

COASTAL CONSERVANCY

Staff Recommendation  
November 9, 2006

**DEVELOPMENT OF HUMBOLDT BAY  
ECOSYSTEM-BASED MANAGEMENT PROGRAM**

File No. 06-087  
Project Manager: Moira McEnespy/Sheila Semans

**RECOMMENDED ACTION:** Authorization to disburse up to \$75,000 to The Regents of the University of California for disbursement to the California Sea Grant College Program to develop an Ecosystem-Based Management Program for Humboldt Bay.

**LOCATION:** Humboldt Bay, including the Eel River Estuary and state waters, Humboldt County

**PROGRAM CATEGORY:** Integrated Coastal and Marine Resources Protection

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**EXHIBITS**

Exhibit 1: Project Location Map

Exhibit 2: Example deliverables from the Morro Bay  
Ecosystem-Based Management Program

Exhibit 3: Letters of Support

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**RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Section 31220 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of up to seventy-five thousand dollars (\$75,000) to The Regents of the University of California for disbursement to the California Sea Grant College Program (“Sea Grant”) to develop an ecosystem-based management program for Humboldt Bay, subject to the condition that prior to disbursement of Conservancy funds, Sea Grant shall submit for the review and written approval of the Executive Officer of the Coastal Conservancy a final work program, including budget and schedule, the names of any contractors to be employed.”

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 Chapter 5.5 of Division 21 of the Public Resources Code (Section 3122).
2. The proposed project is consistent with the Project Selection Criteria and Guidelines adopted by the Conservancy on January 24, 2001.”

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**PROJECT SUMMARY:**

Staff recommends that the Conservancy authorize disbursement of up to \$75,000 to The Regents of the University of California for disbursement to the California Sea Grant College Program (“Sea Grant”) to develop an ecosystem-based management program for Humboldt Bay, including the Eel River Delta and the seaward extent of State waters.

The Conservancy and National Oceanic and Atmospheric Administration’s Coastal Services Center (“CSC”) have recently completed a “Northern California Coastal Conservation Needs Assessment” to determine regional coastal (marine and terrestrial) conservation planning and implementation needs in coastal Mendocino, Humboldt, and Del Norte Counties. Entitled “Linking Land and Sea,” the assessment sought to determine what is needed to plan for and implement coastal conservation within the terrestrial to marine continuum. (The report can be viewed on Redwood Community Action Agency’s website at <http://www.nrsrcaa.org/linkinglandsea/index.htm>).

Several significant themes have emerged from “Linking Land and Sea.” First is the need to better connect terrestrial, estuarine and marine conservation activities. Second, although many of the conservation entities do communicate on a fairly regular basis, there is still the need for improved and more formalized collaboration and communication between all conservation entities, agencies, commissions, planners, academia, and citizens, possibly through a regional resource conservation framework (particularly given that there is no National Estuarine Research Reserve or National Estuary Program framework as there is in other parts of the State). More specific needs included marine and estuarine data to characterize these environments, a central information system for region-specific data and information, specific regional marine conservation planning, increased research and monitoring to better understand the intertwined effects of land uses with estuarine and nearshore water quality and habitat integrity (e.g., effects of sediment runoff), and increased statewide awareness of the resource benefits and needs of the north coast region.

The newly-adopted Ocean Protection Council Strategic Plan specifies actions that overlap with and address many of the needs identified in the assessment. The most directly applicable strategic plan objective is to “create, test and implement another ecosystem-based management pilot project” (Objective A4b). A related objective is to support the work of the Pacific Coast Joint Venture (Objective D1g).

Although Humboldt Bay represents a significant resource for the north coast region, it provides a manageable ecosystem-based management pilot project area because it has a well-defined geographic scope, has a reasonably small number of active and committed stakeholders, and has access to academic resources through the presence of Humboldt State University and California Sea Grant. Furthermore, the idea of ecosystem-based management has been introduced previously by the Ocean Science Trust, which has lead to development of the ecosystem-based

management concept by the Humboldt Bay Harbor, Recreation and Conservation District, California Sea Grant and the California Department of Fish and Game. These three entities have garnered wide support for this effort, and have put together a conceptual paper of what ecosystem-based management would entail. In addition, as the north coast undergoes a shift from its traditional resource extraction-based economy, reevaluating the needs and effects of human interaction with the ocean environment is essential to protect and conserve valuable North Coast natural resources. Finally, the north coast is not represented by any current pilot or ocean projects such as are ongoing in the south and central coasts and San Francisco Bay.

For these reasons, along with what was learned from the needs assessment and the articulated OPC strategic plan objectives, development of a Humboldt Bay Ecosystem-Based Management Program to holistically address the coastal watersheds, bay and estuarine areas, marine areas, and the human element is needed. The geographic scope will include Humboldt Bay (63 sq km), the Eel River delta (24 sq km), which is functionally related to the bay, and the nearshore out to at least three miles.

The proposed project consists of building an ecosystem-based management framework, and developing appropriate region-specific objectives, process, deliverables and workplan. The project will involve working with a suite of stakeholders including conservation entities, agencies, commissions, planners, academia, and citizens, and will be completed within two years. The resulting framework and report will be developed to support science-based management decisions and include transparent processes. Project specifics are more fully described as two tasks:

Task 1. Build an appropriate framework to support Humboldt Bay ecosystem-based management. This framework will set up appropriate advisory, collaborative and fund-administering bodies; a means for public process; a science advisory panel, including a means for coordinating research; development of regional technical capacity (server, hardware, internet connection/portal, ability to manage and update data); and any other necessary components.

Task 2. Develop a report of ecosystem-based management objectives, process, deliverables and workplan. Integrating recommendations from the existing *Humboldt Bay Management Plan (Humboldt Bay Harbor, Recreation and Conservation District, August 2006)*, *Humboldt Bay Watershed Enhancement Plan (Redwood Community Action Agency, January 2005)* and other plans as appropriate, the ecosystem-based management report will specify and prioritize what actions are needed to integrate management of coastal watersheds, bay and estuarine areas, the marine environment and the human element. A specific report of objectives, process, actions and deliverables, and an accompanying detailed workplan (containing tasks, timeline, budget), will be developed for a variety of categories and/or needs (e.g. water quality, recreation, sustainable fisheries, nearshore data gaps, sediment studies, research and monitoring, appropriate indicators, etc.). These categories will be analogous to what was developed as part of the Morro Bay ecosystem-based management program that is currently underway (See Exhibit 2, taken from pp. 8-13 of the *Elucidating the Nexus of Science and Society in the Morro Bay Ecosystem* report (Wendt, CalPoly), and Exhibit 2, "Summary Tables of Ecosystem-Based Management Objectives & Deliverables," of the Morro Bay Ecosystem-Based Management staff report presented at the January 13, 2006 Ocean Protection Council meeting (Duff, SCC).

California Sea Grant, the proposed grantee, brings a greater-than-local perspective, academic experience, expertise in local collaboration, and technical resources via its association with UC Davis. Sea Grant is committed to working with the Humboldt Bay Harbor, Recreation and Conservation District and other stakeholders.

**Site Description:** Humboldt Bay is one of the largest and most pristine bays on the Pacific coast, and is the largest estuary in California north of San Francisco Bay. In addition to being the “front yard” of the north coast’s population centers and a desirable destination for US 101 travelers, Humboldt Bay contains a large diversity of habitat for fish and wildlife, and significant state, national and international resources. Plant and animal species found in Humboldt Bay are subject to international treaties (International Bird Migratory Act), and federal and state management and protection (Endangered Species Act, Essential Fish Habitat, and California Coastal Act). Humboldt Bay contains over 30% of the eelgrass habitat found in California, and some of the most important coho populations spawn and rear in its watershed. In addition, Humboldt Bay is a significant avian stopover on the Pacific Flyway, recognized as a site of International Importance for shorebirds by the Western Hemisphere Shorebird Reserve Network, and achieves the highest avian species number for any bird count at comparable latitudes.<sup>1</sup>

**Project History:** The proposed project builds on a recently-completed “Northern California Coastal Conservation Needs Assessment,” conducted by the Conservancy with CSC funding to determine regional coastal (marine and terrestrial) conservation planning and implementation needs in coastal Mendocino, Humboldt, and Del Norte Counties. Specifically, the proposed project addresses the following needs identified in the assessment: better connection of terrestrial, estuarine and marine conservation activities; improved and more formalized collaboration and communication between all conservation entities, agencies, commissions, planners, academia, and citizens, possibly through a regional resource conservation framework; a central information system for region-specific data and information; specific regional marine conservation planning; increased research and monitoring to better understand the intertwined effects of land uses with estuarine and nearshore water quality and habitat integrity; and increased statewide awareness of the resource benefits and needs of the north coast region.

**PROJECT FINANCING:**

Coastal Conservancy	\$75,000
NOAA Coastal Services Center	
North Coast Needs Assessment	<u>75,000</u>
<b>Total Project Cost</b>	<b>\$150,000</b>

The expected source of funds for this project are derived from the California Beach and Coastal Enhancement Account of the California Environmental License Plate Fund, which may be used for purposes consistent with Division 21 of the Public Resources Code, the Conservancy’s

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<sup>1</sup> The “Southern Pacific Coast Regional Shorebird Plan-Humboldt Bay” (including the Eel River mouth) states that this large estuary is recognized as a site of International Importance for shorebirds by the Western Hemisphere Shorebird Reserve Network (greater than 100,000 shorebirds/yr or greater than 10% of a flyway population). In addition, the Arcata Christmas Bird Count is among the top 20 Christmas Bird Counts (CBC) in North America, and achieves the highest species number for any count at comparable latitudes. Depending on season, 20,000 to 80,000 shorebirds reside in Humboldt Bay (Colwell 1994). Arcata CBC results over the past 20 years indicate an average of 10,000 and as many as 25,000 individuals of waterfowl winter on north Humboldt Bay.

enabling legislation. Matching funds in the amount of \$75,000 have been provided by the NOAA CSC as outlined above.

**CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:**

The proposed project is consistent with Chapter 5.5 of the Conservancy's enabling legislation (Division 21 of the Public Resources Code, Section 31220) regarding integrated coastal and marine resources protection in the following respects:

Section 31220(a) provides that the Conservancy may undertake or award grants to conduct coastal watershed and marine habitat, water quality, sediment management and living marine resources protection and restoration projects in order to improve and protect coastal and marine water quality and habitats. Consistent with this section, the Conservancy will grant funds to Sea Grant to develop an ecosystem-based management program for Humboldt Bay, which will provide for holistic protection and management of Humboldt Bay's marine/ocean, bay/estuary, terrestrial and human elements. Also consistent with this section, the grantee will develop the ecosystem-based management program in consultation with, among all other appropriate entities and stakeholders, the State Water Resources Control Board to ensure consistency with Chapter 3 (commencing with Section 30915) of Division 20.4 of the Public Resources Code.

In the proposed project, the Conservancy will grant funds to Sea Grant to develop an ecosystem-based management program for Humboldt Bay, which will address the following elements of Section 31220(b): Reduction of contamination of waters in the coastal or marine environments consistent with Section 31220(b)(1), protection or restoration of fish and wildlife habitat within coastal and marine waters and coastal watersheds consistent with Section 31220(b)(2), reduction of threats to coastal and marine fish and wildlife consistent with Section 31220(b)(3), reduction of unnatural erosion and sedimentation of coastal watersheds consistent with Section 31220(b)(4), provision for monitoring and mapping of coastal currents, marine habitats and/or marine wildlife in order to facilitate the protection and enhancement of resources within the coastal zone consistent with Section 31220(b)(5), protection and restoration of coastal wetlands, riparian areas, floodplains and other sensitive watershed lands consistent with Section 31220(b)(6), reduction of the impact of population and economic pressures on coastal and marine resources consistent with Section 31220(b)(7), and provision of public access compatible with resource protection and restoration objectives consistent with Section 31220(b)(8).

Section 31220(c) provides that projects shall include a monitoring and evaluation component and shall be consistent with the Integrated Watershed Management Program established pursuant to Section 30947, local watershed management plans and water quality control plans adopted by the State Water Resources Control Board and regional water quality control boards. The proposed ecosystem-based management program will include monitoring and evaluation components, and is being developed consistent with all relevant watershed and water quality control plans, as more fully discussed below.

**CONSISTENCY WITH CONSERVANCY'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 6 Objectives A and B**, the proposed project will develop a plan, specifically an ecosystem-based management program, to, among other things, preserve and restore coastal watersheds and improve water quality to benefit coastal resources.

**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**

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section, above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section, above.
3. **Support of the public:** The proposed project is supported by agency staff, resource managers and academia, among others. Please see letters of support contained in Exhibit 3.
4. **Location:** The proposed project would be located within the coastal zone of County of Humboldt.
5. **Need:** The idea of ecosystem-based management was previously introduced by the Ocean Science Trust, which led to development of the ecosystem-based management concept by the Humboldt Bay Harbor, Recreation and Conservation District, California Sea Grant and the California Department of Fish and Game. The concept has not, however, led to development of a project due to lack of funds. Hence, the proposed project would not occur absent Conservancy funding.
6. **Greater-than-local interest:** Humboldt Bay is a resource of regional, State, national and international importance. See the "Site Description" section, above.

**Additional Criteria**

7. **Urgency:** The proposed project builds on the momentum of the recently-completed Northern California Coastal Conservation Needs Assessment; the newly-adopted Ocean Protection Council Strategic Plan; previous efforts by the Humboldt Bay Harbor, Recreation and Conservation District, California Sea Grant and California Department of Fish and Game to garner wide support for this effort amongst local and federal land managers, regulators, academia, NGOs, and other stakeholders.
8. **Resolution of more than one issue:** The proposed project will develop an ecosystem-based management program for Humboldt Bay, which will address marine/ocean, bay/estuary, terrestrial and human elements.
10. **Conflict resolution:** The proposed project will develop an ecosystem-based management program for Humboldt Bay, which, because it will address marine/ocean, bay/estuary, terrestrial and human elements holistically, is specifically aimed at resolving management and resource conflicts.
11. **Innovation:** The proposed project will serve as the only ecosystem-based management pilot project in the northern part of the State.
12. **Readiness:** Because the proposed project builds on the momentum of the recently-completed Northern California Coastal Conservation Needs Assessment, the newly-adopted Ocean

Protection Council Strategic Plan, the concept developed by the Humboldt Bay Harbor, Recreation and Conservation District, California Sea Grant and the California Department of Fish and Game, the grantee, project partners and relevant stakeholders are anxious to begin work.

13. **Realization of prior Conservancy goals:** See “Project History” section, above.
15. **Cooperation:** The proposed project will develop an ecosystem-based management program collaboratively with a suite of partners, agencies, local entities, land managers, regulators, academia, nonprofits and all relevant stakeholders.

**CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:**

The *Humboldt County General Plan, Volume II, Humboldt Bay Area Plan of the Humboldt County Local Coastal Program (“LCP,” certified October 14, 1982)* is based upon policies contained in the Coastal Act of 1976, including basic goals for the coastal zone which are specified in Section 30001.5 (Public Resources Code, Division 20, California Coastal Act, Chapter 1). Consistent with this section, the proposed project will address protection, maintenance, and where feasible, enhancement and restoration of the overall quality of the coastal zone environment and its natural and manmade resources; orderly, balanced utilization and conservation of coastal zone resources, taking into account the social and economic needs of the people of the state; and maximization of public access to and along the coast and recreational opportunities in the coastal zone, consistent with sound resource conservation principles and constitutionally-protected rights of private property owners; and will implement coordinated planning for mutually beneficial uses in the coastal zone. The proposed project is thus consistent with the basic coastal goals upon which the certified LCP is based.

**CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/  
STATE WATER QUALITY CONTROL PLAN:**

Under Public Resources Code Section 31220(c), projects funded under Chapter 5.5 of Division 21, the Conservancy’s enabling legislation, must be consistent with the Integrated Watershed Management Program established pursuant to PRC Section 30947 and local watershed management plans, “if available and relevant to the project.” The proposed project is consistent with relevant plans and programs, as described below.

Integrated Watershed Management Program established pursuant to Public Resources Code Section 30947. The *North Coast Integrated Regional Water Management Plan, Phase I (NCIRWMP, prepared by Circuit Rider Productions, July 2005)* was developed pursuant to Public Resources Code Section 30947. The NCIRWMP identifies six primary integrated water management objectives for the North Coast region, relevant at both the local and regional scale: (1) Conserve and enhance native salmonid populations by protecting and restoring required habitats, water quality and watershed processes; (2) Protect and enhance drinking water quality to ensure public health; (3) Ensure adequate water supply while minimizing environmental impacts; (4) Support implementation of Total Maximum Daily Loads, the North Coast Regional Water Quality Control Board’s Watershed Management Initiative (WMI) and the Nonpoint Source Program Plan; (5) Address environmental justice issues as they relate to disadvantaged communities, drinking water quality and public health; and (6) Provide an ongoing, inclusive framework for efficient intra-regional cooperation, planning and project implementation. The proposed project consists of establishing an ongoing framework through which to develop an

ecosystem-based management program for Humboldt Bay. Development of this program will take into account all relevant existing plans, including the NCIRWMP, in its provision for holistic protection and management of Humboldt Bay's marine/ocean, bay/estuary, terrestrial and human elements. The proposed project is thus consistent with NCIRWMP.

Local Watershed Management Plans. The proposed project will develop an ecosystem-based management program that integrates recommendations from the *Humboldt Bay Watershed Enhancement Plan (Redwood Community Action Agency, January 2005)*, the *Humboldt Bay Management Plan (Humboldt Bay Harbor, Recreation and Conservation District, August 2006)* and other existing plans as appropriate. The proposed project is thus consistent with local watershed management plans.

**COMPLIANCE WITH CEQA:**

The proposed project consists of developing plans and conducting studies, activities that are statutorily exempt from review under the California Environmental Quality Act (CEQA) pursuant to 14 California Code of Regulations Section 15262 in that they involve only feasibility or planning studies for possible future actions which have not yet been approved, adopted or funded. Staff will file a Notice of Exemption upon approval of this project.