

**MALIBU LAGOON HABITAT ENHANCEMENT DESIGN STUDY**

**Agenda Item 17.**

**October 31, 2002**

COASTAL CONSERVANCY

Project Summary  
October 31, 2002

**MALIBU LAGOON HABITAT ENHANCEMENT DESIGN STUDY**

File No. 02-027  
Project Manager: Jack Liebster

RECOMMENDED ACTION: Authorization to disburse up to \$250,000 to Heal the Bay to prepare feasibility studies, preliminary design and engineering plans, environmental documents, and an implementation program for the enhancement of Malibu Lagoon, and to coordinate these tasks with other projects and study programs affecting the lagoon to implement the Santa Monica Bay Restoration Plan, adopted by the Conservancy in August 2001.

LOCATION: Malibu Lagoon State Park, City of Malibu and Los Angeles County (Exhibits 1-4)

PROGRAM CATEGORY: Resource Enhancement

ESTIMATED COST:	Coastal Conservancy*	\$250,000
	State Dept. of Parks and Recreation (in kind)	<u>40,000</u>
	Total:	\$290,000

\* The anticipated source of Conservancy funds for this project is an appropriation to the Conservancy from the California Clean Water, Clean Air, State Neighborhood Parks and Coastal Protection Fund (Proposition 40).

PROJECT SUMMARY: Staff is recommending authorization to disburse up to \$250,000 to Heal the Bay to prepare feasibility studies, preliminary design and engineering plans, environmental documents, and an implementation program for the enhancement of Malibu Lagoon, and to coordinate this work with other projects and study programs affecting the lagoon.

The project will entail refining and evaluating alternatives for correcting circulation and grading problems that remained after fill was removed from the lagoon by the California Department of Parks and Recreation in the 1980s. Correction of these impairments to the lagoon habitat were identified as top priorities

by the Malibu Lagoon Task Force (MLTF) of the Malibu Creek Watershed Advisory Council, the stakeholder planning group for the watershed. The MLTF recommendations are based on the *Lower Malibu Creek and Lagoon Resource Enhancement and Management* study (Lagoon Study), which the MLTF conducted with Conservancy funding to identify conceptual alternatives for restoration and enhancement actions throughout the lower watershed. The project will also implement the Santa Monica Bay Restoration Project's (SMBRP) *Bay Restoration Plan* (the Bay Plan), which made restoring Malibu Lagoon one of its primary objectives and was approved by the Conservancy in August 2001.

The project design process will take into account factors that limit potential lagoon enhancement, including persistent high water levels and low salinities in the lagoon brought on by increased use of imported water upstream, surface and subsurface inflows of polluted water, controversies over artificially breaching the lagoon berm, and concern over beach closures and health problems associated with people using the Bay waters adjacent to the lagoon. These factors are the subject of other projects already underway. A technical advisory committee will be established among the managers of these projects to coordinate work, avoid duplication of effort, and identify common interests and beneficial synergies.

The project site lies entirely within the State-owned area operated by DPR as Malibu Lagoon State Beach. Since DPR does not have sufficient staffing or funding available to conduct the project, it has asked the Southern California Wetlands Recovery Project (SCWRP) and the Conservancy for assistance. Potential matching funds have already been identified for implementation, and the Conservancy's timely funding of the planning phase would catalyze progress towards a successful enhancement. The SCWRP Board of Governors has included the project in its Work Plan.

DPR has also arranged to work with Heal the Bay (HTB), a private nonprofit organization, to manage the project. HTB was founded in 1985 to work to improve the health and safety of Santa Monica Bay and southern California coastal waters generally. It has a long and extensive record of scientific, technical, and management involvement with the problems and opportunities of Malibu Creek and Lagoon. It has carried out large-scale water quality studies and long-term monitoring programs, and has successfully managed Conservancy grants in the past.

COASTAL CONSERVANCY

Staff Recommendation

October 31, 2002

**MALIBU LAGOON WATER LEVEL MANAGEMENT FEASIBILITY STUDY**

File No. 02-027

Project Manager: Jack Liebster

STAFF

RECOMMENDATION: Staff recommends that the State Coastal Conservancy adopt the following Resolution pursuant to Sections 31251-31270 of Division 21 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed two hundred fifty thousand dollars (\$250,000) to Heal the Bay (HTB) to prepare feasibility studies, preliminary design and engineering plans, environmental documents, and an implementation program, for the enhancement of Malibu Lagoon, and to coordinate this work with other projects and study programs affecting the lagoon to implement the Santa Monica Bay Restoration Plan, adopted by the Conservancy in August 2001. This authorization shall be subject to the conditions that, prior to the disbursement of funds for the project:

1. The California Department of Parks and Recreation shall have provided for the review and approval of the Executive Officer written representation that it wishes the proposed project to be undertaken and that, upon completion of the project, it will seek to implement the recommended enhancement measures.
2. HTB shall submit for the review and written approval of the Conservancy’s Executive Officer:
  - a. A work program, schedule, and budget for the project; and
  - b. The names and qualifications of any contractors it intends to use to conduct the project.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the purposes and criteria in Chapter 6 of Division 21 the Public Resources Code (Sections 31251-31270) regarding the enhancement of coastal resources.
2. The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001.
3. Heal the Bay is a private nonprofit organization as defined by Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the California Public Resources Code.”

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**STAFF DISCUSSION:**

**Project Description:** The project would provide up to \$250,000 to Heal the Bay (HTB) to prepare feasibility studies, preliminary design and engineering plans, environmental documents, and an implementation program for the enhancement of Malibu Lagoon and to coordinate this work with other projects and study programs affecting the lagoon to implement the Santa Monica Bay Restoration Plan, adopted by the Conservancy in August 2001.

At Site A1 (Exhibits 3 & 4), the project's objectives are to increase tidal flushing in the wet season, improve water circulation, increase water holding capacity in the dry season, reduce predator encroachment, and improve the function and value of salt marsh habitat. The design would take into account integrating any potential future acquisition of adjacent sites to enlarge the Lagoon.

Enhancement planning for the Site A4 (Exhibits 3 & 4) would evaluate how best to increase salt marsh acreage at this site and establish nesting habitat, including the possibility for regrading to encourage establishment of salt marsh hydrology, create a nesting island for least terns and snowy plovers, and develop channel connections to the lagoon.

The project design for both sites will take into consideration potential impacts to endangered species such as the tidewater goby that have returned to the site. The project's management structure will also serve to integrate a number of other studies currently underway in and around the lagoon to develop an implementation plan that responds to these multiple objectives in a coordinated way.

HTB is an appropriate organization to conduct these studies. HTB has a long and extensive record of scientific, technical,

and management involvement with the problems and opportunities of Malibu Creek and Lagoon. It has carried out large-scale water quality studies and long-term monitoring programs, and has successfully managed Conservancy-funded projects in the past. It has developed a close working relationship with the California Department of Parks and Recreation (DPR) that will benefit the project.

Project Financing:	Coastal Conservancy*	\$250,000
	State Dept. of Parks and Recreation (in kind)	<u>40,000</u>
	Total:	\$290,000

\* The anticipated source of Conservancy funds for this project is an appropriation to the Conservancy from the California Clean Water, Clean Air, State Neighborhood Parks and Coastal Protection Fund (Proposition 40).

Site Description: Malibu Lagoon, at the mouth of the 105-square-mile Malibu Creek Watershed, was historically one of the most diverse and productive habitats in the Los Angeles region. As the terminus of one of the largest sub-basins of the 414-square-mile land area that drains into Santa Monica Bay, Malibu Lagoon historically covered a much larger area than it does today. Over the last seventy years, encroaching development in Malibu has reduced the size of the lagoon and associated seasonal wetlands and upland habitat. Malibu Lagoon State Beach, owned and operated by DPR, contains a portion of the historical lagoon, including both project sites.

Site A1 is 16.1-acre section at the western edge of the lagoon, bordered by Malibu Colony, the barrier beach, an access road, and the State Beach parking lot. In the 1920s and 30s the site contained wetlands, but a portion of this habitat was filled to accommodate construction of roads and houses and Malibu Colony. The construction of a levee to prevent flooding in Malibu probably caused further degradation by depriving the wetlands of a consistent water source. Later Caltrans used the site as a depository for fill. By the 1970s, the site was completely filled and occupied by a baseball field.

In 1983, DPR undertook a restoration of Malibu Lagoon that included removal of baseball fields, removal of fill and exotic shrubs, and the excavation of tidal channels for the creation of mudflat and upland habitat. A walkway was also constructed between the parking lot and the barrier beach. The resulting constructed topography is unlike natural southern California salt marshes within coastal lagoons. Instead of being low and

flat, the partially restored salt marsh is characterized by elevated islands and peninsulas that do not support a typical or abundant complex of salt marsh vegetation. The relatively steep sides of these islands offer only a narrow intertidal surface area that is subject to the ebb and flow of water when the mouth is open. The broad flat tops of the islands are essentially non-marsh dry land. Thus there is presently far less wetland habitat value and function within this given area of the lagoon than was historically available.

The existing tidal creeks also differ from those in more natural lagoon salt marshes, with relatively straight channels in an “H” configuration, rather than meandering channels with a series of branches. The back channels of the lagoon have poor circulation and low dissolved oxygen. Large algal blooms appear in the dry season, further depleting the oxygen.

Site A4 on the eastern bank of the lagoon includes 1.2 acres. It is bordered by a palm grove, the Adamson House (a national historic site), and the beach. It has been disturbed in the past by construction and periodic dredging, and presents an opportunity for enhancing salt marsh, least tern, and snowy plover habitat.

The lagoon as a whole experiences an unusual water regime. As a result of development and importation of water into the watershed, dry-weather flows have increased. This fills the lagoon to a higher water level than natural, and causes a number of complications. The unnatural accumulation of water in the lagoon is thought to raise groundwater levels beneath Malibu Colony and the Civic Center area, causing septic system failures and runoff of pathogen-laden water into the lagoon. The large volume of water trapped in the lagoon eventually leads to a catastrophic failure of the berm. When the lagoon empties suddenly, endangered tidewater gobies present in the lagoon are beached or flushed out to sea. Rapid changes in salinity also result, detrimentally impacting other lagoon fauna. High fresh water levels also inhibit the development of salt marsh vegetation. Other programs are currently underway to address these issues, and enhancement planning for this project will take these conditions into account

**Project History:** After years of mounting evidence of the degradation of the water quality and habitat values of Santa Monica Bay and its sub-watersheds, the State of California and the U. S. Environmental Protection Agency (US EPA) included Santa Monica Bay in the National Estuary Program (NEP) in May 1988.

The Santa Monica Bay Restoration Project (SMBRP) took on the task of developing a long-range plan to return the Bay's ecosystems and watersheds to productive health. In 1995, the State of California and the U.S. EPA approved the Santa Monica Bay Restoration Plan to include 250 specific action areas focused on habitat conservation, enhancement and restoration, pollution prevention and treatment control, and assessment, education, and monitoring. The Malibu Creek Watershed was singled out for special priority attention as a pilot project, and restoring Malibu Lagoon became one of the Plan's primary objectives. In August 2001, the Conservancy also adopted the Bay Restoration Plan.

As a step toward implementing that Plan, the *Lower Malibu Creek and Lagoon Resource Enhancement and Management* report was prepared for the Malibu Lagoon Task Force (MLTF) of the Malibu Creek Watershed Advisory Council with Conservancy funding. That report, and the recommendations adopted by the MLTF, identified reconfiguring and restoring the project's two sites as among the watershed's very highest priority needs. DPR proposed the current project to the Southern California Wetland Recovery Project (SCWRP), and the SCWRP Governing Board adopted it as part of its Work Program.

The Conservancy has in the past funded, and is currently funding, several projects in the Malibu Creek watershed, including water quality treatment projects and studies in the surrounding urban area of Malibu, the Rindge Dam removal feasibility study, a project to assess removal of other fish passage barriers in the watershed, and continued acquisitions to complete the multi-year restoration plan for Cold Creek, a tributary to Malibu Creek.

**PROJECT SUPPORT:** In addition to the active participation by DPR and HTB, the proposed study has the support of a number of elected officials, agencies and nonprofit organizations, including State Senator Sheila Kuehl, Assemblywoman Fran Pavley, Los Angeles County Supervisor Zev Yaroslavsky, public agencies, including the Regional Water Quality Control Board, Santa Monica Bay Restoration Project, and many other environmental and community groups. Exhibit 5, Letters of Support, will be mailed separately and/or hand-carried to the Conservancy meeting.

CONSISTENCY WITH  
CONSERVANCY'S  
ENABLING LEGISLATION:

Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270) provides for the Conservancy's participation in a program of coastal resource enhancement. The proposed authorization would facilitate the study and possible enhancement of wetlands in Malibu Lagoon that have become degraded due, in part, to urban development. The proposed feasibility study may also lead to the enhancement of the natural and scenic character of the area, and the ability of the watershed to support tidewater gobies and other endangered species.

The proposed project is therefore consistent with Section 31251, under which the Conservancy may award grants to nonprofit organizations for projects that seek to remedy loss of natural and scenic values because of natural or human-induced events.

Public Resources Code Section 31252 specifies that "[a]ll areas proposed for resource enhancement by a state agency, local public agency, or nonprofit organization shall be identified in a certified local coastal plan or program as requiring public action to resolve existing or potential resource protection problems or shall be so identified in other local plans which the commission determines to be consistent with the policies and objectives of Division 20 (commencing with Section 3000)." The Coastal Commission certified a Local Coastal Program (LCP) for the City of Malibu on September 13, 2002. As discussed in greater detail below in the section on "Consistency with the Local Coastal Program" the LCP contains two policies that directly apply to Malibu Lagoon, essentially directing that a lagoon management plan be developed for the lagoon in consultation with all applicable resource management agencies. This project would help carry out those policies, and is therefore consistent with the LCP.

Public Resources Code Section 31253 provides that the Conservancy "may provide up to the total cost of any coastal resource enhancement projects. . . ." Consistent with this section, staff is recommending that the Conservancy authorize funds to continue the process of enhancing the resources of Malibu Lagoon.

CONSISTENCY WITH  
CONSERVANCY'S  
PROJECT SELECTION  
CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines adopted January 24, 2001, in the following respects:

**Required Criteria**

**Promotion of the Conservancy's statutory programs and purposes:** As indicated above, the proposed project is consistent with Chapter 6 of Division 21 of the Public Resources Code (Sections 31251 *et seq.*), which provides for the Coastal Conservancy's participation in coastal resource enhancement projects.

**Consistency with funding source:** The proposed funding source is an appropriation to the Conservancy pursuant to Section 5096.650(b)(1) of the California Clean Water, Clean Air, Safe Neighborhood Parks and Coastal Protection Act of 2002 (Proposition 40) which allocates bond funds to the Conservancy for the purposes of Division 21, the Conservancy's enabling legislation.

**Support from the Public:** The proposed project has community and agency support, as demonstrated by the letters of support that are attached to this staff recommendation as Exhibit 5. Additional letters will be hand-carried to the Conservancy's meeting.

**Location:** The proposed project is intended to determine the feasibility of restoring lagoon and wetland habitat resources of Malibu Lagoon that have been adversely impacted by development and human-induced changes within the lagoon and its watershed.

**Need:** The financial support and participation of the Conservancy are critical for the success of this project. DPR's resources for planning and designing habitat enhancements are inadequate to move this project forward in a timely manner. At the same time, potential matching funds have been identified for implementation of habitat improvements. The Conservancy's contribution would bridge the gap and catalyze progress towards a successful enhancement.

**Greater than Local Interest:** Malibu Lagoon contains the tidewater goby, a species that has been designated as endangered under the federal Endangered Species Act. The project would help protect that recovering species. The proposed en-

hancement would provide additional habitat for two other endangered species, the least tern and the snowy plover. The lagoon itself is a state park that, because of its location, has not only statewide, but national significance.

### **Additional Criteria**

**Resolution of More Than One Issue:** The project will address habitat quality, water quality, and public recreation (current impacts on water-contact sports), as well as impacts to tidewater goby, a federally-listed threatened species.

**Leverage:** As identified in the Conservancy-funded *Lower Malibu Creek and Lagoon Resource Enhancement and Management* report prepared for the Malibu Lagoon Task Force, the proposed project is an integral element of a multi-faceted program of restoring the wetland and riparian habitat resources of Malibu Creek, Lagoon and watershed. The project's management structure will play a central role in integrating other projects and studies affecting the lagoon that are currently underway. The work that will be accomplished under this project could be the key to releasing more than \$2,100,000 of matching funds for implementation (\$1,250,000 of County of Los Angeles Proposition "A" funds allocated to implementing a water level control project at the lagoon, and \$825,000 of Proposition 13 funds being recommended as a construction grant to the Conservancy by State Water Resources Control Board (SWRCB) staff, a leverage factor of better than 14 to 1.

**Realization of Prior Conservancy Goals:** The Coastal Conservancy has been involved in resource protection, enhancement, and restoration projects within the Santa Monica Bay watershed for more than a decade, including projects focused on the remaining coastal wetlands within the Bay. As discussed in the Project Summary and Project History sections above, the project stems from the findings of the *Lower Malibu Creek and Lagoon Resource Enhancement and Management* study which the Malibu Lagoon Task Force conducted with Conservancy funding. The Lagoon study itself was a direct outgrowth of the SMBRP's *Bay Restoration Plan*, which made developing an enhancement program for Malibu Creek a priority. The Conservancy Board formally adopted the Bay Restoration Plan as the overall enhancement plan for the area in August 2001. Implementation of this project will contribute to the fulfillment of this Conservancy goal.

**Cooperation:** The Santa Monica Bay Restoration Project, Malibu Creek Watershed Advisory Council, and Malibu La-

goon Task Force are all cooperative ventures involving a broad range of interested and affected stakeholders including private industry, citizens, environmental groups, and local, regional, state, and federal agencies. This project is a direct result of their efforts, and an important milestone reinforcing their continued cooperation and success.

**CONSISTENCY WITH  
THE COASTAL ACT:**

The proposed project would be consistent with the planning and management policies contained in Sections 30230, 30231, and 30233(a)(7) of the Public Resources Code. Section 30230 states “Marine resources shall be maintained, enhanced, and where feasible, restored. . . . 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 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. . . .” Section 30233(a)(7) states, “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: . . . (7) Restoration purposes. . . .” Consistent with these policies, this project would develop a plan specifically designed to restore the resources of Malibu Lagoon, sustain its biological productivity, and maintain optimum populations of marine organisms in the Lagoon and surrounding waters. Consistent with Section 30233, the project will identify the least environmentally damaging feasible alternative and feasible mitigation measures to minimize adverse environmental effects. While at this time the project consists of planning only, its ultimate objective, restoration of the lagoon, is a specifically permitted use under Section 30233(a)(7). For these reasons, the project is consistent with the policies of the Coastal Act.

**CONSISTENCY WITH  
LOCAL COASTAL  
PROGRAM POLICIES:**

Assembly Bill 988 added Section 30166.5 to the Coastal Act, requiring the Coastal Commission to certify a Local Coastal

Program (LCP) for the City of Malibu by September 15, 2002. The Commission certified the LCP on September 13, 2002 and adopted a map of the post-LCP certification jurisdiction as part of that action. The project is entirely within the area designated as permanent jurisdiction of the Coastal Commission. Therefore, the Coastal Act is the standard of review for permits and plans in this area and the Commission is the decision making body. Nevertheless, the LCP does contain specific policies for Malibu Lagoon. The Commission treats LCPs as guidance for its decision-making within its area of permanent jurisdiction.

The LCP maps specifically identify Malibu Lagoon as an Environmentally Sensitive Habitat Area (ESHA) and a Marine Resource. The Land Use Plan (LUP) also includes two specific policies for lagoon Protection. Policy 3.92 states that “[l]agoon breaching or water level modification shall not be permitted until and unless a management plan for the lagoon in question is approved by the City and certified by the Coastal Commission as an amendment to the LCP, unless it can be demonstrated that there is a health or safety emergency, there is no feasible less environmentally damaging alternative, and all feasible mitigation measures will be implemented to minimize adverse environmental effects. Policy 3.93 states that a “lagoon management plan should be developed for Malibu Lagoon, in consultation with all applicable resource management agencies.” The project is the first phase of developing precisely such a plan in precisely such a manner. The project does not include lagoon breaching or water level modification at this time, but it will provide a substantial amount of the data needed for such a lagoon management plan, including the following six of the ten study topics specifically identified by LUP Policy 3.93:

- Biological study of the lagoon habitat, including identification of all rare, threatened, and endangered species.
- Lagoon hydrology.
- Water quality sampling study.
- Measures to protect endangered species.
- Water quality protection and enhancement measures.
- Monitoring plan to monitor the management area to evaluate the health of the wetland, assess adverse impacts resulting from breaching or water level management, and identify project corrections.

This project provides for baseline planning and analysis, and the development of a coordination structure among the agencies and organizations carrying out projects affecting Malibu Lagoon. This initial work will define further studies required to develop a comprehensive and effective plan for restoring Malibu Lagoon, including developing a work plan that includes studies of water level management. Staff expects to return to the Board for authorization of such an expanded work plan within a year. This project provides for the necessary precursor work that will lead to addressing all the studies specified by LUP Policy 3.93, and is therefore consistent with that policy.

Consistency with the LCP is also assured through the stakeholder/TAC process. Commission and City of Malibu staff were members of the MLTF, which directed the *Lower Malibu Creek and Lagoon Resource Enhancement and Management* study, and based upon that study, made recommendations that led to this project. Commission and City staff will again be asked to join the stakeholder/TAC Committee for this project. Further, under the provisions of LUP Policy 3.92, a lagoon management plan would require an LCP amendment, and any implementation of the plan in the future would require a coastal development permit. Both of these actions must be reviewed and approved by the City and Commission for consistency with the Coastal Act. This process additionally assures Coastal Act conformity.

#### COMPLIANCE

WITH CEQA: The proposed project is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) under 14 Cal. Code of Regulations Section 15262 in that it involves only project feasibility analyses and studies for possible future actions. Additionally, the proposed project is categorically exempt from CEQA under Section 15306 as it involves the collection of data and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval of the project.

**EXHIBIT 5**

**Letters of Support**

*To be mailed separately and/or hand-carried to the Meeting*