

## CALIFORNIA COASTAL COMMISSION

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**STAFF REPORT: REGULAR CALENDAR**

APPLICATION NO.: 4-00-014

APPLICANT: Robert Newlon

PROJECT LOCATION: 3550 Las Flores Canyon Road, City of Malibu  
(Los Angeles County)

**PROJECT DESCRIPTION:** Addition of rip-rap to the bank of the stream at a bend in Las Flores Canyon Creek below the applicant's property. The rip-rap will serve to repair an existing concrete (gunnite) and rock gabion streambank protection which is being used to stabilize the toe of the slope.

**LOCAL APPROVALS RECEIVED:** Approval in Concept -- City of Malibu Planning Department; Approval in Concept -- City of Malibu Biologist; Approval in Concept -- City of Malibu Public Works Department; Approval with Conditions -- State of California Department of Fish and Game.

**SUBSTANTIVE FILE DOCUMENTS:** Coastal Development Permit (CDP) No. 4-95-252 (CA State Parks), No. 4-97-097 (Newlon), and No. 4-98-240 (Odyssey Program); City of Malibu Plot Plan Review No. 97-089 -- 3550 Las Flores Cyn. Rd. (Newlon), dated May 14, 1997; City of Malibu Plot Plan Review No. 97-089 -- 3550 Las Flores Cyn. Rd. (Newlon), dated June 5, 1997; *Hydrology Study RE: Boulder Riprap along Las Flores Creek located at 3550 Las Flores Canyon Road*, by Robert Newlon and Associates, dated March 21, 1999; *Letter extending streambed alteration agreement 5-263-967*, from State of California Department of Fish and Game, dated March 16, 2000; *Letter RE: Item number TU-11e (4-00-014)*, from Mark Gold, Executive Director, Heal the Bay, dated May 8, 2000; *Letters One and Two RE: Riprap Repair, 3550 Las Flores Canyon Road, Malibu, File No. 4-00-014*, by Robert Newlon, dated May 16, 2000; *Letter RE: Riprap Repair, 3550 Las Flores Canyon Road, Malibu, File No. 4-00-014*, by Robert Newlon, dated May 19, 2000.

**SUMMARY OF STAFF RECOMMENDATION**

Staff recommends **denial** of the proposed project. The applicant is proposing the addition of rip-rap in front and on top of an existing concrete (gunnite) and rock gabion streambank stabilization in Las Flores Canyon Creek. Other streambank stabilization alternatives (e.g., removal and replacement of the existing toe-of-slope protection) are available which are preferable from a long-term public safety, water quality and sensitive habitat protection, and scenic visual impact perspective.

## **I. STAFF RECOMMENDATION**

1. **Motion:** *I move that the Commission approve Coastal Development Permit No. 4-00-014 for the development proposed by the applicant.*

2. **Staff Recommendation of Denial:**

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

3. **Resolution to Deny the Permit:**

The Commission hereby denies a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development would not be in conformity with the policies of Chapter 3 of the Coastal Act and would 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. Denial of the permit will comply with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have not been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

## **II. FINDINGS AND DECLARATIONS**

The Commission hereby finds and declares as follows:

### **A. Project Description and Background**

The applicant, Mr. Robert Newlon, is proposing the addition of rock rip-rap and vegetation to an existing streambank stabilization project constructed on the southeast bank of Las Flores Canyon Creek as the intermittent stream crosses his property. The rip-rap would be placed in front and on top of existing material in order to repair the streambank stabilization which is being used to protect the toe of the slope below the applicant's home. A repair is necessary because if this slope were to erode further, then Mr. Newlon's home could potentially be threatened. The subject property is an approximately 2.5 acre parcel located in the Las Flores Canyon area of the City of Malibu. Access to the property and the project site is from Pacific Coast Highway to Las Flores Canyon Road, a public street which borders the west side of the property and crosses the creek just downstream of the proposed repair. A previous coastal development permit (CDP No. 4-97-097) was obtained for the streambank stabilization repair, but the work never occurred, and the permit expired. Mr. Newlon's home is an existing single family residence located at the top of a steep ridge on the subject

property, approximately 100 feet above the stream channel and the site of the streambank stabilization.

The proposed repair is located on the streambank of Las Flores Canyon Creek, a United States Geological Survey (USGS) designated blue-line (intermittent) stream in the southern portion of the Santa Monica Mountains, which crosses the northwestern corner of the subject property. Drainage from the property and from the creek flows downstream to the south eventually passing under Pacific Coast Highway and outletting at Las Flores Beach. The Las Flores Canyon Creek riparian corridor is designated a Disturbed Sensitive Resource (DSR) area in the Malibu / Santa Monica Mountains Land Use Plan (LUP).

The lower portion of Las Flores Creek corridor, including the area where the subject site is located, has been extensively disturbed by previous construction of residences, businesses, and various streambank stabilization measures in the immediate vicinity of the stream channel. The Carden School, for instance, is located immediately upstream of the proposed project and is bordered by an 80 ft. long, 5 ft. high wall along the creek. A bridge crossing and a Caltrans storage / staging facility are located immediately downstream of the project area. Generally, increased development in the creek's watershed has reduced local riparian vegetative cover, decreased runoff infiltration, increased erosion rates, and promoted greater "flashiness" in the creek's flow characteristics. The portion of the creek where the project is proposed has a typical highly-varied cobble channel bed with sparse vegetation including fallen trees (e.g., cottonwoods, sycamores), scattered patches of grass, brush, and a few shrubs which have managed to gain a foothold in the rugged, narrow, scoured drainage course.

Las Flores Canyon is typical for the Santa Monica Mountains in that it is a steep-sided, rocky, and fairly narrow canyon. Slopes on the northwestern side of the applicant's parcel at the creek are extremely steep approaching a gradient of 1:1 (horizontal to vertical). The creek at this point makes a near ninety degree (90°) turn to the west to pass under Las Flores Canyon Road. This dramatic turn in the stream channel creates a situation where hydrologic erosional forces are concentrated on the outer curve in the bend, especially during high flow conditions. The southeast bank of the creek, beneath the applicant's residence, has consequently been eroding due to strong seasonal streamflows and related scouring.

Approximately 30 to 40 linear feet of the streambank have been previously stabilized with a combination of grouted rip-rap at the creek channel bottom and a second tier of concrete gunnite material topped by a post-and-wire gabion structure filled with rock from the local area. As a result of channel degradation, this existing toe-of-slope stabilization is threatened by continued erosion. The grouted rip-rap / gabion structure has been undermined, and many of the existing gabion rocks have been displaced. The applicant proposes to stabilize the previous toe-of-slope repair by placing rip-rap at the base and in front of the existing gunnite structure and along and behind the gabion basket rock-filled area. The spaces between rocks will then be planted with appropriate native riparian vegetation to "soften" the streambank.

This permit application (CDP No. 4-00-014) was originally scheduled to be heard at the May 2000 Coastal Commission meeting. Commission staff received a letter from Mark Gold, Executive Director of Heal the Bay, on May 10, 2000, which disagreed with staff's recommendation that there was no feasible development alternative that would reduce the adverse impacts on the environment and provided specific comments on items in the staff report. The Commission, consequently, voted to continue the matter until a

later hearing in order to address alternative streambank stabilization measures. Staff has subsequently received three letters from the applicant responding to the issues raised by Heal the Bay, spoken with the applicant numerous times on the telephone, and met with the applicant in person to discuss alternatives. Coastal Commission Staff Civil Engineer Lesley Ewing has also reviewed Mr. Newlon's proposal and has helped to identify conceptual design alternatives. These alternatives are discussed in detail in subsequent sections of this report.

## **B. Hazards**

Section 30253 of the Coastal Act states (in part):

*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...*

The proposed improvement is located in the Santa Monica Mountains, an area which is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains include landslides, erosion, flooding, earth movement, and wildfire. In the winter of 1977-78, storms triggered numerous landslides and mudslides causing significant damage throughout the Malibu / Santa Monica Mountains area. The El Niño seasons of 1982-83 and 1997-98 also resulted in above-average amounts of rainfall causing wide-spread flooding, erosion, and scouring of local creeks and rivers along with associated damage to adjoining properties. The proposed project is located along the east bank of Las Flores Creek which is subject to seasonal, periodic flood and debris flows.

The prominent geomorphic features surrounding the project area are the ridgelines of the Santa Monica Mountains to the north, La Costa and Las Flores Beaches to the south, Carbon Canyon to the west, and the Big Rock area to the east. The site is located on the bank of a United States Geological Survey (USGS) designated blue-line (intermittent) stream -- Las Flores Canyon Creek -- which eventually outlets to the Pacific Ocean (Santa Monica Bay) at Las Flores Beach. The applicant's property adjacent to this portion of the creek is developed with a single family residence approximately 100 feet higher in elevation than the creek bed. The residence is threatened by continued lateral erosion of the creek channel which could eventually undermine its foundations.

The existing streambank stabilization has proven effective at stabilizing the bluff, but the applicant has demonstrated that the existing toe-of-slope protection is being undercut and therefore not adequate to prevent further erosion during future high rainfall events in Las Flores Creek. Failure of the existing streambank protection would likely lead to increased slope erosion potentially undermining the foundations of the applicant's existing residence and creating a hazardous condition to the structure as well as to downstream resources and development from debris. Consequently, a streambank stabilization project is necessary to ensure the structural and geologic integrity of the existing residence and will serve to minimize risks to life and property. Without

construction of a repair project, significant potential adverse effects to public safety could occur.

Possible alternatives for this streambank stabilization project include no action, complete removal of the existing treatment with or without replacement of the material, increased armoring of the streambank, or some combination of these. The "no action" alternative would not address the undermining of the existing structure and the corresponding threat to the stability of the slope and the residence above and is, therefore, not feasible. Removal of the streambank stabilization would place the existing residence in increased jeopardy from toe-of-slope erosion. Further, complete removal of the existing materials would require the use of heavy equipment which, due to the restricted accessibility of the site, would entail substantial disturbance of the adjacent creek habitat. However, such significant disturbance could be justified if the long-term result was a more environmentally sound solution which also served to protect the existing residence.

The application of greater materials to the streambank, as proposed, potentially increases the disruption to riparian areas on-site and downstream of the project. Coastal Staff Civil Engineer Leslie Ewing asserts that for certain rainfall events, there could be some increase in stream velocity and the potential for a corresponding increase in creek area through erosion of the unarmored bank or undercutting of the subject streambank. Historically, Commission staff has found that the cumulative placement of rip-rap effectively "hardens" stream channels thereby increasing the rate and volume of runoff, potentially causing increased erosion and sedimentation. The addition of more material in front and on top of the existing toe-of-slope protection creates the possibility of repeated future armorings with more rocks as the channel bed continues to lower and be subject to scour. A preferred alternative would be to strike a balance between approaches in order to stabilize the streambank in the long-term without excessive further "hardening" of the channel.

In his letter dated May 8, 2000, Mark Gold of Heal the Bay refers to implementing a "bio-engineered" solution favoring a "softscape" approach using plants, trees, and plant parts in order to ensure a biologically functioning riparian corridor. However, a purely "bio-engineered" streambank stabilization is not appropriate for this project due to the high velocities and scouring which occur in the stream channel in this location. The applicant, Robert Newlon, a registered Professional Civil Engineer in the State of California, estimates the potential for maximum creek flow at over 5,800 cfs (equivalent to 2,600,000 gallons per minute) at the site location. His letter dated May 15, 2000 states:

*A "softscape" solution simply could not withstand the forces at this sharp bend in the creek. ... A "softscape" alternative would be "blown out" by these flows. Most likely, this "softscape" alternative would experience a partial sudden failure which could result in environmental and perhaps economic damage downstream.*

Thus, an alternative relying only on a "softscape" solution would not be effective in this case. Commission staff, after consultation with staff engineer Lesley Ewing, formulated another alternative which would create a better long-term solution for the problem of streambank stability. Instead of shoring up a failing system which is being undermined and encroaching further into the stream channel, this alternative proposes starting anew, pulling out the existing toe-of-slope protection, embedding rocks into the streambed at the existing toe location, and placing rock rip-rap, filter cloth, and vegetative material upwards in a more naturally sloped grade to match existing contours (see Exhibits 12, 13, 14). Placing rocks at a good starting depth and creating a more

open, flatter slope would let the bank accept more vegetation, and the flatter slope would be more stable with less encroachment into the streambed. Instead of being a short term "quick-fix," such an alternative would stabilize the slope and allow riparian vegetation to grow on the streambank for long-term stability of the on-site creek channel.

Coastal staff presented this alternative to the applicant Mr. Newlon in a meeting on July 12, 2000. Newlon concurred that such an alternative was preferable to his own proposal, but stated it would be much more time-consuming, costly, and would require new approval from the City of Malibu and the California Department of Fish and Game. In the end, the applicant decided that such an approach was "infeasible" to him and that he would not modify his project proposal. The Commission recognizes that implementing an alternative streambank stabilization method, especially one involving removal and replacement of the existing materials, would mean that repair work could likely not be conducted until after the subsequent rainy season. However, the preferred "quasi-bio-engineered" approach would create a more stable slope which would give vegetation a better opportunity to survive thereby screening the rip-rap, enhancing the riparian corridor, and minimizing visual impacts in this section of the creek in the long-term.

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The structural integrity of the streambank / slope and allow for the preservation / enhancement of the riparian environment to a greater extent than the proposed project. The proposed repair unavoidably "hardens" the stream bank by the use of rip-rap; in addition, the proposed repair simply covers up the existing stabilization which is being undercut by Las Flores Creek and encroaches further into the stream channel. Furthermore, it is questionable whether the "softscape" elements proposed by the applicant will remain in place since there is no filter fabric or other anchoring mechanism shown on the project plans -- the native vegetation and soil are simply placed in the interstitial spaces between rocks and upslope of the repair.

While the proposed project would arrest lateral bank erosion and reduce the likelihood of failure of the slope which supports the building site on top of the applicant's property, it is likely that the new rip-rap will eventually be either relocated or undercut by subsequent rainfall and erosional events requiring a subsequent permit and the placement of even more rock material into the stream bed. Thus, the project, as proposed, is a short term solution to the problem which may itself require additional repairs in the future. Because the proposed streambank stabilization and upslope residential development remain subject to damage from potential large-scale flooding of Las Flores Creek, some sort of streambank stabilization is necessary on-site. However, there are feasible alternatives which would create a more natural slope contour and allow for more effective establishment of vegetation for a better long term solution. The Commission therefore finds that the project, as proposed, is not consistent with Section 30253 of the Coastal Act.

### C. Environmentally Sensitive Resources

Section 30230 of the Coastal Act states:

*Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a*

*manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

*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:

*Channelization, 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.*

And Section 30240 of the Coastal Act states:

*(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such 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 such areas, and shall be compatible with the continuance of such habitat areas.*

The proposed project is located along a portion of the east bank of Las Flores Creek, a seasonally intermittent stream characterized by high velocity flows with significant associated scouring. The riparian corridor along Las Flores Creek is a designated Disturbed Sensitive Resource (DSR) area in the Malibu / Santa Monica Mountains Land Use Plan (LUP) since it has been substantially and adversely impacted by development in Las Flores Canyon. This existing development, including Las Flores Canyon Road and various residential, commercial, and institutional developments in the canyon and on the adjoining steep slopes, has reduced local riparian vegetative cover, decreased runoff infiltration, increased erosion rates, and promoted greater "flashiness" in the creek's flow characteristics. Immediately upstream of the subject site, for example, the Carden School has placed an 80-foot long flood protection wall along the stream channel to protect the facility against high creek flows.

Despite these human modifications, Las Flores Creek continues to provide some important habitat for a variety of riparian species of plants and animals. Although this disturbed riparian habitat does not have the same biological significance as undisturbed Environmentally Sensitive Habitat Area (ESHA), it is sufficiently valuable to warrant protection of the existing resources. The riparian habitat in the vicinity of the subject portion of Las Flores Creek does contain several unique and sensitive riparian plant and animal species including Coastal Live Oak (*Quercus agrifolia*) and California Sycamore (*Platanus recemosa*).



Sections 30230 and 30231 of the Coastal Act require that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored. In addition, Section 30240 of the Coastal Act states that environmentally sensitive habitat areas must be protected against disruption of habitat values. To assist in the determination of consistency with Sections 30230, 30231, and 30240 of the Coastal Act, the Commission has, in past coastal development permit actions in the Santa Monica Mountains, looked to the Malibu / Santa Monica Mountains Land Use Plan (LUP) for guidance. The Malibu LUP has been found to be consistent with the Coastal Act and provides specific standards for development along the Malibu coast and within the Santa Monica Mountains. In its findings regarding the certification of the Malibu / Santa Monica Mountains LUP, the Commission emphasized the importance placed by the Coastal Act on protection of sensitive environmental resources:

***Coastal canyons in the Santa Monica Mountains require protection against significant disruption of habitat values, including not only the riparian corridors located in the bottoms of the canyons, but also the chaparral and coastal sage biotic communities found on the canyon slopes.***

Correspondingly, Policies 84 and 94 of the LUP, in concert with the Coastal Act, provide that disturbed areas shall be revegetated with native plant species within environmentally sensitive habitat areas and significant watersheds. The Commission notes that any development within riparian areas may result in potentially adverse effects to resources from increased erosion, contaminated stormwater runoff, disturbance to local wildlife, and loss of riparian plant and animal habitat. The subject site has been previously disturbed in order to protect the toe-of-slope on the applicant's property. The proposed new bank reinforcement will be located in approximately the same location as the existing streambank protection and, according to the applicant, will not displace any riparian vegetation in the stream bed area nor interfere with creek flow in the stream channel itself.

However, the proposed rip-rap repair will extend approximately four feet (4') further into the creek bed, and construction activities and the placement of new rip-rap may result in potentially adverse effects to riparian habitat through disruption during transportation, temporary storage, and placement of the rocks, in addition to potential constriction and "hardening" of the channel. The proposed project attempts to mitigate this effect by planting willow trees and other plants amongst the rock rip-rap material. However, it is questionable whether trees or other vegetation will be able to take root without fabric support amongst a blanket of rock rip-rap over an existing gunnite / gabion structure in the bend of a high velocity, scouring creek, as proposed. A superior alternative would be a "quasi-bio-engineered" solution designed to remove the existing streambank stabilization measure and rebuild the base of slope at a more natural angle with rock rip-rap embedded into the existing location, anchoring the toe into the streambed and integrating a filter fabric into the structure of the replacement materials thereby insuring the viability of the introduced riparian vegetation (see Exhibits 12, 13, 14).

The Commission notes that any development located within a stream channel requires a Streambed Alteration Agreement from the California Department of Fish and Game and approval from the United States Army Corp of Engineers. For Coastal Development Permit No. 4-97-097, the applicant submitted a Stream Alteration Agreement from the Department of Fish and Game dated September 16, 1997 for the proposed project. This Streambed Alteration Agreement was set to expire on September 16, 1998 but was subsequently extended by the Department of Fish and



Game on March 16, 2000 with the addition of four conditions:

- 1. The rip-rap shall be constructed from clean rock only, and shall not be grouted or concreted.*
- 2. The rock shall be graded so the larger rock shall be placed on the bottom and the small rocks towards the top of the bank.*
- 3. The rock shall be filled with clean dirt to allow growth of vegetation.*
- 4. The slope / bank shall be planted with native blackberries and lined with seven (7) willows and/or sycamores on the top of the bank. These plantings shall be maintained until established.*

The Commission notes that the conditions placed on the extension of the Fish and Game permit complement and are compatible with the proposed solution and the alternative "quasi-bio-engineered" approach under consideration. Implementation of a new alternative from that which is proposed would likely require additional review by the Department of Fish and Game, and possibly, the City of Malibu as well. The applicant has not, at this time, presented evidence of issuance of a permit from the U.S. Army Corps of Engineers because the federal agency will not issue a permit until all state and local approvals have been obtained.

The Commission notes that construction activity within or adjacent to a stream channel may result in the presence of equipment and materials and/or the potential generation of debris that could be subject to streamflow. Further, if construction site materials are left inappropriately or unsafely exposed to the elements on the project site, discharge to the environment could occur, resulting in adverse effects to sensitive riparian habitat. Riparian habitat areas and the stability of the site itself may be especially sensitive and vulnerable during the rainy season (November 1 – April 30) when rapidly moving storms produce bank-full streamflows which, combined with streambank construction activities, could lead to significantly increased erosion and adverse effects to on-site and downstream riparian habitat. Thus, any new alternative, especially one which involves removal of the existing streambank stabilization materials, must be designed and timed appropriately to best protect the existing Las Flores Creek riparian corridor.

The Commission notes that Section 30236 of the Coastal Act requires alterations of streams to incorporate the best mitigation measures feasible and be limited to 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. As discussed in the previous section, alternatives to the proposed project include no action, complete removal of the existing toe-of-slope stabilization with or without replacement of the material, increased armoring of the streambank, or some combination of these. The proposed method of placing rock rip-rap in front of and over the existing gunnite and gabion structure, while requiring less cost and riparian disturbance initially, will not only encroach further into the existing stream channel but would likely lead to further lowering of the creek channel and subsequent repairs to stabilize the toe of slope. Although complete removal and replacement of the existing materials would require the use of heavy equipment which, due to the restricted accessibility of the site, would entail temporary disturbance of the adjacent creek habitat, this is a preferred alternative because it stands the best chance of being a long-term solution to the erosion problem present at this bend in the creek. This "quasi-bio-engineered" approach would create a flatter, more stable slope with an integrated filter fabric which would give the introduced plantings a better opportunity to establish mature root systems thereby enhancing the riparian corridor in this section of the creek in the

long-term. Thus, the proposed project is not the most feasible alternative which protects existing development while maintaining sensitivity to environmental resources.

The letter from Heal the Bay, dated May 8, 2000, suggests developing a long-range program for slope / channel stabilization within Las Flores Creek by focusing on the entire watershed basin instead of individual projects. While Commission staff agrees that a watershed approach to stream management is preferable and would address the problem of creek erosion and streambank stability on a long-term basis, such an endeavor is well beyond the scope of this permit application. The applicant, Robert Newlon, in his letter dated May 15, 2000 asserts: "this project is insignificant in its effect on the impact to a 2,400 acre watershed. ... [I]t is an undue and unwarranted burden to require an individual to undertake the study of such a large watershed for work that will have no significant impact." Nor does the applicant have the ability to obtain the participation of other property owners in funding or carrying out a watershed management plan. Such a plan would probably have to be developed by the City, County, State or Federal agencies, and/or a local non-profit group. Coastal staff is not aware of any current plans by any of these entities to pursue this option.

The Commission notes that the riparian habitat on the subject site has been previously affected by construction of the existing streambank stabilization. The proposed rip-rap reinforcement will be located in approximately the same footprint as the existing gunnite, gabion basket, and rock placement, but will extend approximately four feet (4') further into the creek bed. Coastal staff and the applicant Mr. Newlon have discussed other alternatives which would be environmentally preferable to the proposed toe-of-slope protection in the long term. Due to the existing development above the creek which is in need of protection and the previous reinforcement's location on the channel streambank which is being undercut, a streambank stabilization project is needed at the subject site. The Commission concludes, however, that less environmentally damaging alternatives to the proposed project are feasible. The Commission therefore finds that the project, as proposed, is not consistent with Sections 30230, 30231, 30236, and 30240 of the Coastal Act.

#### **D. Visual Resources**

Section 30251 of the Coastal Act states that:

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

The proposed project involves the reinforcement of an existing toe-of-slope protection / streambank stabilization, visible from Las Flores Canyon Road in a suburban area of Malibu, using rip-rap in front of and on top of a previous repair. While the proposed new streambank stabilization would serve to increase the structural stability of the slope on the subject site and ensure public safety by preventing the undermining of the existing residence upslope of the stream channel, and may be more aesthetically pleasing than the concrete gunnite and gabion basket material currently in place on the subject site,

the new rip-rap would be more extensive in appearance and similarly inconsistent with the rural / suburban nature of the area surrounding the project site. Also, the proposed repair is similar in length but would extend approximately four feet (4') further into the stream channel.

The applicant is correctly proposing to use rip-rap material along with native plantings for the repair with stones or rocks which are native or at least mimic the approximate size, color, and texture of native materials. The proposed development includes the planting of native willow trees in order to screen and soften the streambank repair. However, as discussed in previous sections, the proposed project using rock rip-rap over an existing gunnite / gabion repair includes no filter fabric or other geotextile material to hold the plants, their roots and/or the soil in place during high creekflow conditions. Thus, the long-term stability and aesthetic character of the project, as proposed, is questionable.

Simply placing rock rip-rap over and in front of the existing toe-of-slope protection is a "quick-fix" alternative which fails to address the long-term aesthetics of the site as seen from Las Flores Canyon Road and the surrounding scenic canyon area. In a meeting with Coastal staff on July 12, 2000, the applicant Mr. Newlon agreed that there were other available alternatives which would be visually superior to the proposal under consideration. Mr. Newlon asserted that these alternatives would be too time-consuming and costly to pursue seriously. The Commission recognizes that implementing an alternative streambank stabilization method, especially one involving removal and replacement of the existing materials, would likely require new review by the City of Malibu and/or California Department of Fish and Game, meaning that repair work could likely not be conducted until after the subsequent rainy season. However, the preferred "quasi-bio-engineered" approach would create a more stable slope which would give vegetation a better opportunity to survive thereby screening the rip-rap, enhancing the riparian corridor, and minimizing visual impacts in this section of the creek in the long-term.

Furthermore, the failure of the existing toe-of-slope protection has been an ongoing process occurring over several years, and it is likely that the existing materials will continue to function adequately through another wet season. This stabilization project was originally applied for as Coastal Permit No. 4-97-097, but was not constructed at that time. If the existing materials begin to show signs of catastrophic failure this winter, then the applicant is always able to apply for an emergency permit to protect his residence. The Commission finds that the additional time and cost necessary to implement the environmentally and aesthetically superior alternative are not of sufficient magnitude to make the alternative infeasible. The added time (delay) and cost to this project are reasonable in light of the preferred long-term consequences that would result. The Commission finds that there are other alternatives which would better protect and enhance visual resources in the area, that the proposed development will result in adverse effects to public views and is therefore not consistent, as proposed, with Section 30251 of the Coastal Act.

## **E. Water Quality**

The Commission recognizes that development in the Santa Monica Mountains has the potential to adversely impact coastal water quality through the removal of native vegetation, increase of impervious surfaces, increase of runoff, erosion, and sedimentation, introduction of pollutants such as petroleum, cleaning products,

pesticides, and other pollutant sources, as well as effluent from septic systems. Section 30231 of the Coastal Act states:

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

As described above, the proposed project includes the addition of rip-rap to the bank of the stream at a bend in Las Flores Canyon Creek below the applicant's property. The rip-rap would serve to repair the existing streambank stabilization which is being used to protect the toe of the slope. The addition of rip-rap to the existing streambank stabilization would help to absorb the impact of the high velocity creekflows as the water makes an abrupt turn to the west to pass under a bridge. Staff has had some concern about the placement of new rocks in front of the existing toe-of-slope protection thereby encroaching into the stream channel and potentially constricting channel flow. However, according to the *Engineering Hydrology Study RE: Boulder Riprap along Las Flores Creek located at 3550 Las Flores Canyon Road*, by Robert Newlon and Associates, dated March 21, 1999, the proposed work would have no significant impact on water flows in Las Flores Creek and would not negatively impact neighboring properties. Mr. Newlon's letter dated May 15, 2000 states: "The hydrology and hydraulic study indicated that an insignificant change in the streamflow characteristics will occur as a result of the proposed project." Coastal Staff Engineer Lesley Ewing agrees that the hydraulic change from the proposed project is very small for high flow conditions and insignificant for low flows. For very large events, streamflow will overtop the proposed project and extend from bank to bank; and for very small events, the main stream channel will be adequate to contain the stream. But, for mid-ranged events, when the main flow will extend from the unarmored bank to the proposed streambank repair, Ewing asserts that there could be some increase in stream velocity due to the decreased channel area. This increase in velocity would have the potential to erode the unarmored bank and/or undercut the subject stream bank.

Historically, Commission staff has found that the cumulative placement of rip-rap effectively "hardens" stream channels thereby increasing the rate and volume of runoff, potentially causing increased erosion and sedimentation. When runoff is channeled or deflected by impervious surfaces, pollutants in suspension are not allowed to settle out and are quickly conveyed further downstream. Thus, changes to the stream channel can cause cumulative impacts to the hydrologic cycle of an area by increasing and concentrating runoff, leading to further stream channel destabilization, increased flood potential, increased concentration of pollutants, and reduced groundwater levels. The proposed placement of rock rip-rap over and in front of an existing gunnite / gabion structure potentially creates a cumulative "hardening" effect in this portion of Las Flores Canyon Creek. A softer, purely "bio-engineered" solution is preferred as a way of preventing further "hardening" of a stream channel; but, as discussed previously, such a solution is not feasible for this project location. However, a "quasi-bio-engineered" method involving the removal and replacement of existing toe-of-slope protection materials along with riparian trees, plants, and other vegetation held in place by filter fabric material would serve to "soften" the streambank stabilization and provide for long-term reduction of erosion. This alternative is preferable to that proposed by the

applicant. The Commission therefore finds that the project, as proposed, is not consistent with Section 30231 of the Coastal Act.

## **F. Local Coastal Program**

Section 30604(a) of the Coastal Act states (in part):

*a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with Chapter 3 (commencing with Section 30200) and that the permitted development will not prejudice the ability of the local government to prepare a local program that is in conformity with Chapter 3 (commencing with Section 30200). ...*

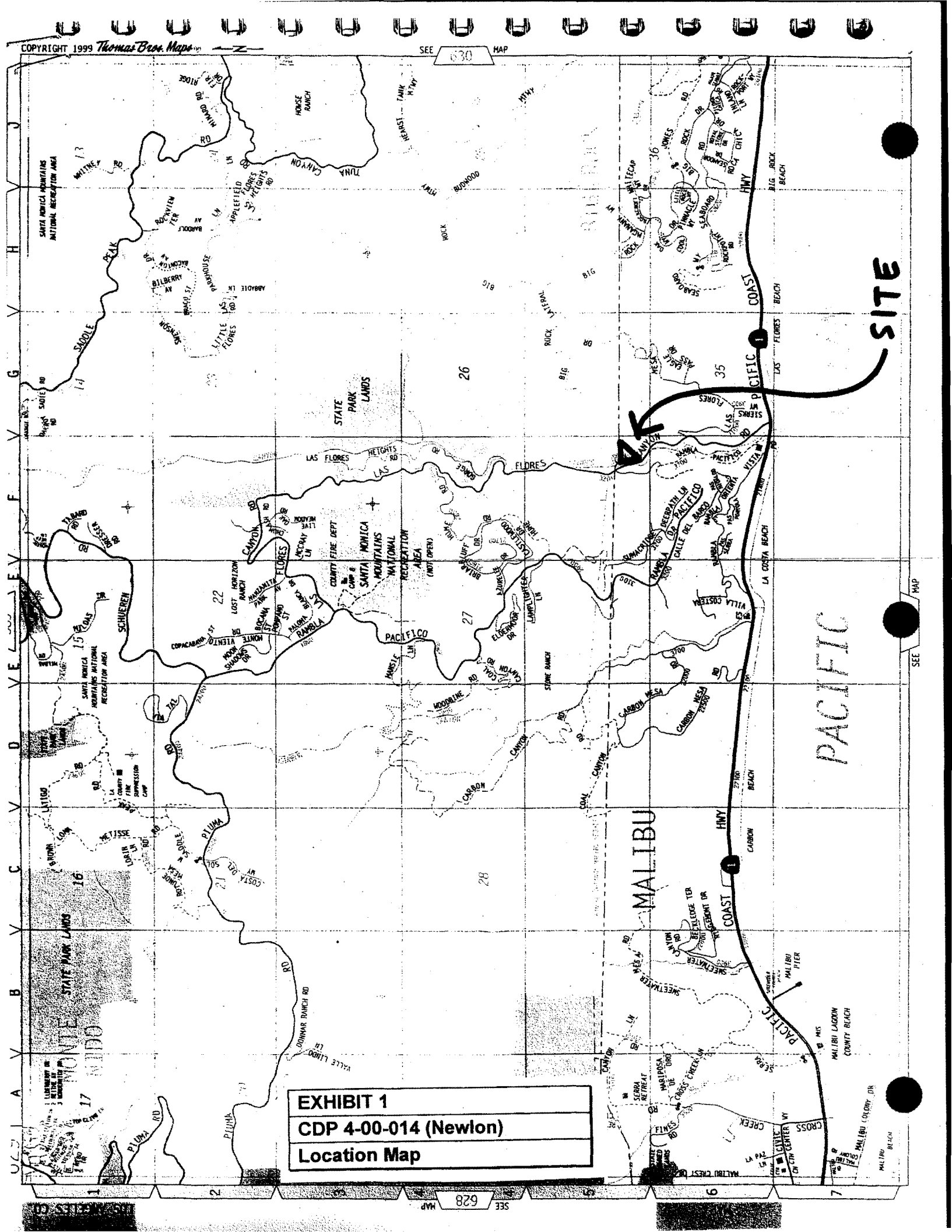
Section 30604(a) of the Coastal Act stipulates that the Commission shall issue a Coastal Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project would not be in conformity with the provisions of Chapter 3 of the Coastal Act. The proposed development would create significant adverse impacts and is found to be inconsistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development would prejudice the City's ability to prepare a Local Coastal Program for the City of Malibu which is also consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

## **G. California Environmental Quality Act (CEQA)**

Section 13096(a) of the Coastal 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 which the activity may have on the environment.

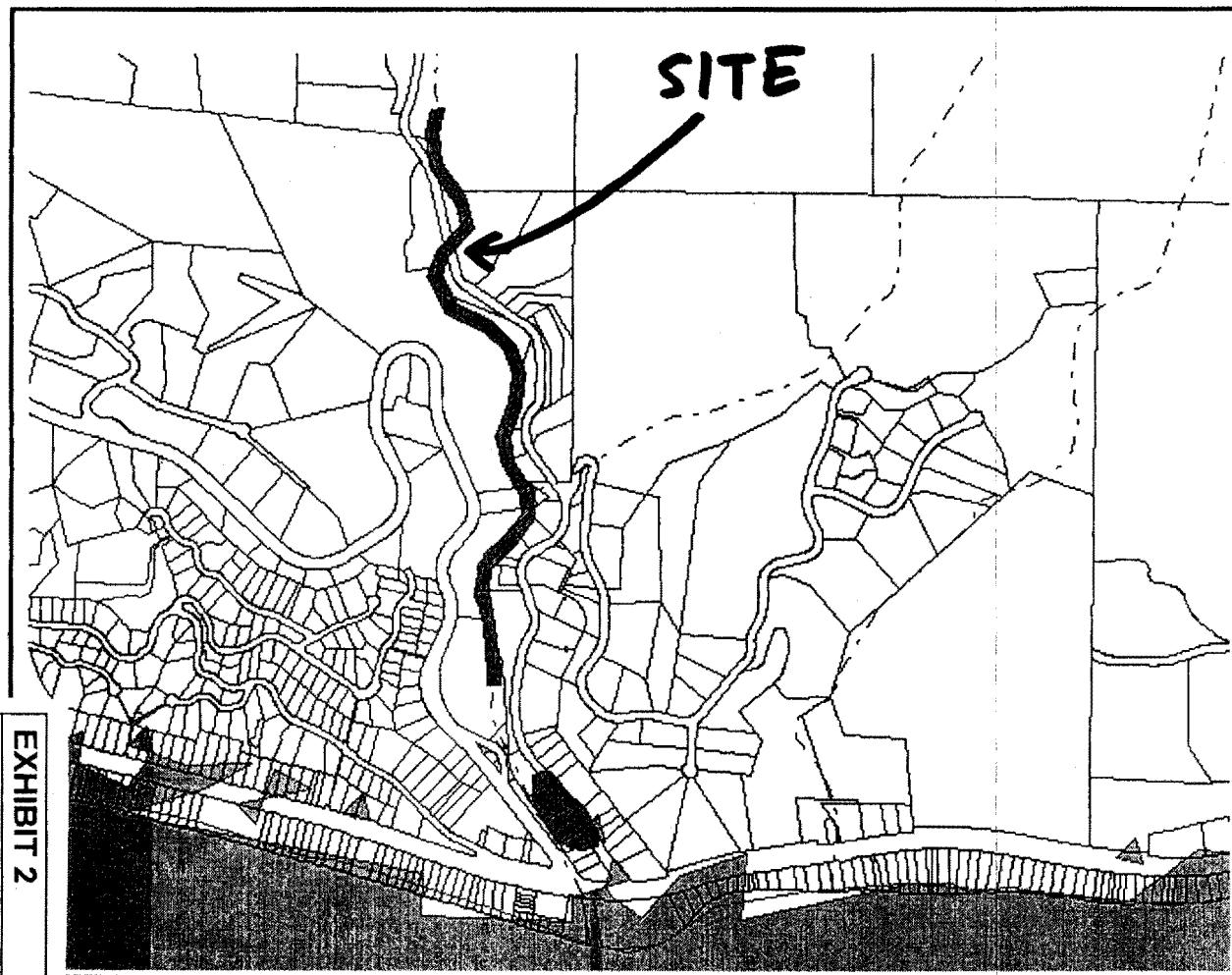
The Commission finds that the proposed project would have significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. These effects include impacts to public views, native vegetation, and water quality as discussed in previous sections of this report. The Commission notes that there are feasible alternatives, such as removing the existing streambank stabilization and reconstructing the toe-of-slope protection, which would significantly reduce or eliminate these adverse impacts. Therefore, the proposed project has not been adequately mitigated and is determined to be inconsistent with CEQA and the policies of the Coastal Act.

**EXHIBIT 1**  
**CDP 4-00-014 (Newlon)**  
**Location Map**



ESRI ArcExplorer 1.1

# 4-00-014 Newlon (3550 Las Flores Canyon Rd.)



- Malibu City Boundary
- LA-Ventura County Boundary
- Trails - LA County LUP
- Blue Line Streams
- shoreline
- czbdy
- laprcls
- esha
- Small lot subdivisions
- Ocean



Wednesday, Apr 19 2000

EXHIBIT 2

CDP 4-00-014 (Newlon)

Location Map



CARDEN  
MALIBU  
SCHOOL

LAS FLORES CREEK

PROPERTY  
LINE

2.7 ACRES

RIPRAP REPAIR  
LOCATION

255'

RIDGE LINE

SEPTIC  
TANK

PECK

HOUSE

DECK

EX 48"  
SD.

ONLY TO  
NEIGHBORS

DRIVEWAY

PER COASTAL  
COMMISSION DOCUMENTS

EXIST.

12' PAVED

LEACH PIT

LAS FLORES  
ROAD

RANT

1/4 MILE

1/2 MILE

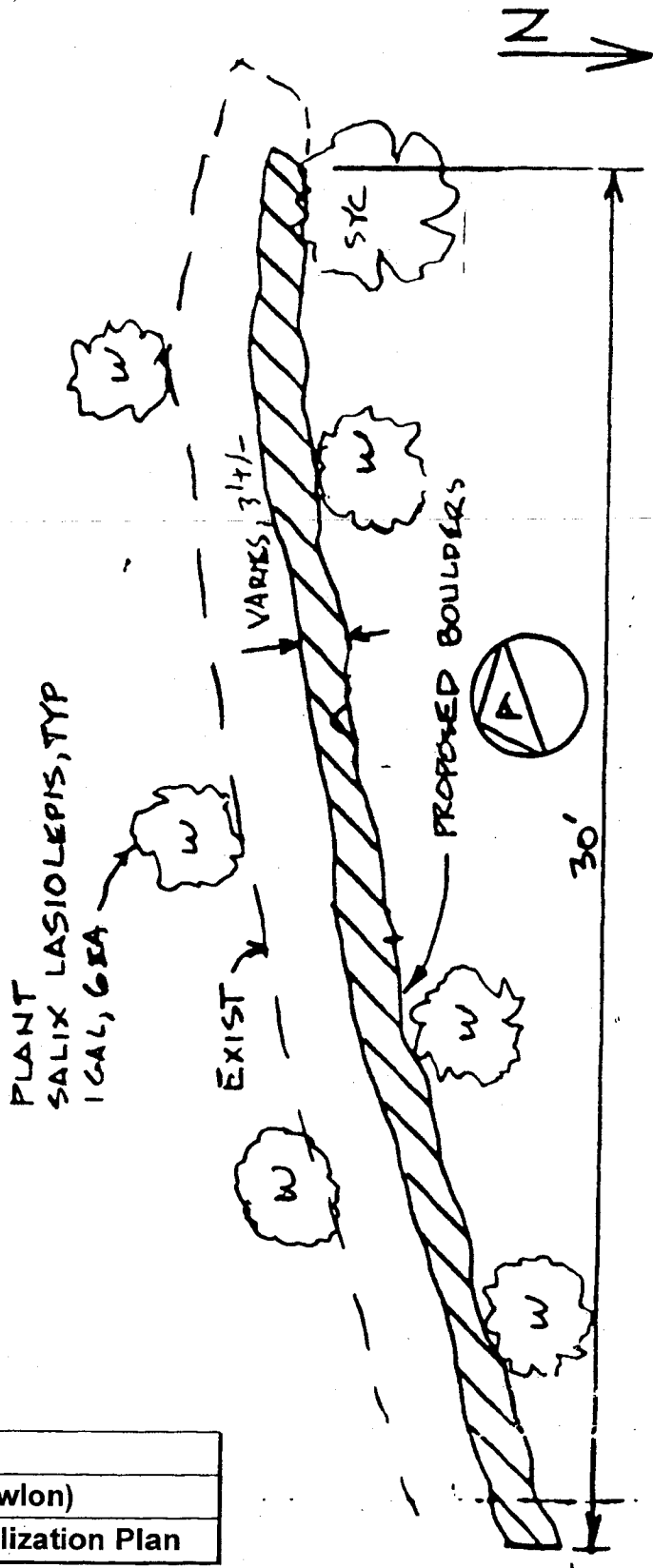
LAS FLORENSA

EXHIBIT 3

CDP 4-00-014 (Newlon)

Site Plan

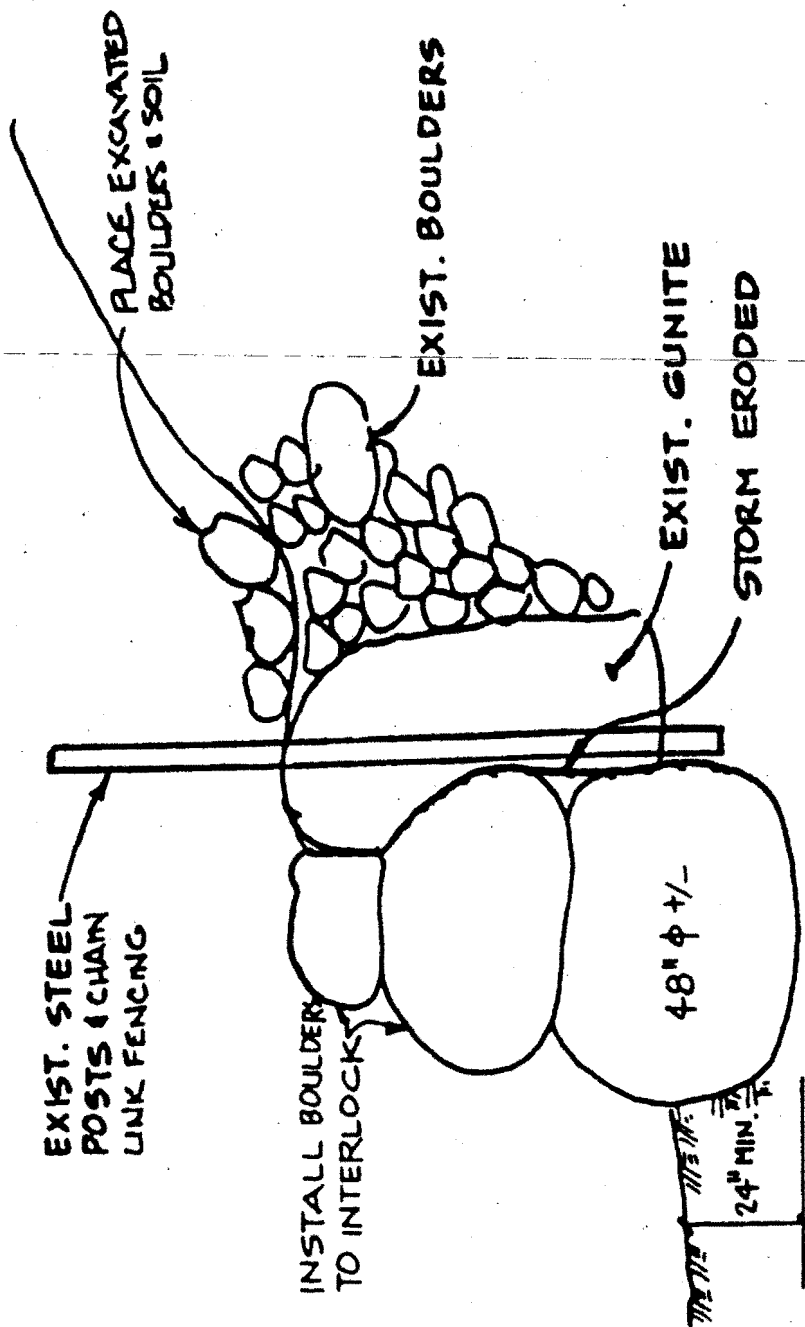
EXHIBIT 4
CDP 4-00-014 (Newlon)
Streambank Stabilization Plan



# PLAN

ALL PLANTS SHALL BE IRRIGATED BY A TEMPORARY IRRIGATION SYSTEM.

PLANT  
1 GAL  
PLATANUS  
RACEMOSA,  
2 EA, OUT  
OF CREEK  
CHANNEL



## DETAIL

EXHIBIT 5

CDP 4-00-014 (Newlon)

Streambank Stabilization Detail

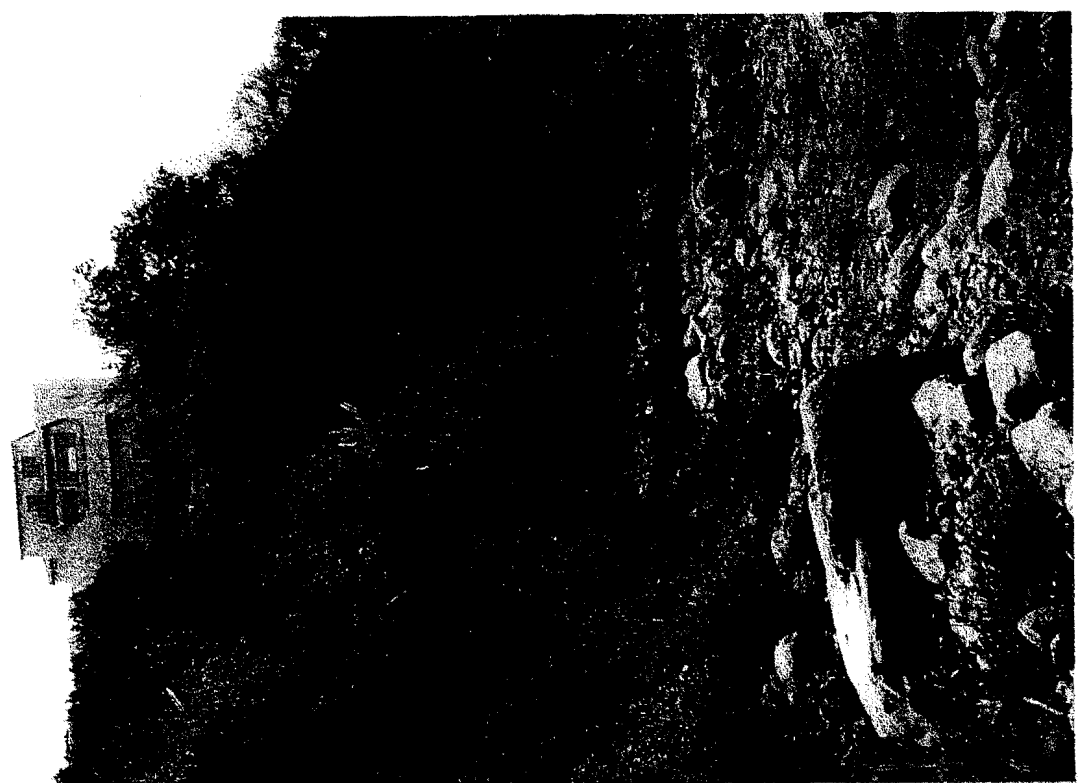
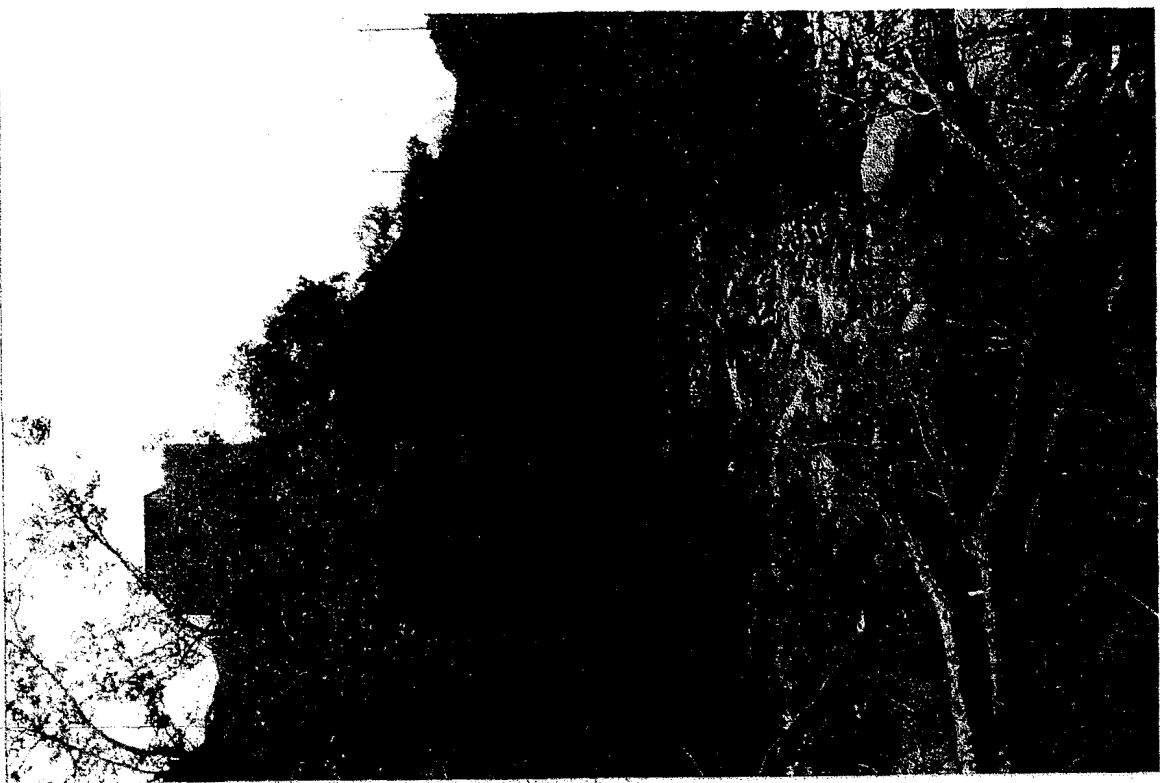


EXHIBIT 6

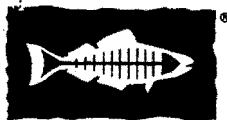
CDP 4-00-014 (Newlon)

Photographs (looking South)



RECEIVED

EXHIBIT 7
CDP 4-00-014 (Newlon)
Photographs (looking East)



Heal the Bay

RECEIVED

MAY 10 2000

CALIFORNIA  
COASTAL COMMISSION  
SOUTH CENTRAL COAST DISTRICT

2701 Ocean Park Blvd., Suite 150  
Santa Monica CA 90405  
310.581.4188 fax 310.581.4195  
htb@healthebay.org  
www.healthebay.org

Mr. Peter Douglas  
Executive Director  
Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105-2219

VIA Facsimile: (415) 904-5400

RE: Item number TU-11e (4-00-014)

RECEIVED

MAY 10 2000

MAY 11 2000

CALIFORNIA  
COASTAL COMMISSION

CALIFORNIA  
COASTAL COMMISSION  
SOUTH CENTRAL COAST DISTRICT

Dear Mr. Douglas,

Heal the Bay is a non-profit environmental organization with approximately 10,000 members and volunteers working to make Santa Monica Bay and Los Angeles County coastal waters safe and healthy for people and marine life.

General Comments

We disagree with staff's recommendation that the proposed project is the most feasible available development alternative that substantially lessens any significant adverse impacts on the environment. The Commission is confronted with approving a project that has already proven itself ineffective in controlling erosion and stabilizing a bluff. The fact that another permit is required to "repair" the grouted rip-rap and existing gabion rocks is evidence that this armoring of Las Flores Creek is not stabilizing the channel slope.

Also, the staff report does not contain information discussing or demonstrating that this project reduces the velocity creek flows. Simply displacing the water's energy to another portion of the creek, only transfers the problem of slope stability. Quoting the staff report, "The placement of rip-rap effectively "hardens" the stream channel thereby increasing the rate and volume of runoff." Increased runoff velocities results in an increase of erosion within the streambank and further degrades not only the biological productivity of the creek but also the structural integrity of the creek channel. The result will be a race to armor the channel, similar to our coastline, for slope stability while forfeiting any future biological productivity.

The staff report claims to have implemented a "bio-engineered" solution, by stating that it will "place rip-rap at the base of the existing gunnite structure and along and behind the gabion basket of rock-filled area." The literature in today's landscape architecture journals on "bio-engineering" argue against "hardscape" (rip-rap, concrete walls, channels, and underground culverts) as a long-term solution to streambank stabilization, and favor "softscape" (plants, trees and plant parts). For example, plant and tree roots have been demonstrated to have greater tensile strength (a measurement of stress) than concrete.

Finally, there is little discussion as to the need for developing a long-range program for slope/channel stabilization within Las Flores Creek. The need to take a watershed approach to



Earth Share.

EXHIBIT 8a

CDP 4-00-014 (Newlon)

Heal the Bay Letter p.1

slope stabilization, much like water quality, is evident. By ignoring up or downstream developments along the Las Flores Creek, such as Carden School or others, and blaming the increased velocity and in turn erosion problems on seasonal streamflows, is turning a blind eye to the real problem—an increasingly impervious channel.

#### Specific Comments

In section III.1a, when discussing removal of invasive and non-indigenous plant species, there is no discussion as to how non-native species will be removed and or prevention of regrowth. Will herbicides be utilized for such work?

In section III.3, regarding the construction activity shall not occur during the rainy season (November 1 – March 31), this time period should be extended to April 30.

In section IV.a, there is no evidence to demonstrate that recent seasonal streamflows were any greater than they have been in the past.

In section IVb, the staff cites the Coastal Act (Section 30253 (2)) “Assure stability and structural integrity, and neither create nor contribute significantly to erosion...” and then makes the statement latter on in section IVe “The placement of rip-rap effectively “hardens” the stream channel thereby increasing the rate of runoff, potentially causing increased erosion and sedimentation...” which goes against what is stated in the Coastal Act.

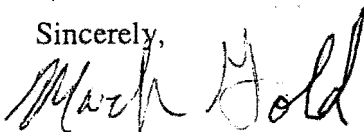
In section IVb, in paragraph two, “Commission staff notes that no preferred alternatives exist which would ensure the structural integrity of the streambank/slope and allow for preservation /enhancement of the riparian environment...” What is the basis for this statement? There has been no discussion of other “bio-engineered” alternatives or why the proposed project is the preferred alternative.

In section IVb, page seven, the statement “There is no feasible engineering alternative to protect the toe of the slope that avoids armoring of the creek bank,” not only goes against the previously cited Coastal Act (section 30253(2)); but, a number of claims made in this report, which are used to support this staff recommendation are unsubstantiated.

The Commission must stop looking at individual projects within watersheds and begin looking at watershed as a whole. A watershed approach to slope stabilization is imperative to having a biologically functioning riparian corridor. Without such, what is being proposed (piece-mealed projects) that claim to have no other alternative but to place rip-rap, will continue to come before the Commission, and Las Flores Creek will in essence become channelized through armoring.

If you have any questions regarding these requests, please feel free to give me a call at (310) 581-4188 ext.119 or email me at [mgold@healthebay.org](mailto:mgold@healthebay.org).

Sincerely,



Mark Gold, D.Env  
Executive Director

<b>EXHIBIT 8b</b>
<b>CDP 4-00-014 (Newlon)</b>
<b>Heal the Bay Letter p.2</b>



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Robert Newlon & Associates  
Civil Engineering and Landscape Design

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5/16/00

To: Brent McDonald  
From: Robert Newlon  
Re: Riprap Repair, 3550 Las Flores Canyon Road, Malibu  
File No. 4-00-014

RECEIVED  
MAY 22 2000

CANONIA  
COASTAL COMMISSION  
SOUTH CENTRAL COAST DISTRICT

This letter is being sent to respond to the letter sent to the Coastal Commission from Mark Gold, Executive Director of Heal the Bay, dated May 8, 2000.

Mr. Gold's letter was sent to object to my proposed rip rap repair and he offered opinions and suggestions for alternate methods and studies. The intent of my response is to clarify the scope and nature of the proposed work and to offer responses which argue in favor of keeping the proposed work as presently designed. To facilitate review, I will address Mr. Gold's comments in the order presented in his letter.

Under his General Comments, first paragraph, Mr. Gold states, "The Commission is confronted with approving a project that has already proven itself ineffective in controlling erosion and stabilizing a bluff." This statement is false. The existing grouted rip-rap and gabion structure has proven very effective in controlling erosion. The bluff above the structure has been stabilized due to its installation. The creek bed has lowered and is undercutting the existing structure. The proposed work is to support this structure while at the same time providing a plant and animal habitat.

Second paragraph, "The staff report does not contain information discussing or demonstrating that this project reduces the velocity creek flows." The proposed work does not propose to alter the velocity of the creek flows. A hydrology and hydraulic study was performed which demonstrated that the proposed work has an insignificant impact on streamflow characteristics.

Mr. Gold continues to state that this work is beginning "a race to armor the channel, similar to our coastline, for slope stability while forfeiting any future biological productivity." Mr. Gold's hyperbole is effective in drumming up an emotional response but is once again inaccurate and misguided. The existing rip rap structure is approximately 30 feet in length. It has been in place for approximately 15 years. It consists of a solid concrete face with a gabion structure above. The existing condition can be considered partially armored with the lower portion being a fully armored creek bank. This lower portion is proposed to be covered with boulders with soil pockets. This proposed boulder repair will create a habitat for both plants and animals and will effectively reduce the armoring of the creek bed.

EXHIBIT 9a

CDP 4-00-014 (Newlon)

Newlon Letter One p. 1/3

Mr. Gold's third paragraph seems to argue against defining the proposed work as a "bio-engineered" solution and he appears to argue that "bio-engineered" solutions are limited to "softscape" (plants, trees, and plant parts). Rather than argue definitions I would prefer to focus on the proposed work and it's effectiveness in achieving it's proposed goals. The proposed work begins by installing boulders native to the creek bed. Upon completion of the boulder installation, a variety of plants native to the creek bed will be planted among and adjacent to the boulders. This simple solution using materials natural and indigenous to the location would appear to be reasonably defined by the Coastal Commission staff as "bioengineered". In addition, the proposed solution will be capable of withstanding the force of a raging winter storm flow. A "softscape" solution simply could not withstand the forces at this sharp bend in the creek.

Mr. Gold's General Comments section concludes by stating there is "The need to take a watershed approach...". I do not believe it is fair to me to undertake such a far-reaching study, especially since I am improving the biological nature of the location and the proposed work is only thirty feet in length.

Under Mr. Gold's Specific Comments section:

Section III.1a: All proposed work is by hand. Removal of invasive and non-indigenous plants will be by hand. No herbicides are proposed.

Section III.3: The work is proposed to occur in July, 2000, however I don't object to limiting the time period for work between November 1- April 30.

Section IV.a: Mr. Gold states "there is no evidence to demonstrate that recent seasonal streamflows were any greater than they were in the past". Quite the contrary. Whether seen on TV, the newspapers, or magazines, people across the country were aware of the 1993 fires in Malibu and the El Nino winter and floods which followed. These floods are what lowered the creekbed and have required the proposed work.

Section IVb: Mr. Gold's first statement regarding this section takes issue with statements made by Coastal staff implying that the proposed work goes against what is stated in the Coastal Act. Mr. Gold is misinterpreting what was written and he is taking the staff statements out of context. The issue he raises relates to whether the proposed work creates or contributes to erosion. The existing structure has served to prevent erosion. The proposed repair will continue to prevent erosion while having the added benefit of providing a habitat for plant and animal life. This complies with the Coastal Act.

Section IVb: Mr. Gold is objecting to the lack of further detailed discussions of alternates to the proposed work. I must say that when I read the staff report I was incredulous at the amount of detail, review, and analysis that was performed by the Coastal staff. All I am proposing to do is place natural boulders along a 30 foot section of a creek. The location is already protected with a grouted rip rap and gabion structure. I then propose to plant the pockets between the boulders with native plants to the creek. A thirteen page, single-spaced staff report was prepared which discussed this work. I would argue that further analysis is a waste of my money as a taxpayer and a waste of energy by Coastal Commission staff who could be reviewing other projects.

EXHIBIT 9b

CDP 4-00-014 (Newlon)

Newlon Letter One p. 2/3

Section IVb, page seven: Mr. Gold again takes his information out of context. The Coastal staff member spent considerable time discussing alternatives to the proposed work and has clarified how the proposed work meets the intent of the Coastal Act.

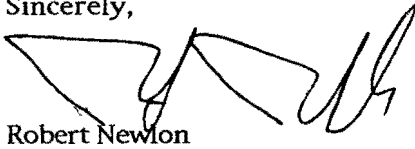
Mr. Gold finishes by arguing that the Commission must stop looking at individual projects within watersheds and begin looking at the watershed as a whole. I don't believe it is fair to reject my project because Mr. Gold believes the Commission should change its practices on reviewing projects. I believe my project complies with the Coastal Act and that the work will serve to improve the wildlife habitat.

Finally, I would like to say that I found it disheartening to disagree with Mr. Gold's claims. I have respected and supported the work of Heal the Bay. I also support various environmental organizations and support the goal of preserving our environment. Finding myself on the opposite side of an issue from an environmental group is quite unusual. I can only assume Mr. Gold did not grasp the actual nature of the project. And perhaps he did not realize that the project will enhance the environment by covering a concrete structure with natural boulders and will provide a habitat for indigenous plants and animals.

I respectfully request that my project be approved as presently proposed together with the six (6) special conditions regarding a riparian vegetation restoration plan, use of native materials, timing of construction, debris removal, required permits, and assumption of risk.

Thank you.

Sincerely,



Robert Newlon

EXHIBIT 9c
CDP 4-00-014 (Newlon)
Newlon Letter One p. 3/3

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Robert Newlon & Associates  
Civil Engineering and Landscape Design

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5/16/00

To: Brent McDonald  
From: Robert Newlon  
Re: Riprap Repair, 3550 Las Flores Canyon Road, Malibu  
File No. 4-00-014

RECEIVED

MAY 22 2000

CALIFORNIA  
COASTAL COMMISSION  
SOUTH CENTRAL COAST DISTRICT

This letter is being sent to respond to specific issues relating to my proposed project.

1. Feasible Alternatives

Feasible alternatives do, in fact, exist to the proposed project. I will briefly outline three feasible alternatives.

a. One feasible alternative would be use a drill rig to excavate for caisson footings. Steel rebar cages would be installed and concrete poured into the footings. In order to avoid the contamination of stream waters from toxic cement, a coffer dam would be installed. Once the footings cured, concrete piles could be extended above grade to the heights of the top of the existing concrete-faced riprap. Steel cables could be installed between the piles and the area backfilled with boulders and planted with vegetation.

b. A second feasible alternative would be to drive steel piles into the stream bed using a pile driver. The steel beams would extend up to the height of the top of the existing concrete-faced riprap. Steel cables could be installed between the piles and the area backfilled with boulders and planted with vegetation.

c. A third feasible alternative would be to install boulders as presently proposed and to then shotcrete the face of the boulders. This would also require a coffer dam to avoid contamination of the creek. The boulders would only need to extend to the bottom of the existing concrete-faced riprap.

All three of the above feasible alternatives would require a greater disruption to the natural environment than the proposed alternative of installing natural boulders and planting in the voids. Also, due to the use of drill rigs, pile drivers, and/or concrete, these three alternatives would pose a greater potential threat to the environment during construction than the proposed alternative. The proposed alternative is also superior than the other alternatives because only materials native to the site will be used and the resulting construction will blend naturally with the environment.

The use of a "softscape" alternative cannot be considered feasible as it does not meet the technical requirements of the site, nor in fact would it necessarily meet the environmental and economic requirements. This site occurs at a sharp bend in Las Flores creek. It has been estimated that the potential for a maximum creek flow of over 5,800 cubic feet per second exists at the site location. This is equivalent to 2,600,000 gallons per minute. It doesn't take an engineer (although I am one) to recognize that a "softscape" alternative would be "blown out" by these flows. Most likely, this "softscape" alternative would experience a partial sudden failure which could result in environmental and perhaps economic damage downstream by the "softscape" alternative being whisked down the stream and damaging wildlife or private property.

2. Will Stream Velocity be Affected by the proposed project

The hydrology and hydraulic study indicated that an insignificant change in the streamflow characteristics will occur as a result of the proposed project. This is a logical conclusion considering that the potential stream width is over fifty feet wide while the proposed work only encroaches into this width a couple of feet.

3. Feasibility of a "Bioengineered approach using plant materials only"

The definition of feasible as stated in the California Environmental Quality Act is "... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Under this definition, the alternative of a plant materials only approach can only be considered unfeasible as enumerated on page 1.

4. Need for a "watershed approach" or stream management plan

I would argue against these suggestions for three basic reasons.

First, this project is insignificant in its effect on the impact to a 2400 acre watershed. The length of the project is only thirty feet. It proposes to use only natural materials with all work being performed by hand labor.

Second, I believe that it is an undue and unwarranted burden to require an individual to undertake the study of such a large watershed for work that will have no significant impact.

Third, I don't believe it is in the scope of the Coastal Act nor am I aware that the Coastal Commission would have the jurisdiction to require such a study based upon the proposed project.

I respectfully request that my project be approved as presently proposed together with the six (6) special conditions regarding a riparian vegetation restoration plan, use of native materials, timing of construction, debris removal, required permits, and assumption of risk.

Thank you.

Sincerely,

  
Robert Newlon

EXHIBIT 10b
CDP 4-00-014 (Newlon)
Newlon Letter Two p. 2/2

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Robert Newlon & Associates  
Civil Engineering and Landscape Design

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5/19/00

To: Brent McDonald

From: Robert Newlon

Re: Riprap Repair, 3550 Las Flores Canyon Road, Malibu  
File No. 4-00-014

RECEIVED  
MAY 22 2000

CALIFORNIA  
COASTAL COMMISSION  
SOUTH CENTRAL COAST DISTRICT

Per your phone request, I will analysis the possible alternative construction method of removing the existing concrete and gabion structure and replacement with boulders.

Removal of the existing concrete and gabion structure will most likely require access by heavy equipment in order demolish and remove the concrete, steel piles which are integrated into the concrete, and gabion structure. It is doubtful, although possible, that this could be performed by hand labor. The quantity of debris required for removal together with the distance and uphill route required to remove it to a street location would be difficult to perform by hand labor.

Whether demolition was performed by heavy equipment or hand equipment, it would be nearly impossible to avoid contamination of the creek from cement dust and debris. This cement dust and debris is toxic to fish and wildlife. The State of California Department of Fish and Game expressed concern over this issue of cement and agreed to issue their approval of the project because contamination from cement was not an issue. Likewise, the California Regional Water Quality Control Board granted their approval because the presently proposed project consisted of using natural boulders and there was no possibility of affecting the water quality. It is also likely that the City of Malibu Biologist would object to this alternate method that poses a threat to wildlife.

The alternate of removing the existing concrete and gabion structure and replacing with boulders has no effect on changing the "armoring" of the creek bed in comparison with the present proposal of installing boulders over the existing structure. In both cases, the face of the creek bed will be lined with boulders which would provide equivalent "armoring" of the creek bed.

The timeframe of construction and scope of potential impact to the creek would be increased by the alternate of removing the existing concrete and gabion structure and replacing with boulders. Initially, the existing structure would require demolition. The demolished material would then need to be hauled down the creek, up a slope, and loaded into trucks. Trucks would then haul the demolished material to a landfill. Installation of roughly double the quantity of boulders would be required in order to provide the equivalent slope protection as the presently proposed method. It is estimated that the time to demolish the existing structure would be equivalent to the time necessary to install the presently proposed design of installing boulders. Hauling of material would take about an equivalent time as demolition. Installation of twice the quantity of boulders would take twice the present time frame. Thus it is estimated that the timeframe for the alternate method would be four times as long as the presently proposed method.

EXHIBIT 11a

CDP 4-00-014 (Newlon)

Newlon Letter Three p. 2/2

From a governmental agency processing standpoint, the timeframe for beginning construction would be delayed. The presently proposed solution has been worked out over a considerable timeframe among the following agencies: United States Corps of Engineers, The State of California Department of Fish and Game, the California Regional Water Quality Control Board, the City of Malibu Planning Department, the City of Malibu Biologist, the City of Malibu Geologist, the City of Malibu Public Works Department, and your agency, the California Coastal Commission. An alternate solution would require reprocessing through each of the above bodies.

Noise pollution would be an issue with the alternate of demolishing the existing concrete and gabion structure and replacement with boulders. This site is located immediately adjacent to a private school and a short distance from two private residences. The school has programs for children which run during the typical school year together with summer programs and thus functions almost continuously throughout the year. The only typical time they are not in operation is for two weeks around Christmas which is in the middle of the rainy season. The noise from jackhammers and demolition equipment would create a definite negative impact on both the school and the two residences. The presently-proposed solution of placing boulders over the existing structure has no noise impact as all work will be performed by hand labor and no equipment.

From an economic standpoint, the alternate solution of removing the existing concrete and gabion structure and installing boulders would be considerably more expensive than the presently proposed solution of installing boulders over the existing structure. The estimated construction cost is approximately four times the present alternative and is estimated as follows. Demolition of the existing structure should cost roughly what installation of the present quantity of boulders would cost. Hauling of the demolished material out of the creek bed, up a slope, into trucks, trucking to a landfill, and landfill fees is estimated to cost roughly the same as demolition. Then the installation of double the quantity of boulders would cost two more times the original cost. Thus the total construction cost would be roughly four times the presently proposed method. And this is only the economic impact of the construction cost. Other costs include the re-application fees to re-apply to each of the governmental agencies which have previously granted approval; costs of any new required studies, structural analysis of the alternate solution, costs for preparation of the revised plans; costs for processing of the revised plans with the various agencies, costs to respond to new requests from agencies, costs to prepare alternates to this alternate which will satisfy a specific agency; costs to prepare revised plans to the original alternate; reprinting costs to resubmit the revised alternate to various agencies; preparation of an alternate to the second alternate to satisfy the requests of a second agency; preparation of revised plans, reprinting the revised plans and resubmitting the plans to the various agencies; most likely additional fees to review the revised plans; costs to attend meetings; costs to reapply to various agencies because their original approval expired; costs to prepare revised applications; costs for preparation of letters explaining why the project should be granted a time extension rather than a new review, costs to prepare documents for a new review for the agency that will not grant a time extension; costs to prepare responses to the new review for the new agency staff member; costs to prepare alternate solutions for the new agency staff member; costs to meet with the new agency staff member; costs to prepare revised plans; costs to resubmit the revised plans to the various agencies together with a letter of explanation why the need for the revised plans; phone and mailing costs.

I again respectfully request that my project be approved as presently proposed together with the six (6) special conditions regarding a riparian vegetation restoration plan, use of native materials, timing of construction, debris removal, required permits, and assumption of risk.

Thank you.

Sincerely,

Robert Newlon



**EXHIBIT 11b**

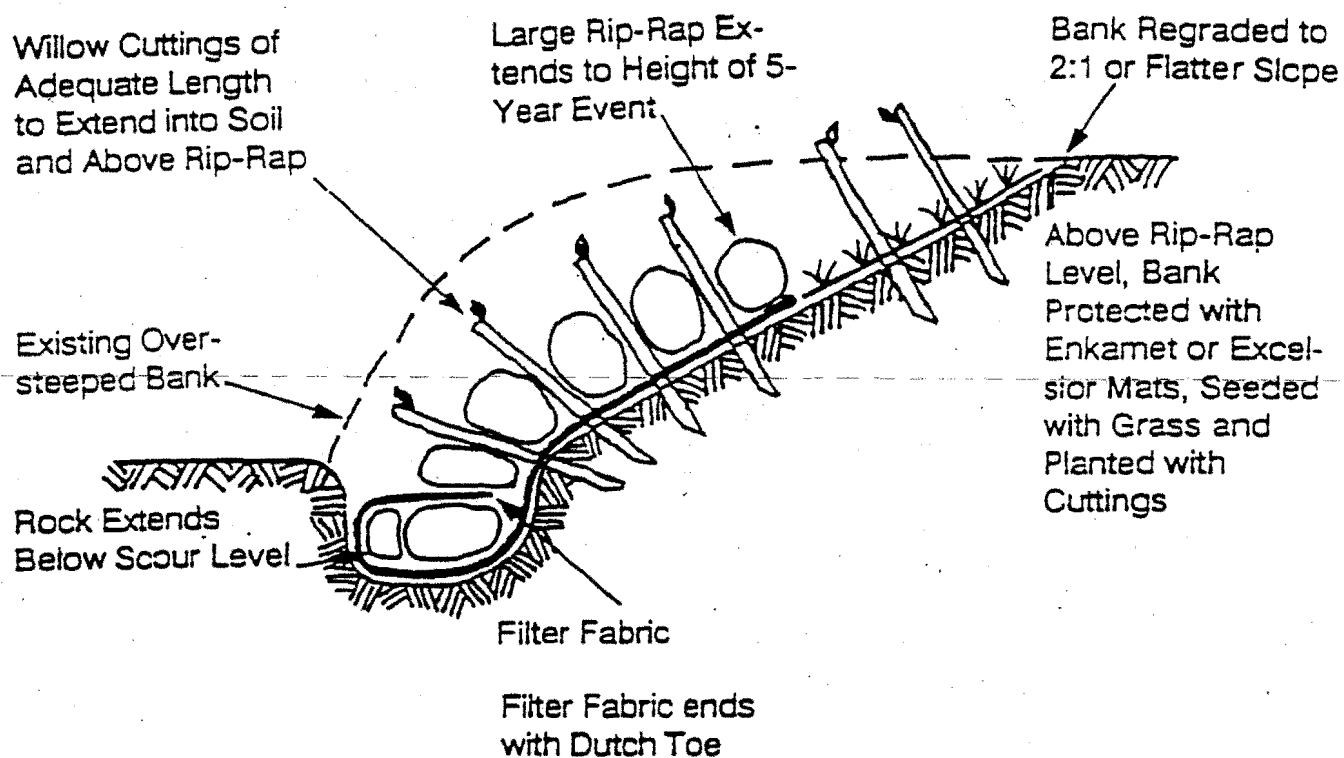
**CDP 4-00-014 (Newlon)**

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FIGURE 5

## Toe of Slope Stabilized with Rip-Rap and Planted



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EXHIBIT 12

CDP 4-00-014 (Newlon)

Schematic of possible "Quasi-Bio-Engineered" Alternative

to plant growth. The laboratory reports should also include any recommended fertilizer and lime amendment requirements for woody plant material.

8.3 VEGETATED RIPRAP (JOINT PLANTING)

8.3.1 Description

Joint planting refers to the insertion of live cuttings (stakes) in the openings or joints between the rock in a riprap revetment, as shown in Figures 8-1 and 8-2. Alternatively, the cuttings can be tamped into the ground at the same time the rock is being placed on the slope face. The latter approach facilitates installation of the cuttings but also complicates rock placement and increases the likelihood of damage to the cuttings if the rock is tailgated or dumped in place.

8.3.2 Objective

Live cuttings placed in this manner should extend into the soil beneath the stone armor, as illustrated in Figure 8-1. The objective is to have these live cuttings root in the soil beneath the riprap, thus reinforcing the bank, anchoring the riprap, and improving drainage by extracting soil moisture.

8.3.3 Effectiveness

A vegetated riprap revetment (joint planting) provides the following advantages:

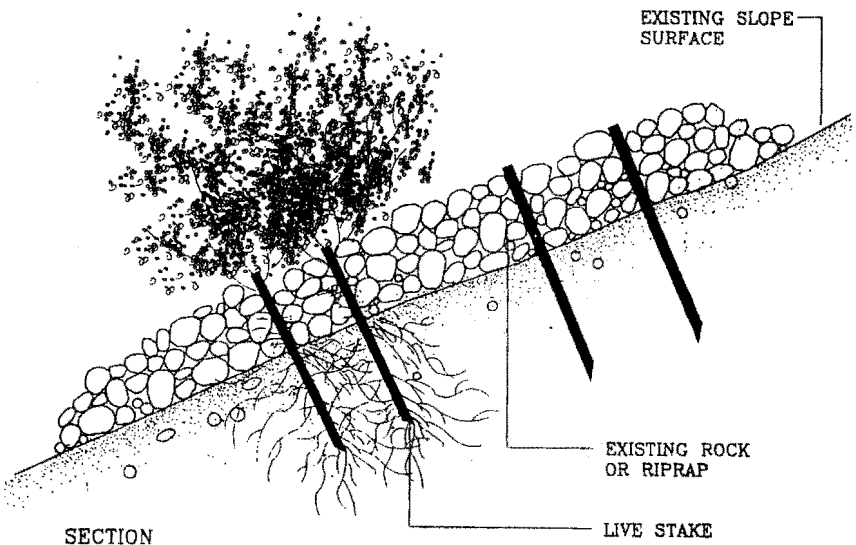


Figure 8-1. Schematic illustration of an established, growing vegetated riprap revetment.



Figure 8-2. Photo of vegetated riprap revetment showing cuttings that have rooted and sprouted between the armor rocks.

- It improves the performance of the armor layer by preventing the washout of fines and by reinforcing the underlying native soil.
- It has a more natural appearance and is less visually intrusive than a structural treatment alone.
- It provides some riparian cover and wildlife habitat.
- It helps to slow water velocities near the bank and trap sediment.

8.3.4 Materials

Live materials consist of cut stakes that are 1 to 1½ inches in diameter and long enough to reach beyond the base of the riprap, as shown in Figure 8-1. Willow cuttings work best for this purpose. The cuttings must be fresh and must be kept moist after they have been prepared into appropriate lengths. They should be installed the same day that they are prepared. The inert construction materials consist of rocks, which should be sized to resist dislodgment by waves or currents and a filter course, which should be designed to prevent washout of fines in the native soil beneath the revetment.

8.3.5 Installation

The following general guidelines for installing a vegetated rock revetment are:

EXHIBIT 13
CDP 4-00-014 (Newlon)
"Bio-Engineered" Schematic

Construct-

the minimum width to height ratio requirement. The structural wall design should be approved by a qualified geotechnical engineer.

EXHIBIT 14  
CDP 4-00-014 (Newlon)  
Textbook "Bio-Engineering"

in layer of earthen backfill atop each successive tier or course of closed wire baskets. Select backfill should also be placed in gabion baskets to an elevation that is level with the top of the

live branches or cuttings on the soil/rock-filled wire baskets. They should be placed at right angles to the wall with the growing tips pointing up and butt ends in the backfill behind the wall. The tips of the cuttings should extend a few inches beyond the front and the butt ends, into the backfill behind the gabions.

The cuttings or branches should then be covered with another thin layer of soil. Finally, the soil or backfill should be compacted and covered with a thin layer of soil to ensure good contact with the cuttings.

The order of the vegetated rock gabion erection procedure is repeated, tier by tier, until the required height is reached.

## 8.7 VEGETATED ROCK WALLS

### 8.7.1 Description

A vegetated rock wall is essentially a rock breast wall in which live cuttings are inserted between the rocks and also placed in the soil bench formed above the wall, as shown schematically in Figure 8-12.

### 8.7.2 Objective

Unlike conventional retaining structures, rock breast walls are placed against relatively undisturbed earth and little if any backfill is placed behind the wall. Rock breast walls are not designed to withstand large lateral earth stresses. Their main purpose is to finish off and protect the toe of a slope against undermining. They also help to decrease the steepness of a slope at its base and facilitate the establishment of vegetation.

### 8.7.3 Effectiveness

A vegetated rock breast wall provides the following advantages:

- It is helpful at the base of slopes, where a low toe-wall can be used to reduce the steepness of a slope and protect the toe against scour and undermining.
- It has a more natural appearance and is less visually intrusive than a structural treatment alone.
- It facilitates establishment of vegetation at the toe of the slope.
- Plant roots provide articulation and help to bind the rock together into a coherent unitary mass and reduce the danger of local shear failure.

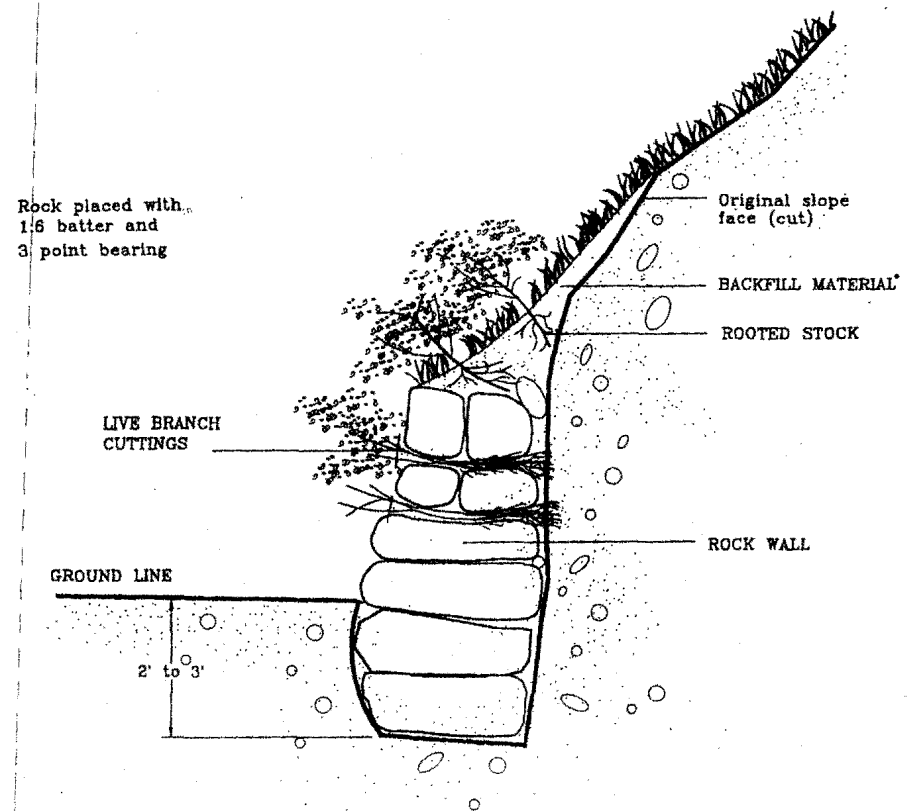


Figure 8-12. Schematic illustration of an established growing vegetated rock wall.

### 8.7.4 Materials

Live materials consist of branches or cuttings that are  $\frac{1}{2}$  to 1 inch in diameter and long enough to reach beyond the rock structure into the fill or undisturbed soil behind, as shown in Figure 8-12. The inert construction materials consist of rocks and fill material for the wall construction. The rocks used should normally range from 8 to 24 inches in diameter. Large boulders should be used for the base.

### 8.7.5 Installation

The following general guidelines and procedures can be followed for constructing a vegetated rock wall system:

- Starting at the lowest point of the slope, remove loose soil until a stable base is reached. This will normally entail excavating a 2 to 3 foot deep footing area or trench below natural grade. The footing base should be sloped down slightly so that the rock will have a batter (inclination off vertical) of at least 1:6 (H:V). This battering provides additional stability to the structure.