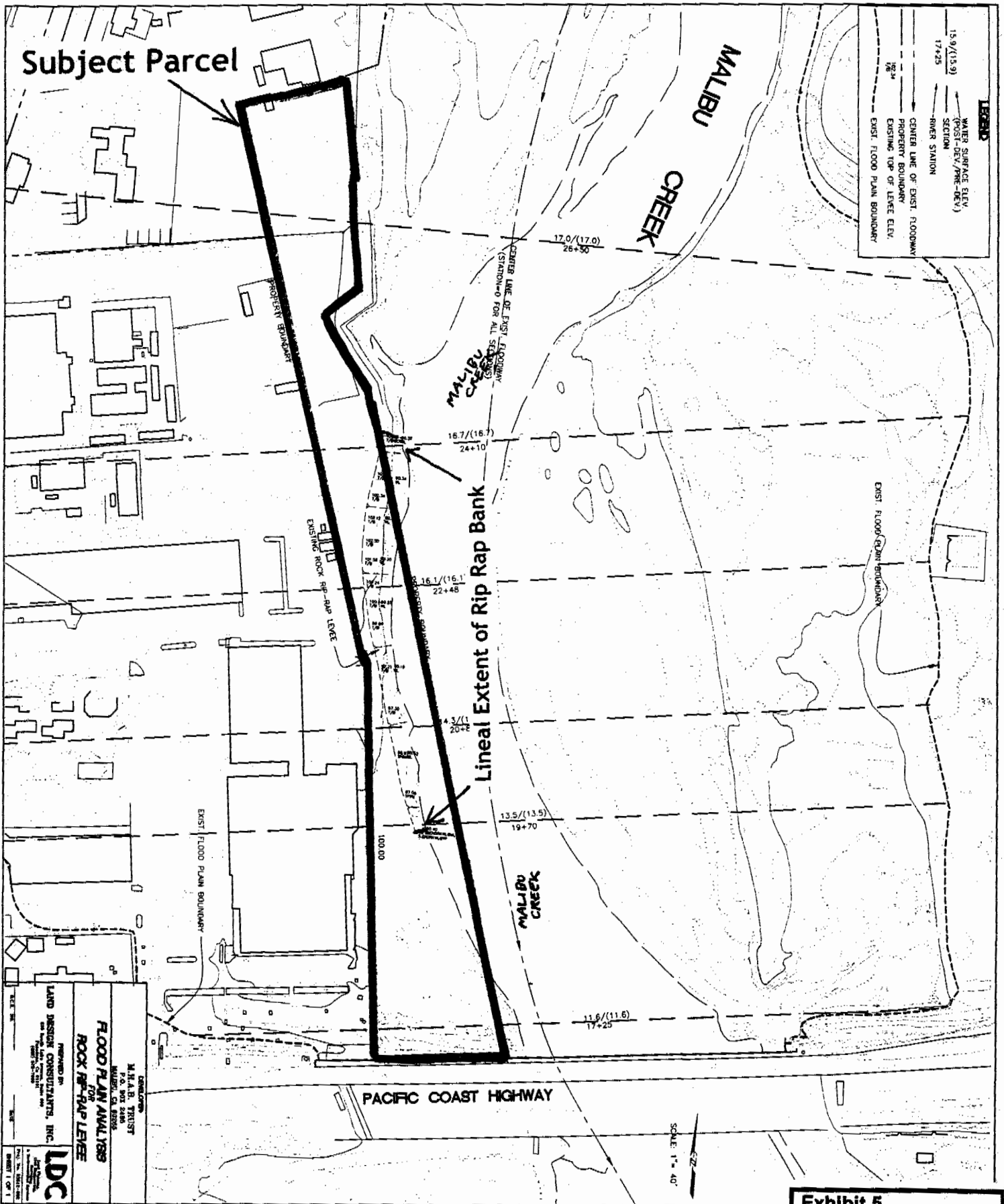


Exhibit 5
4-98-024 (Mariposa)
Site Plan

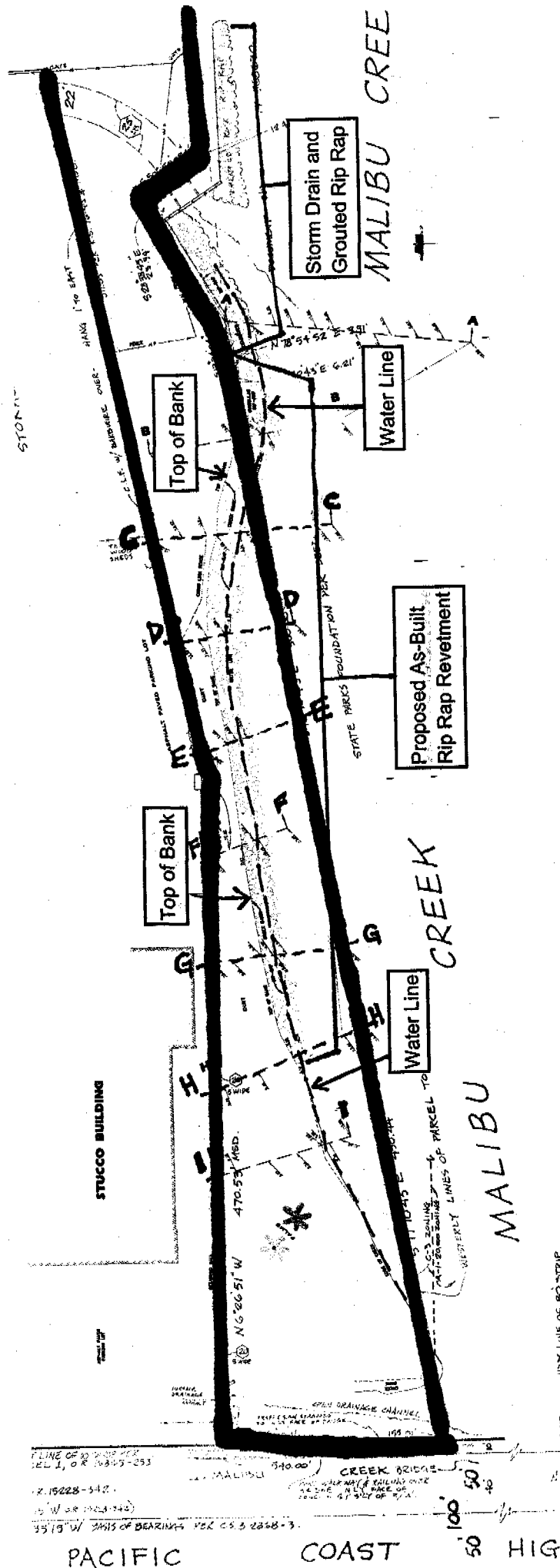


Exhibit 6
4-98-024 (Mariposa)
Surveyed Site Plan with Cross Sections

SECTION VIEW "C-C"



65% Slope
Top of Bank to Property Line: 45 ft.

SECTION VIEW "D-D"



81% Slope
Top of Bank to Property Line: 19 ft.

SECTION VIEW "E-E"



85% Slope
Top of Bank to Property Line: 18 ft.

SECTION VIEW "F-F"



73% Slope
Top of Bank to Property Line: 22 ft.

SECTION VIEW "G-G"



100% Slope
Top of Bank to Property Line: 35 ft.

SECTION VIEW "H-H"



75% Slope
Top of Bank to Property Line: 58 ft.

SECTION VIEW "I-I"



75% Slope

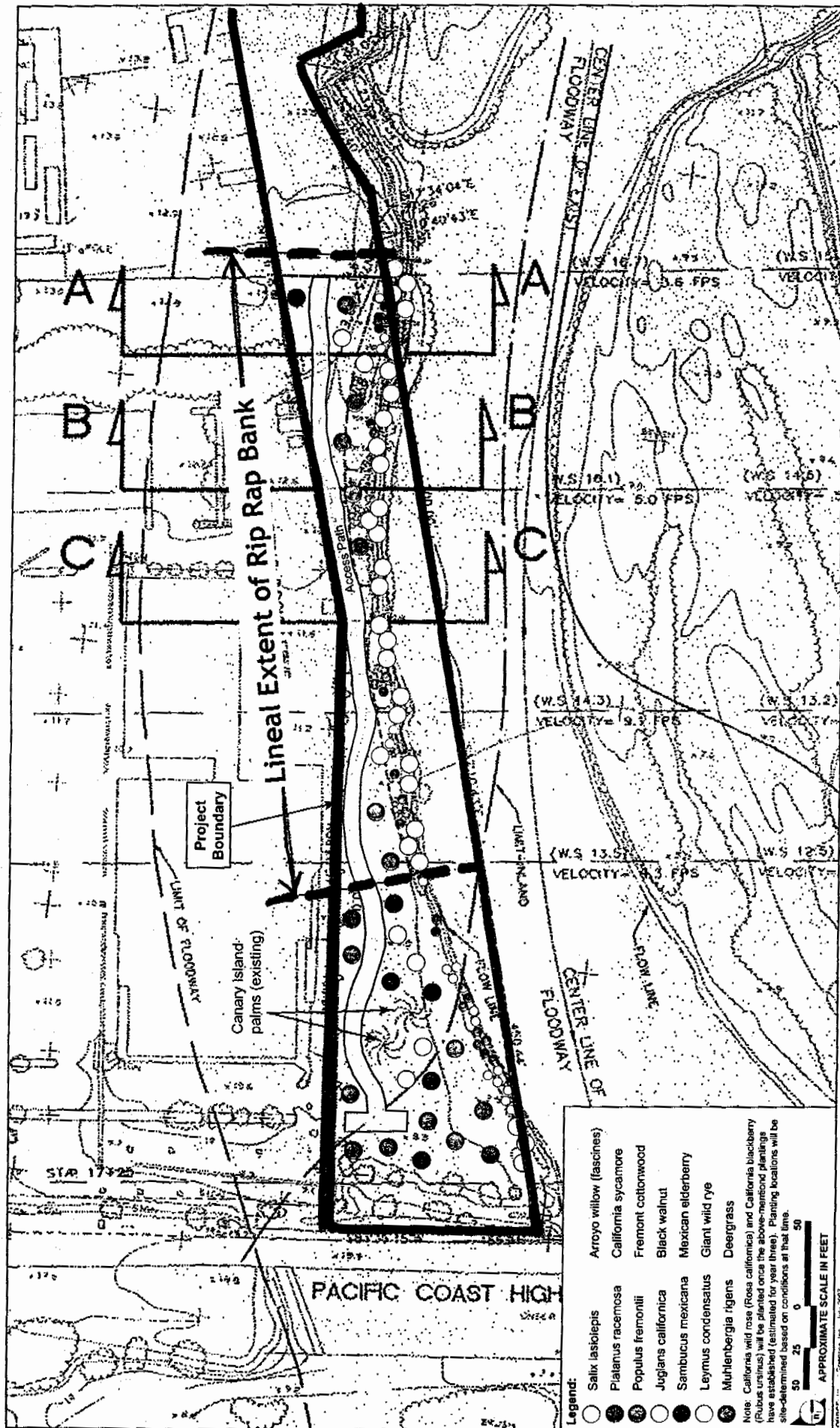
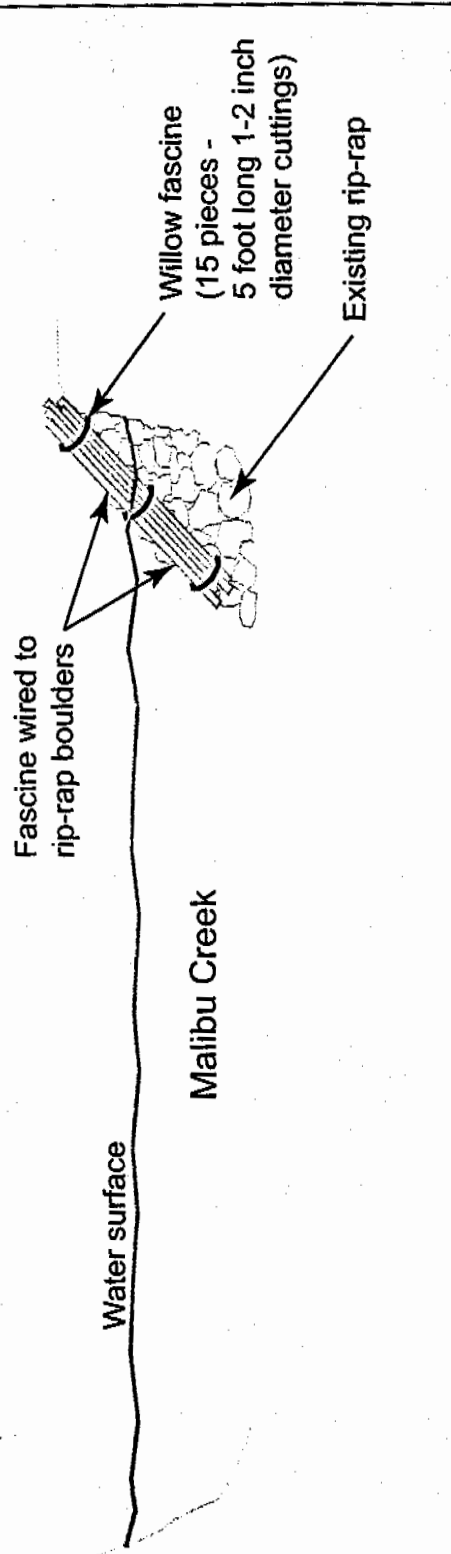


FIGURE 4

Planting Plan



0 SCALE

lencas - July 2007

FIGURE 5

Willow Fascine Schematic

Exhibit 8
4-98-024 (Mariposa)
Willow Fascine Schematic



IMPACT SCIENCES

20
YEARS

January 9, 2009

California Coastal Commission
89 South California Street, Suite 200
Ventura, CA 93001-2801

Attn: Deanna Christensen

Re: Modification to the Mitigation Plan for Mariposa Land Company at Malibu Creek.

Dear Ms. Christensen:

Impact Sciences proposes to modify one aspect of the "Vegetation Restoration Plan - Malibu Creek", the restoration plan that was submitted as part of the application package for Malibu Land Company's pending final permit for bank stabilization along Malibu Creek. Specifically, Impact Sciences now proposes to use willow cuttings, rather than using the willow fascines fastened to the riprap.

In discussing the establishment of willows in riprap, particularly with Susan Litteral, NRCS Agricultural Engineer in the Templeton CA Field Office and Charles Davis, the State Conservation Engineer, the Natural Resources Conservation Service has been planting willows in riprap for over 25 years. According to Mr. Davis, "The key is the willow roots need to be in water." Mr. Davis provided the attached document entitled "*History of NRCS Streambank Protection Projects with Rock Slope Protection Completed under the NRCS Emergency Watershed Protection Program*"

Ms. Litteral indicated that fascines were most useful in establishing willows to protect otherwise unprotected banks where the fascines could be placed in contact with the soil. However, for areas already protected by riprap, particularly where the riprap had sufficient interstitial spaces between the riprap, and into the soil where it can be reached between the riprap, that cuttings should be placed through the riprap and into moist soil. Ms. Litteral, who has a number of project in San Luis Obispo County, recommended this method, including auguring holes for the cuttings, or using a water jet to excavate holes to place the cuttings into. Ms. Litteral also mentioned that typically, the initial growth of willow cutting planted during the winter is to have one or more leaves emerge in early spring, and for the cutting to then have root growth for a year or so before additional leaves emerge.

Therefore, we propose to modify the plan by eliminating the willow fascines, replacing them with willow cuttings, placed into the interstitial spaces between

Exhibit 9
4-98-024 (Mariposa)
Amended Willow
Planting Plan Memo

riprap, and into the soil where the soils is sufficiently moist on a permanent basis. Willow cuttings, which shall be at least one inch in diameter and six feet long, shall be planted at an average of one cutting per eight linear feet (63 - 65 cuttings), with some areas planted more closely than other areas to give a more natural appearance. The exact location of each willow cutting shall be determined by the project biologist.

All other parts of the "Vegetation Restoration Plan" remain unchanged. IF you have any questions, please call me at (805) 437-1900.

Sincerely,
Impact Sciences, Inc.

Larry Lodwick

Larry Lodwick
Associate Principal

Cc Grant Adamson
Daryl Koutnik

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 641-0142

**EMERGENCY PERMIT**

February 20, 1998

Applicant: Grant Adamson (Mariposa Land Company) **Permit No.:** 4-98-024-G

Project Location: 3728 Cross Creek Road (west bank of Malibu Creek)

Work Proposed: Placement of rock rip-rap along 450 feet of the west bank of Malibu Creek to protect property from erosion. The revetment will use 1,500 tons of .5 to 8 ton boulders and will be approximately 14 to 16 feet in height (2-4 foot toe below stream bed).

This letter constitutes approval of the emergency work you or your representative has requested to be done at the location listed above. I understand from the information submitted that an unexpected occurrence in the form of severe stream bank erosion resulting in a threat to a parking area and property requires immediate action to prevent or mitigate loss or damage to life, health, property or essential public services. 14 Cal. Admin. Code Section 13009. The Executive Director hereby finds that:

(a) An emergency exists which requires action more quickly than permitted by the procedures for administrative or ordinary permits and the development can and will be completed within 30 days unless otherwise specified by the terms of the permit;

(b) Public comment on the proposed emergency action has been reviewed if time allows; and

(c) As conditioned the work proposed would be consistent with the requirements of the California Coastal Act of 1976.

The work is hereby approved, subject to the conditions listed on the reverse.

Very Truly Yours,

Peter M. Douglas
Executive Director

A handwritten signature in cursive script that reads "Chuck Damm".

By: Chuck Damm
Title: Senior Deputy Director

Exhibit 10
4-98-024 (Mariposa)
Emergency CDP
4-98-024-G

CONDITIONS OF APPROVAL:

1. The enclosed form must be signed by the property owner and returned to our office within 15 days.
2. Only that work specifically described above and for the specific property listed above is authorized. Any additional work requires separate authorization from the Executive Director.
3. The work authorized by this permit must be completed within 30 days of the date of this permit.
4. Within 60 days of the date of this permit, the permittee shall apply for a regular Coastal Permit to have the emergency work be considered permanent. If no such application is received, the emergency work shall be removed in its entirety within 150 days of the date of this permit unless waived by the Director.
5. In exercising this permit the applicant agrees to hold the California Coastal Commission harmless from any liabilities for damage to public or private properties or personal injury that may result from the project.
6. This permit does not obviate the need to obtain necessary authorizations and/or permits from other agencies.
7. The regular coastal development permit application shall include an analysis of all other alternatives for shoreline, bluff, or stream bank protection prepared by a qualified engineer.

IMPORTANT

Condition #4 indicates that the emergency work is considered to be temporary work done in an emergency situation. If the property owner wishes to have the emergency work become a permanent development, a coastal permit must be obtained. A regular permit would be subject to all of the provisions of the California Coastal Act and may be conditioned accordingly.

If you have any questions about the provisions of this emergency permit, please call the Commission Area office.

Enclosures: 1) Acceptance Form; 2) Regular Permit Application Form

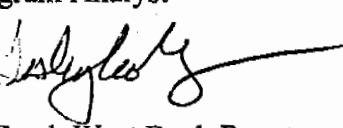
cc: Local Planning Department

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



January 7, 2009

TO: Deanna Christensen, Coastal Program Analyst
FROM: Lesley Ewing, Coastal Engineer. 
SUBJECT: CDP# 4-98-024; Lower Malibu Creek West Bank Revetment

I have reviewed the Preliminary Engineering Design Study (Pacific Advanced Civil Engineering (PACE), May 25, 2007) and the Malibu Creek Survey (Grimes Surveying and Mapping, Inc. surveyed September 15, 2008) and had discussions about this project with both Commission staff and Mr. Dave Jaffe, PACE Project Engineer.

It is my understanding that in 1998 rock was placed along the western bank of the lower Malibu Creek as an emergency measure to address a situation of on-going erosion during a high-flow event, likely in association with one of the severe El Niño storms. The property owner has been attempting to make permanent some form of bank stabilization that will protect the bank from future erosion. And, while the need for bank stabilization has been demonstrated, staff has been requesting that the applicant develop some alternative permanent bank stabilization alternatives that will allow for the propagation of native vegetation to reduce some of the impacts from stabilized banks.

The as-built stabilization is quite steep, approaching 1:1 in some locations. The applicant's engineer asserts that the steepness of the bank stabilization is intended to mimic the natural bank cut that developed on the outer bank of the creek bend. However, this steepness does not readily allow for plants to colonize in the voids between the rocks and, from inspection of photographs of the stabilized bank it appears that most of the bank is void of vegetation.

The current bank and stabilization can feasibly be recontoured to achieve a less steep slope. This would require that the revetment be disassembled from the top, the bank be sloped back, and rock be placed again along the bank at a more gradual slope. The Preliminary Engineering Design Study by PACE (May 25, 2007) asserts that laying the top portion of the existing revetment back at a 2:1 (h:v) slope would result in increased turbidity. But, based the provided information, no evidence has been submitted to support this assertion. There is the potential for some temporary turbidity during construction; however this could be minimized through project scheduling, good work practices and implementation of best management practices. If the revetment were to be reconstructed along the bank at a more gradual slope, a bottom layer of filter fabric should be installed to reduce soil piping and reduce turbidity from high flow events. While it may be necessary to cut root holes into the filter fabric, the soil loss through these openings in the bottom layer would not be significant. Additionally, turbidity should be greatly reduced from the current revetment with rock covering a bare soil slope with no fabric filter layer

Exhibit 11
4-98-024 (Mariposa)
Lesley Ewing Memo

at all. The applicant would need to prepare a revised engineering design for the new revetment. Also management plans would be needed to control silt and turbidity and schedule the revetment rebuilding to minimize impacts to coastal resources. Based on all information provided by the applicant, it appears feasible that this slope can be rebuilt at a more gradual 2:1 slope.

I will be happy to further discuss this project with you at your convenience, or to discuss it with the applicant's engineers. I can be reached at the main office number above, by my direct line (415/904-5291) or by e-mail (lewing@coastal.ca.gov).

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800



MEMORANDUM

FROM: Jonna D. Engel, Ph.D.
Ecologist

TO: Deanna Christensen
Coastal Program Analyst

SUBJECT: Malibu Creek Vegetation Restoration Plan, CDP# 4-98-024; Lower Malibu
Creek West Bank Revetment

DATE: January 9, 2009

Documents Reviewed:

Impact Sciences, Inc. August 2007. Vegetation Restoration Plan -- Malibu Creek.
Prepared for the Mariposa Land Company, Malibu, California.

I have reviewed Impact Sciences "Vegetation Restoration Plan -- Malibu Creek" for the nearly 500 feet of rip rap placed, under emergency permit conditions, on the west side of Malibu Creek to address the severe erosion caused by the 1997-1998 winter and spring high stormwater flows. Approximately 0.25 acre of land was lost that winter, creating a steep cut bank. Rip rap was placed on the bank to prevent further erosion from impinging on Mariposa Land Company property. Impact Sciences estimates that the rip rap slope angle is approximately 1:1 and that it stands 15 in height. A primary goal of the restoration plan is to plant the rip rap that remains bare as well as the undeveloped area between Malibu Creek and the Cross Creek Shopping Center to create 0.585 acre of native riparian habitat. To plant the rip rap, fascines of willow cuttings are proposed to be fastened along the length of the revetment to begin to fill in the interstitial spaces in order to create overhanging vegetation adjacent to Malibu Creek. The restoration plan also states that "interstitial spaces will be filled with sand or fine gravel as a substrate for additional plantings (estimated to take place during year three)."

Direct observation and photos demonstrate that along the bank areas where there is a less than 1:1 slope angle, vegetation has been able to naturally recruit among the rip rap. However, plants are unable to establish on the majority of the rip rap which stands at a steep 1:1 slope angle. It is my opinion that the streambank restoration would be more successful if the proposed rip rap were to be laid back at a lesser slope angle, such as 2:1, which is more typical for vegetated rip rap bank stabilization designs.

Lesley Ewing, Commission Coastal Engineer, has reviewed this project and stated that it is feasible from an engineering standpoint to recontour the current bank and

Exhibit 12
4-98-024 (Mariposa)
Dr. Engel Memo

revetment to attain a less steep slope (e.g. 2:1) that will support native riparian vegetation¹. Ms. Ewing also points out that placement of a bottom layer of fabric filter under the rip rap will reduce soil piping and turbidity from high flow events while acknowledging that root holes in the fabric filter may be necessary to facilitate plant establishment. I am in agreement with Ms. Ewing's opinion that fabric filter should be placed under the rip rap with root holes for plants. I also recommend that willow cuttings be stuck directly into the interstitial spaces within the rip rap throughout the area, and that interstitial spaces be partially filled with a fine gravel, sand, soil combination..

The plant palette for the upland area, surrounding the rip rap, is provided in Table 2 of the proposed restoration plan and consists of California sycamore, Fremont cottonwood, black walnut, Mexican elderberry, arroyo willow, mulefat, giant wild rye, deergrass, California wild rose, and California blackberry. In addition to these species, I recommend that mugwort, *Artemisia douglasiana* and yerba mansa, *Anemopsis californica* be added to the proposed plant palette for the rip rap and upland area in order to add to the species diversity within the riparian corridor.

Impact Science's vegetation restoration plan provides appropriate plans for mitigation site preparation, non-native plant control and eradication, irrigation, plant maintenance and weeding. Impact Science states that "the site shall attain 75 percent cover after three years and 90 percent cover after five years for the life of the project." In addition they state that "all plantings shall have a minimum of 80 percent survival the first year and approaching 100 percent survival at the end of the five-year monitoring period." The goals and objectives of the mitigation project will be met by adhering to these performance standards. Impact Science's plan includes a well designed monitoring program that will be conducted for five years and will include annual reports. They have taken into consideration unforeseen situations by including an adaptive management and contingency measures section in their report by which they will be able to address any problems that may arise.

In conclusion, it is my opinion that a less steep revetment slope than is proposed, in conjunction with incorporating filter fabric and willow stakes into the reconstructed riprap design, would be more likely to result in successful riparian restoration along this stretch of lower Malibu Creek bank.

¹ Ewing, L. January 7, 2009. CDP# 4-98-024; Lower Malibu Creek West Bank Revetment Memorandum to Deanna Christensen, Coastal Program Analyst.



August 11, 2008

Ms. Deanna Christensen
California Coastal Commission
89 South California Street, Suite 200
Ventura, CA 93001

RE: CDP Application Number 4-98-024

Dear Ms. Christensen,

It is a pleasure to write this letter in support of the existing creek bank stabilization effort and proposed mitigation of the west bank of Malibu Creek. In addition to numerous site visits to the lower Malibu Creek study area, I have extensively reviewed the "Lower Malibu Creek Emergency Revetment Geomorphic, Bank Erodibility, and Alternatives Analysis prepared by Pacific Advanced Civil Engineering, (PACE) and the Malibu Creek Vegetative Restoration Plan prepared by Impact Sciences. The studies identify the best action plan for flood- bank protection, creek hydraulic suitability, costs, re-vegetation and maintaining minimal environmental impacts. As a former faculty member of the Environmental Studies Program, University of California at Santa Barbara, I am qualified to review the mitigation measures presented herein.

The goals of the mitigation plan will substantially improve and:

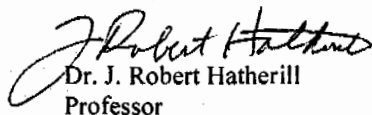
- Protect the Western bank along Lower Malibu Creek from further erosion;
- Re-vegetate the area to create a native flora riparian habitat and;
- Improve the aesthetics of lower Malibu Creek.

The enhanced riparian corridor will include the installation of fascines of arroyo willow along the revetment perimeter to create overhanging vegetation adjacent to lower Malibu Creek. This action will likely attenuate the steep slope of the revetment and will be aesthetically pleasing.

Removing non-native species and planting a mixture of native shrubs and trees will improve the riparian habitat value. This action will increase the habitat area for the tidewater goby (*Eucyclogobius newberryi*), as the shaded areas of the creek are the preferred habitat of the tidewater goby. The extensive planting of native vegetation will dramatically improve the aesthetics of lower of Malibu Creek and support and provide a habitat for the native fauna.

I strongly support the proposed mitigation plans for the west bank of Malibu Creek, prepared by PACE and Impact Sciences. If you require additional information, please do not hesitate to contact me [jhatherill@delmar.edu].

Sincerely,


Dr. J. Robert Hatherill
Professor

AUG 14 2008



Angeles District
1925 Las Virgenes Road
Calabasas, CA 91302
(818) 880-0350

RECEIVED
NOV 17 2008

November 14, 2008

CALIFORNIA
COASTAL COMMISSION
SOUTH CENTRAL COAST DISTRICT

Deanna Christensen
Coastal Program Analyst
California Coastal Commission
89 South California Street, Suite 200
Ventura, CA 93001

Re: **Vegetation Restoration Plan for the Mariposa Land Property at Malibu Creek City of Malibu, California**

Dear Mrs. Christensen,

The California Department of Parks and Recreation, Angeles District, has reviewed the above referenced Restoration Plan and offers the following comments for your consideration.

This property has a long history and several proposals have been reviewed by State Parks. As with past plans, we have two concerns with the current proposal. First, leaving the rip-rap in place with its current 1:1 slope configuration is not a solution to mitigating the erosion problem next to the Mariposa Land Property. Second, using willow fascine and minimally erodible component to fill in interstitial spaces in between rip-rap is not a known or proven restoration method. Each concern is discussed in detail below.

Rip-rap Configuration

The placement of the rip rap was granted as an emergency permit during the 1997-1998 wet season. It is known that hardened structures on stream banks change the hydrology of the creek. Evidence of this is apparent with the current emergency project, as well as the grouted rip-rap and chain link fencing upstream of the project. The unconsolidated nature of the boulders and their un-engineered placement has continued to contribute to an unstable site for vegetation development. This is evident by the absence of vegetation along the 500-foot stretch of rip-rap adjacent to the Mariposa Land property.

Now that the emergency has passed, it is justifiable that the applicant take the time to design a sustainable bio-engineered project. We suggest the rip-rap be removed to create a sustainable soft bio-engineered slope. If rip-rap can not be removed it should be modified with vegetation and other materials to create a soft bio-engineered slope. Using vegetation and other materials to soften the land-water

Mrs. Deanna Christensen
November 14, 2008
Page 2

interface is known to improve ecological features without compromising the engineered integrity of the shoreline (Best Management Practices for Soft Engineering, U.S. Fish and Wildlife Services July 9, 2008).

Design considerations should include tying into the top of the existing slope with a slope that is 3:1. A 3:1 slope will widen the creek channel; thus, reducing water velocities along the edges of the creek. Reduced velocities will in turn encourage deposition of suspended sediment and help begin the process of establishing a soil matrix for vegetation growth. In addition, slopes that are 3:1 can be stabilized with riparian vegetation which provides shade for aquatic species and filters urban runoff.

Willow Fascines & Filling Interstitial Spaces


We are concerned with the proposed attachment of willow bundle fascines to rip-rap as a way to establish willows at the rip-rap water interface. Additionally, the suggestion to later fill in interstitial spaces (after 2-3 years) with minimally erodible material to establish vegetation cover is also a concern. To our knowledge, neither of these approaches is a proven restoration methodology.

As discussed above, we suggest utilizing a soft engineering approach to re-design the slope. This technique should combine live and dead vegetation with other materials to create a slope that can be planted with willow stakes (*Salix spp.*) and other native plants. Unlike the proposed willow bundle fascines, many examples of stream bank stabilization projects that utilize willow stakes can be found in California. Planting of willow stakes is a known method to reduce erosion, encourage deposition of suspended sediment, and improve wildlife habitat associated with the immediate streambank.

Overall, our suggestions focus on eliminating and/or reducing impacts from the current rip-rap configuration while providing natural bank stabilization. Hard structures are known to have a high failure rate and are difficult areas to re-establish vegetation. Softer bio-engineered solutions are now recognized as more sustainable than rock rip-rap. If you have any questions or need any clarification of the information in this letter, please call Environmental Scientist, Kristi Birney, at the number listed above, extension 104. She can also be reached by email at kbirney@parks.ca.gov.

Thank you for your consideration of these comments in this matter.

Sincerely,



Ron Schafer
District Superintendent



3220 Nebraska Avenue
Santa Monica CA 90404

ph 310 453 0395
fax 310 453 7927

info@healthebay.org
www.healthebay.org

August 4, 2005

City of Malibu Planning Division
Attn: IS No. 03-003
23815 Stuart Ranch Road
Malibu, Ca 90265

Submitted via email to Raneika Brooks-McClain rbrooks@ci.malibu.ca.us

**Re: Opposition to the Mitigated Negative Declaration
(MDN) No. 04-002 for 3738 Cross Creek Road (APN 4452-011-036)**

Dear Raneika Brooks-McClain,

Heal the Bay has reviewed the Mitigated Negative Declaration No. 04-002 for 3738 Cross Creek Road (APN 4452-011-036) ("MDN") and vigorously opposes its certification. The MDN is in direct conflict with numerous policies in the City of Malibu's Local Coastal Plan (LCP), LCP Land Use Plan, and LCP Local Implementation Plan.

First of all, this issue is currently an open enforcement case for the California Coastal Commission and thus it is not appropriate for the City to issue the MDN at this time. Second, the MDN is not compliant with the LCP as it fails to present or consider an environmentally superior alternative or any viable alternatives for that matter, and thus is not consistent with applicable laws. This is inconsistent with the principles of CEQA as well. Third, not only will the proposed mitigation and solution to this recurring problem set forth in the MPN not work, it does not utilize current design criteria for installing planted rip-rap to prevent failure. Heal the Bay strongly disagrees with numerous assertions made by City planning staff and the applicant regarding the significance of impacts associated with the loose boulder rip-rap in Malibu Lagoon. Due to the sensitive nature of the resources in the immediate area, a full EIR that incorporates a long-term environmental alternative should be required for this project. We are at a loss as to why the City of Malibu would review a mitigated negative declaration for a project that falls under Coastal Commission jurisdiction and which has been in violation of the Coastal Act and without a valid Coastal Permit since at least September of 1998. Indeed, this project is currently an open enforcement case for the Coastal Commission. In short, the overall plan as proposed is inconsistent with existing coastal policies and plans, will not function properly and will lead to further degradation of water quality and habitat over the long term.

I. Discussion

The following issues were of major concern in our review of the proposed mitigated negative declaration:

- Non-compliance with their Coastal Permit from September 1998 to present; no mitigation to correct violations;



3220 Nebraska Avenue
Santa Monica CA 90404

ph 310 453 0395
fax 310 453 7927

info@healthebay.org
www.healthebay.org

- Failure to design a sustainable environmentally sound project or alternatives analysis;
- Failure to address fencing area and the grouted rip-rap armoring directly upstream;
- Proposed planting of existing rip-rap; and
- Inadequate mitigation to address impacts and no assessment of downstream impacts.

1. Non compliance with Emergency Coastal Permit from September 1998 to present; no mitigation or attempt to correct violations.

The emergency permit ("Permit") was granted by the Coastal Commission to protect structures during an emergency situation (El Nino) and was never intended to help the applicant avoid meeting the conditions of the Coastal Act. Moreover, the applicant did not even meet the conditions required in the Permit to make the emergency work permanent. The applicant is therefore in violation of their Permit conditions and has been since September of 1998. The intent of an emergency permit is not to allow for the permanent placement of structures that damage waters of the United States and fill wetlands, but to protect property during extreme conditions using temporary measures. This is clearly in the Permit dated February 20, 1998, Emergency Permit Application Number 4-98-024-G, in Attachment 7, Page 2, Bullet Point 4 and "Important" note.

Within 60 days of the date of this permit, the permittee shall apply for a regular Coastal Permit to have the emergency work be considered permanent. If no such application is received the emergency work shall be removed in its entirety within 150 days of the date of this permit unless waived by the director.

IMPORTANT

Condition # 4 indicates that the emergency work is considered to be temporary work done in an emergency situation. If the property owner wishes to have the emergency work become a permanent development, a coastal permit must be obtained. A regular permit would be subject to all the provisions of the California Coastal Act and may be conditioned accordingly.

Bullet 7 on the same page states:

The regular Coastal Development permit application shall include an analysis of all other alternatives for shoreline, bluff, or stream bank protection prepared by a qualified engineer.

The applicant did not submit an application for a new Coastal Permit to make the emergency work permanent. Nor did the applicant conduct an analysis of all other alternatives for stream bank protection. Instead, the applicant now, 7 years later, is trying to make the rip rap permanent through a mitigated negative declaration, which also contains so analysis of alternatives. This is not consistent with the Permit or the Coastal Act.

Further, the proposed MND fails to recognize the serious impacts caused to the ecosystem by the installation of the rip-rap in 1998 and the significant impacts that have occurred during the time in which the applicant has been in violation of their temporary Permit (September 1998 to date), as well as ignores the requirement to comply with the provisions of the Permit and to correct the situation. Allowing the rip-rap to become a permanent solution will degrade water quality and habitat downstream including critical



3220 Nebraska Avenue
Santa Monica CA 90404

ph 310 453 0395
fax 310 453 7927

info@healthebay.org
www.healthebay.org

habitat for the federally endangered steelhead trout and tidewater goby. Exhibit 1 shows Heal the Bay's map of this area; special notice should be paid to the stream bank erosion downstream of the rip-rap at issue. This is a continual source of sediment loading to Malibu Lagoon. Fine sediments are considered a significant source of phosphates in the summer months and contribute to eutrophication in the Lagoon (Malibu Lagoon Restoration and Enhancement Plan, June 2005). The existing rip-rap on site is already failing (toe undercut) and this lateral and downward channel erosion further exacerbates sediment loading to Malibu Lagoon. Malibu Lagoon is on the State 303(d) List of Impaired Water Bodies for algae, eutrophication, and sediment. The City should not allow further exacerbation of these already existing impairments to the Creek and Lagoon, both of which are important ecologically and economically to the City.

2. Failure to design a sustainable environmentally sound project or provide alternative analysis.

The current emergency solution (rip-rap) is neither sustainable nor sound. This is clearly evidenced by the fact that the existing rip-rap on site is already failing (toe undercut) and will need to be repaired and maintained in perpetuity. The applicant is aware of this problem, as they have requested, as part of the MND, to:

"maintain the existing rock revetment including the recovery of migrated boulders that may be moved by future storm events, placement of additional rock only to replace migrated boulders when they can not be recovered."

However, every time boulders are replaced and the rip-rap repaired more degradation of water quality and habitat will occur. Heal the Bay has mapped over 70 miles of streams in the Malibu Creek Watershed and has documented 987 individual bank armoring projects, of which 62% were failing or had failed. Loose boulder rip-rap accounted for 403 of the mapped bank armoring projects and had a failure rate of 74.9%, and grouted or concreted boulder rip-rap accounted for 173 of the mapped bank armoring projects with a failure rate of 68.2%. Armored stream banks were one of three major causes of downstream bank erosion and sedimentation identified in the Draft State of Malibu Creek Watershed Report. Luce and Abramson, June 2005. The data analyzed in that report clearly demonstrated the ineffectiveness of bank hardening, especially rip-rap, as well as the damage that armored stream banks cause to downstream resources.

Due to the proximity of this site to Malibu Lagoon its sensitive resources, a sustainable environmentally responsible long-term solution is needed. Heal the Bay strongly urges the applicant and the City of Malibu to re-contour the stream banks and use soft bioengineered solutions to stabilize the banks for the long term. Bioengineered solutions will afford greater strength and protection against bank erosion and will promote vegetation to shade the stream and uptake pollutants. See Nelsen, Chirbas, and Myrowich, "Turf Reinforcement Matting: An EPA-recognized stormwater BMP" in Stormwater at 64 (March/April 2005). A vegetated buffer zone would also intercept storm water runoff before it gets to the Malibu Creek and assist in meeting the upcoming TMDLs for nutrients and sediments. Any plan should create a vegetated buffer to stabilize the banks along the entire stream reach and should involve removing the fencing that is forcing stream flows into the bank instead of allowing energy dissipation through vegetated buffer overbank flows. This will ultimately increase the ecological benefits to the creek, eliminate the need for long term maintenance, and dissipate energy.



The alternatives evaluation in Attachment 10 of the MND is incomplete and grossly misleading. For example, to suggest an alternative to concrete the banks like the Los Angeles River and then to compare that alternative to the proposed rip-rap alternative in an attempt to show that the proposed solution is more environmental is misguided and insulting to the public. No evaluation was done for bioengineering using soft materials, nor has this type of alternative been explored at any level of detail. Notably, such an evaluation is required by the LCP. The applicant also has not demonstrated that bioengineering and restoration can not accomplish flood protection and would not be feasible. Heal the Bay has discussed this issue with numerous stream restoration experts, all of whom have concluded that bioengineering is feasible at this site. The applicant must consider and compare bioengineered alternatives in order to make a valid assertion that the proposed alternative is the more environmental solution.

In fact, during the development of the Malibu Lagoon Restoration and Enhancement Plan, completed in June 2005, a preliminary evaluation of the conditions at this site was performed by the consultants. They found that energy dissipation could be accomplished and could be integrated into the final design of the lagoon restoration if the applicant were willing to do so. To create a sustainable long-term solution, the applicant should consider an alternative that would re-contour the slopes of the entire reach up to the grouted rip-rap, restore riparian vegetation, and create the widest possible vegetated buffer zone. This would allow streamflows to overtop into a vegetated buffer area where scour velocity can be slowed and energy dissipated. This alternative would require laying back the slope of the existing bank and possibly installing a floodwall in front of the shopping center as far back as possible. These suggestions would be consistent with policies 3.8, 3.23, 3.32, 3.34, 3.88 and 3.121 of the City of Malibu's LCP Land Use Plan and the Hydromodification section 17.9 paragraph B of the LCP Local Implementation Plan. Thus, there is a viable and feasible environmental alternative that could have been considered may be implemented. Yet the applicant did not even describe such an alternative in its analysis. This must be done before any MND can be approved.

3. Failure to address adjacent fencing and grouted rip-rap armoring directly upstream, which contribute to the stabilization problem.

The analyses in the MND fails to address or consider the impacts of the grouted rip-rap and fence placement directly upstream on the applicants property, both of which contribute to bank erosion and bank failure downstream. If all of three of these elements are not addressed together, existing erosion and bank failure problems will continue to occur, and the resulting maintenance activities will continue to jeopardize water quality and habitat in the lagoon.

The attached 1997 aerial photo (Exhibit 3) clearly shows that the upstream fencing did not exist prior to the bank erosion. If it had been built prior to the rip-rap, it would have been eliminated when the stream bank eroded. Thus it must have been built either at or after the construction of the rip-rap, and without a Coastal Permit. Further, a comparison of Exhibit 2 taken in 2004 and Exhibit 3 taken in 1997 clearly shows the loss of vegetation that occurred within the fenced area. The steep bank that supports the fencing forces higher volumes and velocity water to scour the stream bank contributing to its failure. As there is no mention of the fencing in the temporary Permit, and there is no other Coastal Permit allowing this fencing, it should be removed. Similarly, the grouted rip-rap upstream of the project (Exhibits 1 and 2) actually deflects flows toward the project stream bank and likely induces scouring of that bank.



Clearly, if the fencing and upstream rip-rap elements are ignored, there is an even higher likelihood that the proposed stabilization will continue to fail.

4. Proposed planting of existing rip-rap.

The applicant's proposal to plant the existing rip-rap simply will not work. The current installation techniques for installing "planted rip-rap" involve the use of underlayment and surface matting, purposefully sized and spaced boulders to accommodate planting and retain soils, special soil amendments below and within the rip-rap, and integration of a planting plan as part of the design. The current rip-rap is already failing and was not designed to accommodate planting. The pore spaces proposed for planting will leak top soil and any soil amendments into Malibu Lagoon, contributing even more sediment and nutrients into already impaired waters. This same poorly-conceived idea of simply burying rip-rap and planting the area above the water level was attempted just upstream at the new Serra Retreat Bridge; it failed spectacularly in the first month. In addition, Heal the Bay's Stream Team has documented numerous rip-rap plantings that have failed throughout the watershed. A real, sustainable, environmentally sound long-term solution needs to be designed for this site. In addition, any solution must address the sources of bank scour such as steepened banks with fencing and the grouted rip-rap upstream.

5. Inadequate mitigation to address impacts and no assessment of downstream impacts.

Although Heal the Bay strongly urges the city to deny the MND in its entirety, for the sake of completeness we offer the following specific comments and recommendations on the document itself. In that regard, each of the following impact assessments and/or mitigation measures in the MND are fatally flawed.

a. Biological Resources

First, we strongly disagree with the assessment of the following impacts in Section D: Biological Resources of the MND and the evaluation of these impacts (pp.13-16). In fact, as each of these impacts will actually be potentially significant, the applicant's MND should be denied and a full EIR conducted.

Bullet 1. The MND states that the impact to steelhead trout and tidewater goby habitat are less than significant. As discussed above, the ongoing erosion caused by the rip-rap to the downstream banks and the channel down cutting that contribute fine sediments are major factors in the summer algal blooms and eutrophication in the lagoon. Tidewater goby prefer sand substrate for rearing and breeding. Malibu Lagoon Restoration and Enhancement Plan, June 2005. Further, low dissolved oxygen in the lagoon has been responsible for fish kills in the past and has the reasonable potential to cause future fish kills that could affect goby and/or steelhead trout. The project as proposed will do nothing to reduce downstream erosion or down cutting and does pose a potentially significant impact to both species.

Bullet 2. The existing rip-rap has and continues to prevent riparian vegetation growth. This was further exacerbated by the installation of the upstream fence well within the 100 ft buffer zone as well as the subsequent clearing of the property behind the fence for vehicle storage. The proposed project does not restore the previous extent of riparian buffer vegetation. Thus, it constitutes a potentially significant impact.



Bullet 3. Continued downstream erosion and undercutting will substantially degrade water quality and habitat in a federally protected wetland. Lack of riparian vegetation, lost connectivity of the floodplain, and the inability to infiltrate stormwater runoff has and will continue to adversely impact the wetland habitat and water quality. Thus, Bullet 3 also should be considered a potentially significant impact.

Bullet 4: Increased sedimentation of the lagoon, particularly the increase in fine sediment and loss of sandy substrate, has the reasonable potential to interfere with tidewater goby breeding habitat and should be listed as a potentially significant impact.

Bullet 6. The current loose boulder rip-rap and fencing are in the riparian buffer ESHA and conflict with the following sections of Malibu's Local Coastal Plan, Land Use Plan:

3.23 State 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 (minimum 100ft.) and physical barriers to human intrusion.

3.32 Channelizations or substantial alterations of streams shall be prohibited except for flood protection of existing development where there is no feasible alternative and bioengineering shall be preferred for flood protection over rip-rap channels.

3.34 Bioengineering methods or "soft solutions" should be developed as an alternative to constructing rock revetments, vertical retaining walls or other "hard structures" along lower Malibu Creek. If bioengineering methods are demonstrated to be infeasible, then other alternatives may be considered. Any applications for protective measures along lower Malibu Creek shall demonstrate that existing development in the Civic Center is in danger from flood hazards, that the proposed protective device is the least environmentally damaging alternative, that it is sited and designed to avoid and minimize impacts to the habitat values of the riparian corridor along the creek and the recreational and public access use of State Park property along the creek, and that any unavoidable impacts have been mitigated to the maximum extent feasible.

3.88 Buffer areas shall be provided around wetlands to serve as transitional habitat and provide distance and physical barriers to human intrusion. Buffers shall be of sufficient size to ensure biological integrity and preservation of the wetland they are designed to protect, but in no case shall they be less than 100 feet in width.

3.121 Alteration or disturbance of streams or natural drainage courses or human-made or altered drainage courses that have replaced natural streams or drainages and serve the same function, shall be prohibited, except where consistent with Policy 3.32. Any permitted stream alterations shall include BMPs for hydromodification activities.

This project also is in conflict with the City of Malibu, Local Implementation Plan, Section 17.9: Hydromodification, Paragraph B:

Any channelization or stream alteration permitted for one of these three purposes shall minimize impacts to coastal resources, including the depletion of



3220 Nebraska Avenue
Santa Monica CA 90404

ph 310 453 0395
fax 310 453 7927

info@healthebay.org
www.healthebay.org

groundwater, and shall include maximum feasible mitigation measures to mitigate unavoidable impacts. Bioengineering, unless no feasible alternative exists, is the only acceptable method of bank stabilization and flood protection for new development, and the preferred method for redevelopment. Where armoring of stream banks has failed, streambanks shall be stabilized using bioengineered structures, unless no feasible alternative exists. Any permitted stream alterations shall include BMPs such as incorporating vegetation in structure design, deflecting flow from eroding stream banks, and reshaping the eroding bank and establishing vegetation.

Clearly the applicant should state in Bullet 6 that the project will cause potentially significant impacts.

b. The MND Contains Non-Meaningful Conditions

Second, the third paragraph on Page 15 of the MND states that the project will be conditioned such that if the stream bank fails it will be replaced using bioengineered methods. As stated earlier, the rip-rap and adjacent fencing currently does not have a valid Coastal Permit. In addition, it is subject to the conditions and requirements of the LCP, which requires consideration of a bioengineered solution. Yet this MND application requests the ability to repair the structure in perpetuity, thus ensuring that bioengineering will never occur. So for all practical purposes, this condition is irrelevant and meaningless. This is clearly in conflict with City and State Coastal Programs and Policies and should be corrected. The applicant should be required to use bioengineering and restore the riparian buffer to the maximum extent practicable and be brought into compliance with the Coastal Act and Malibu's LCP. (Notably, this paragraph of the MND acknowledges the feasibility of using bioengineering at this site.)

c. Proposed Mitigation Measures

Third, the proposed mitigation measures on page 15 are flawed:

Bullet 1 requires monitoring for three years of the invasive removal program and vegetation restoration components. This is not long enough to establish success and we recommend that 5 years be the minimum monitoring requirement. Further, 5 years was the recommended monitoring and eradication time frame in the Attachment 10 report prepared for the applicant.

Herbicides should not be applied this close to the lagoon. We recommend mechanical removal at the time the stream bank is recontoured and hand removal throughout the 5 year period. Additionally, the Attachment 10 report recommends removal or treatment of invasive vegetation twice a year. Heal the Bay has extensive experience in hand removing exotic invasive vegetation in this area and we strongly suggest a minimum of 6 removal visits each year for the 5 year duration. Additionally, before and after photos taken at permanent photo points should be integrated into the monitoring and reporting program.

Bullet 3: We recommend that a certified botanist or native plant expert be onsite during all construction activities and vegetation removal activities.

Bullet 9: We recommend that all plant stock be acquired through State Parks and locally harvested by State Parks Resource Ecology Personnel. This is critical to maintain the genetic diversity within Malibu



3220 Nebraska Avenue
Santa Monica CA 90404

ph 310 453 0395
fax 310 453 7927

info@healthebay.org
www.healthebay.org

Lagoon State Park. In addition, we believe that the revegetation plan is wholly inadequate and needs to be prepared in conjunction with the Resource Ecologist at State Parks to insure appropriate plant materials and revegetation techniques are utilized.

Bullet 12: We recommend extending the monitoring period for 5 years, requiring that a certified botanist or native plant expert be present on site during all removal activities, and requiring photo point monitoring from permanently established photo points.

d. Geology and Soils

Fourth, the analysis in MND Section F Geology and Soils is incomplete and flawed:

Bullet 2: The project does and will continue to result in substantial soil loss through downstream bank erosion and channel down cutting. The project as proposed does little, if anything, to rectify this problem. In addition, if topsoil is placed in the current rip-rap spaces that were not engineered to accommodate plantings this dirt will fall through the holes or be washed away into Malibu Lagoon. These constitute potentially significant impacts, which are ignored completely in the impacts discussion in section F. They must be addressed.

No mitigation has been proposed for soil loss by erosion or soil dumping into the creek during installation. The applicant must state how erosion and sediment loading will be eliminated and /or mitigated during the installation process.

e. Hydrology and Water Quality

Fifth, Section H: Hydrology and Water Quality is incomplete and flawed:

Bullet 3 and 4: The grading associated with rip-rap installation, the rip-rap, the removal of vegetation and compaction of soils for vehicle and other storage in the fenced area, and the elimination of riparian buffer all reduce the capacity for stormwater infiltration and intercept of polluted stormwater runoff. These cumulatively have substantially altered the drainage pattern on site and decreased the ability to dissipate energy during storm events. In addition, the rip-rap has created downstream bank erosion by transferring energy downstream and channel down cutting has occurred due to increased volume and scour velocities associated with these alterations. The Lagoon is already impaired for sediment and eutrophication, which are being received as a result of this project. The proposed "fix" does little, if anything, to rectify these problems. Bullets 3 and 4 should both state the project would cause potentially significant impacts. These impacts and their mitigation are not adequately addressed in the MND.

Bullet 8: The fencing and equipment storage area, which were illegally installed without a Coastal Permit, is within a 100 year flood hazard area and does redirect flood flows. It is these structures that have eliminated riparian vegetation and buffer area which contribute to the higher scour velocities and larger volumes of water that are causing the current rip-rap to fail. This constitutes a potentially significant impact. The applicant should discuss this impact and appropriate mitigation in Bullet 8.

II. Conclusion



3220 Nebraska Avenue
Santa Monica CA 90404

ph 310 453 0395
fax 310 453 7927

info@healthebay.org
www.healthebay.org

We urge the City of Malibu to deny this mitigated negative declaration. The MND for this site is wholly inadequate and is in direct conflict with the State Coastal Act and Malibu's own Local Coastal Plan Land Use Plan and Imp- term sustainable solution to this recurring problem. In fact during the creation of the Lagoon Restoration and Enhancement Plan, the applicant refused to have the consulting team research and present other solutions for this site. This site is within Malibu Lagoon, one of the few remaining coastal wetlands in Los Angeles County. Significant financial resources and investment have been spent and will be spent in the near future by the State and the City of Malibu to improve water quality and enhance habitat at Malibu Lagoon and Surfrider Beach. Further, this site was considered one of the highest priority restoration sites to enhance Malibu Lagoon throughout the 6 year planning, facilitation, and design process that culminated in June 2005 with the Malibu Lagoon Restoration and Enhancement Plan. This 6-year effort involved diverse and varied stakeholders including landowners, homeowner associations, government agencies and environmental groups. The proposed project will not work and will continue to degrade water quality and critical habitat for the federally endangered tidewater goby and southern steelhead trout. In addition, the rip-rap will require maintenance and repair in perpetuity, each time further degrading habitat and water quality. A bioengineered solution that restores some floodplain connectivity and restoration of riparian vegetation would be more cost effective and would be consistent with the Coastal Act and Malibu's Local Coastal Plan, as well as with the overall restoration effort for Malibu Lagoon and Surfrider Beach.

Heal the Bay has worked closely with the City of Malibu on numerous wastewater, stormwater, Malibu Lagoon, and Surfrider Beach water quality issues. Presently, as a demonstration of our good faith, Heal the Bay supported the Civic Center conceptual wastewater and stormwater management plan and we worked very closely with the city on their urban runoff treatment facility. In addition, Heal the Bay spearheaded the effort to complete the Malibu Lagoon Restoration and Enhancement Plan. Any action other than the denial of the project proponent's MND will be detrimental to our mutual efforts to clean up and restore Malibu Lagoon and Surfrider Beach. The emergency rip-rap bank stabilization has already had a detrimental impact on Malibu Lagoon's natural resources and water quality for seven years. At thus point, the City shouldn't consider any project short of a full-blown stream bank and riparian buffer restoration plan with a mitigation component for historic damages caused by the emergency rip-rap bank modification.

We appreciate the opportunity to comment on this MND.

Sincerely,

/s/

Mark Abramson
Stream Team Manager
Heal the Bay

/s/

Heather Hoecherl Esq.
Director Science and Policy
Heal the Bay

/s/

Mark Gold D.Env.
Executive Director
Heal the Bay