

COASTAL CONSERVANCY

Staff Recommendation  
December 11, 2003

**UPPER NEWPORT BAY ECOSYSTEM RESTORATION**

File No. 01-075  
Project Manager: Trish Chapman

**RECOMMENDED ACTION:** Authorization to disburse up to \$12,500,000 to the County of Orange to implement the Upper Newport Bay Ecosystem Restoration project.

**LOCATION:** Upper Newport Bay, City of Newport Beach, County of Orange (Exhibit 1)

**PROGRAM CATEGORY:** Resource Enhancement and Watershed Restoration

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**EXHIBITS**

Exhibit 1: Project Location and Site Map

Exhibit 2: Letters of Support

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**RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31220 and 31251-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed twelve million five hundred thousand (\$12,500,000) to the County of Orange to implement the Upper Newport Bay Ecosystem Restoration project, subject to the following conditions:

1. Prior to commencement of construction and to disbursement of any funds to the County, the County shall submit for the review and written approval of the Executive Officer of the Conservancy:
  - a. A detailed work program, project budget and timeline.
  - b. The names and qualifications of any contractors or subcontractors that the County intends to employ to construct the project.
  - c. Evidence that all applicable permits and approvals for the project have been obtained.
2. The County shall implement the Mitigation Measure Monitoring Program adopted by the County on June 26, 2001 for the project in compliance with the California Environmental Quality Act.

3. Conservancy funding shall be acknowledged by erecting and maintaining a sign in the project area, which has been reviewed and approved by the Executive Officer of the Conservancy.”

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 set forth in Chapter 5.5 of the Public Resources Code (Section 31220) regarding watershed restoration projects and Chapter 6 of the Public Resources Code (Sections 31251-31270) regarding coastal resource enhancement projects.
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:**

The proposed project would provide a grant to the County of Orange to implement the Upper Newport Bay Ecosystem Restoration Project (UNBERP). The UNBERP was developed by the U.S. Army Corps of Engineers (ACOE) and the County of Orange (County), in cooperation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Department of Fish and Game (DFG), and Santa Ana Regional Water Quality Control Board. On August 2, 2001, the Conservancy approved the UNBERP Feasibility Study and Final Environmental Impact Statement/Environmental Impact Report, and authorized a \$500,000 grant for preparation of final design plans.

Upper Newport Bay is the largest functioning full tidal wetland in southern California. DFG manages 752 acres of the upper bay as an ecological reserve that provides valuable habitat for a diverse array of migratory and resident birds, fish, vertebrates, invertebrates, and plants. The principal threat to fish and wildlife habitat in Upper Newport Bay is from excessive sediment and nutrients delivered from upstream, particularly from San Diego Creek which drains 85 percent of the bay’s watershed. As a result, open water and subtidal habitats are being converted to mudflats and marsh.

The primary objective of the UNBERP is to halt the conversion of open water and subtidal habitats by increasing the capacity of sediment basins within the Bay. The project involves deepening both the Unit I/III and Unit II sediment basins (Exhibit 1) in the upper bay to 20 feet below mean sea level. This will remove approximately 2.1 million cubic yards of sediment from the bay. The sediment will be disposed of offshore at an approved EPA disposal site. The project also includes an ongoing maintenance dredging program that will be undertaken approximately every 20 years. In order to enlarge the Unit I/III basin, one of the nearby least-tern islands would be relocated to a site west of Unit II.

In addition to the proposed dredging program, the project includes the following enhancements to existing habitat areas:

- Deepen the side channel around the “hot dog”-shaped least tern nesting island to reduce predator access to the island. Cap the island with clean sand to reduce vegetation growth.

- Remove old dredge spoils at the Bullnose wetlands, North Star Beach, and Shellmaker Island in order to restore approximately 9.7 acres of intertidal mudflat and 0.5 acres of open water.
- Deepen side channels around New Island, Middle Island, and Shellmaker Island and dredge a new dendritic channel through Shellmaker Island to improve tidal circulation.
- Reintroduce a patch of eelgrass along the western side of Shellmaker Island.
- Create a break in the main dike adjacent to the Unit II basin to stop easy human and predator access to the adjacent sensitive marsh areas.

The Ecosystem Restoration Project would result in the net gain of approximately 42 acres of open water habitat and the net loss of approximately 39 acres of mudflat habitat. The Feasibility Study estimated that without the proposed project, 171 acres of open water habitat would be lost over the next 50 years.

The ACOE is the lead agency for implementing the Ecosystem Restoration Project. The County of Orange will function as local sponsor for the project and intends to enter a cost-sharing agreement with the ACOE. Both agencies are working closely with DFG which manages the Ecological Reserve.

**Site Description:** Newport Bay is located in the City of Newport Beach, at the mouth of San Diego Creek. The lower bay stretches parallel to the coast behind a spit that protects it from the ocean. Urban development and marinas surround the lower bay, which is intensively used for recreational boating.

The area known as "Upper Newport Bay" is a 3.5-mile long, 1,000-acre body of water that is oriented perpendicular to the coast. Bluffs topped with houses surround much of the upper bay. Marinas and a mobile home park also occupy a portion of the shoreline. The fish and wildlife habitat in the bay includes submerged marine and estuarine areas, along with extensive mudflats and vegetated marsh. The natural condition of the bay is highly valued in the surrounding community, and trails and a narrow perimeter road provide opportunities for passive recreational use. The County of Orange recently completed an interpretive center that overlooks the bay.

DFG manages 752 acres of Upper Newport Bay as an ecological reserve. The reserve contains the largest functioning full tidal wetland in southern California. Upper Newport Bay provides valuable habitat for a diverse array of migratory and resident birds, fish, vertebrates, invertebrates and plants. Many sensitive plant and animal species are present. The threatened and endangered species that use the bay and perimeter uplands include the salt marsh bird's beak, brown pelican, California black rail, light-footed clapper rail, western snowy plover, California least tern, coastal California gnatcatcher, and Belding's savannah sparrow.

The principal threat to fish and wildlife habitat in Upper Newport Bay is from excessive sediment and nutrients delivered from upstream, particularly from San Diego Creek which drains 85 percent of the bay's watershed. The creek is not a "natural" tributary to the bay. Before the early 1900s, it flowed into a lake that functioned as a natural sump for the watershed. Runoff from urban and agricultural development has increased the flow in the creek. Disturbance from these land uses has also accelerated erosion in the watershed, leading to deposition of sediment in the Ecological Reserve at a rate that exceeds the ability of the tides to scour the marsh plain and channels. As a result, open water and subtidal habitats are being converted to mudflats and marsh.

Upper Newport Bay is suffering a net loss of aquatic habitat and a precipitous reduction in habitat value due to sediment accretion. The substrate of vegetated marsh is rising out of the reach of the tides. Moreover, the reduction in the tidal prism results in greater impacts from freshwater flows on bay habitat, as fluctuations in salinity create environmental stresses for marine fish and invertebrates. These stresses, in turn, affect the food supply for shorebirds and waterfowl. As the tidal prism is reduced, accretion is exacerbated by the reduced "scouring energy" of the tides.

Nutrients delivered from the urban and agricultural areas of the watershed stimulate destructive and aesthetically unappealing algal blooms. The algae frequently proliferate, robbing the water and marine and benthic organisms of oxygen, turning it a pea green color, and covering the surface with floating yellow-green mats. Contaminants also reach the bay from the watershed, but their effects are not as easily perceived.

Comprehensive sediment control planning and projects have been undertaken cooperatively by Orange County, the Cities of Tustin, Irvine, and Newport Beach, the Irvine Company, and the Department of Fish and Game. Three sediment basins have been built in lower San Diego Creek to capture coarser sediments before they enter the bay. Sediment basins have also been built in the upper watershed to catch sediment nearer to its source. Two sediment basins – known as "Unit I/III" and "Unit II" – were excavated in the upper bay to capture finer particles (see the "Project History" section below for more information).

**Project History:** Several large-scale plans have been prepared for sediment and flood control in the Newport Bay watershed. In the early 1980s, the cities of Irvine and Newport Beach developed a plan to reduce erosion in the Newport Bay watershed and to trap sediment in and above the bay. Many of the measures proposed in that plan have been successfully implemented.

Shortly thereafter, a multi-agency flood control plan was developed. CalTrans also prepared plans for managing a number of drainages in the watershed that are affected by Interstate 5. The later plans were coordinated with the original sediment and erosion control plan.

In late 1984, the Department of Fish and Game prepared a detailed inventory of resources within its Ecological Reserve and proposed measures for protecting and restoring habitat. One of the Department's principal recommendations was for the creation of sediment basins to trap sediment that was reaching the bay from upstream.

In 1984, the Conservancy provided \$362,000 of a total project cost of \$4.1 million to assist with construction of a sediment basin (known as "Unit I") in Upper Newport Bay. 945,000 cubic yards of sediment were removed from the bay, and the basin was completed in 1985. The Unit II sediment basin was completed in 1988. 1.2 million cubic yards of sediment were removed at a cost of \$5.6 million. In 1998-99, the City of Newport and County of Orange implemented the Upper Newport Bay Enhancement Plan. The project enlarged and deepened the Unit I basin, which was subsequently renamed Unit I/III. Unit II was not dredged as part of this project.

In addition to these dredging projects, there are several other ongoing efforts to address erosion and sedimentation issues. The Santa Ana Regional Water Quality Control Board has adopted a total maximum daily load (TMDL) limit for sediment in San Diego Creek that requires a 50 percent reduction in sediment entering the bay by 2008. The County and cities in the watershed are responsible for instituting source controls and sediment trapping measures to ensure that the TMDL is met. The ACOE, in partnership with the County, is preparing a Watershed Management Plan for the San Diego Creek watershed that includes a major focus on erosion and sedi-

ment transport within the watershed. In 2000, the Conservancy and the County completed a related enhancement plan for the lower San Diego Creek watershed. This enhancement plan looked at habitat, water quality, and recreation issues, with specific recommendations to reduce downstream sedimentation. The Conservancy also funded a stream stabilization and restoration project along Serrano Creek, a tributary to the Bay that has been a major source of sediment in the past.

The principal parties involved in the major watershed and bay projects have formed the San Diego Creek Watershed Committee to coordinate related activities. The Committee includes federal, state, and local agencies, as well as researchers from U.C. Irvine and representatives of several community environmental groups. The Committee meets several times a year to communicate and coordinate activities within the bay and watershed.

**PROJECT FINANCING:**

Coastal Conservancy	
This authorization	\$12,500,000
Previous authorization (August 2,2001)	<u>    500,000</u>
<b>Total Conservancy Contribution</b>	<b>\$13,000,000</b>
U.S. Army Corps of Engineers	<u>    25,493,000</u>
<b>Total Project Cost</b>	<b>\$38,493,000</b>

The proposed authorization would be funded with monies appropriated to the Conservancy for Upper Newport Bay from the Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Act of 2000 (Park Bond).

The total estimated cost to construct the project is \$38.5 million. Under the cost-sharing agreement between the County and the ACOE, the ACOE will provide 65 percent of the funding, or approximately \$25.5 million. The County of Orange, as the local sponsor, is responsible for the remaining 35 percent, or approximately \$13 million. It is anticipated that funding for this authorization will come from monies appropriated to the Conservancy for Upper Newport Bay from the Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Act of 2000 (Prop. 12). Prop. 12 provided for the Conservancy to allocate up to \$13 million for wetlands restoration in Upper Newport Bay.

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

This resource enhancement project is undertaken pursuant to Chapters 5.5 and 6 of the Conservancy's enabling legislation (Public Resources Code Sections 31220 and 31251-31270, respectively).

Consistent with §31220(a), Santa Ana Regional Water Quality Control Board (RWQCB) staff have collaborated with County of Orange's Upper Newport Bay Ecosystem Restoration Project local partners since the Project inception. The Project, established with assistance from the U.S. Army Corps of Engineers, responds to State water quality issues by aiding in the restoration of the Upper Bay's fishery and wildlife habitat quality characteristics. The RWQCB Water Quality Control Plan (Basin Plan) identifies several existing beneficial uses to the Upper Bay including, but not limited to, rare and endangered species, spawning, shellfish, and preservation of biological habitats of special significance. The Project is consistent with the criteria specified under

Chapter 3 (commencing with §30915 [Clean Beaches Program]) of Division 20.4 of the Public Resources Code in that direct water quality improvements and benefits is expected to be established as a result of this Project. The Project is specified as an implementation measure in the Regional Board's sediment total maximum daily load (TMDL), a regulatory program intended to restore the water quality within a polluted waterbody. The Project is identified in the TMDL as a control strategy to reduce sediments, and thus, all contamination associated with sediments, from Upper and Lower Newport Bay. The sediment load originates from the upper portions of the Newport Bay watershed.

Consistent with §31220(b)(2), the proposed project would protect fish and wildlife habitat within coastal watersheds by halting the conversion of open water and intertidal habitats. In addition, the project will increase the available intertidal habitat. Consistent with §31220(b)(2), the proposed project would protect and restore coastal wetland habitat by reducing sedimentation, enhancing tidal circulation, and restoring intertidal marsh.

Consistent with §31220(c), staff has consulted with the State Water Resources Control Board on project selection through the Southern California Wetlands Recovery Project's project evaluation and selection process. Also consistent with this section, the project shall include a monitoring and evaluation component.

Pursuant to §31251, the Conservancy may award grants to local agencies for the purpose of enhancement of coastal resources which, because of natural or human-induced events have suffered a loss of natural and scenic values. Consistent with §31251, staff recommends that the Conservancy provide funds to Orange County to complete implementation of the UNBERP. The project will result in the restoration of submerged habitat and protection of the ecosystem from excessive accretion of sediment.

Pursuant to §31252, the proposed project is consistent with the City of Newport Beach and County of Orange Local Coastal Programs as described in "Consistency with Local Coastal Program Policies" below.

Consistent with §31253, the amount of funding recommended for the proposed project is based on the total amount of funding available for coastal resource enhancement projects, the fiscal resources of the applicant and its project partners, and the urgency of the project relative to other eligible coastal resource enhancement projects.

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

Consistent with **Goal 5 Objective A**, the proposed project will increase Coastal Resource Conservation by protecting approximately 1,000 acres of coastal wetland habitat from further degradation due to sediment accretion and will further the goals of the Southern California Wetlands Recovery Project.

**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 Upper Newport Bay Ecological Restoration Project enjoys broad support from both state and federal agencies, as well as the local community. The California Department of Fish and Game and City of Newport Beach are working closely with the County and ACOE to accomplish the project. Support letters are included in Exhibit 2.
4. **Location:** The proposed project would be located within the coastal zone of the City of Newport Beach, County of Orange.
5. **Need:** The proposed project will be undertaken in partnership with the U.S. Army Corps of Engineers. As an ACOE project, the federal government will provide 65 percent of the capital costs, and the local partners are required to provide 35 percent of the capital costs plus the ongoing operations and maintenance. In total, the 35 percent local cost share will be approximately \$13 million. Neither the City nor the County have sufficient resources to provide this funding. The Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Act of 2000 (Park Bond) provides for the Conservancy to allocate up to \$13 million for wetlands restoration in Upper Newport Bay. Without this funding, the project will not proceed.
6. **Greater-than-local interest:** Upper Newport Bay comprises the largest functioning saltmarsh ecosystem in southern California. Upper Newport Bay provides valuable habitat for a diverse array of migratory and resident birds, fish, vertebrates, invertebrates and plants. The threatened and endangered species that use the bay and perimeter uplands include the salt marsh bird's beak, brown pelican, California black rail, light-footed clapper rail, western snowy plover, California least tern, coastal California gnatcatcher, and Belding's savannah sparrow. Preservation and enhancement of the wetland and aquatic habitats in the bay is a high priority for federal and state resource agencies.

### **Additional Criteria**

9. **Leverage:** See the "Project Financing" section above.
12. **Readiness:** The final design and engineering plans are nearing completion and the project will be ready to construct as soon as the federal and local funding is secured.
13. **Realization of prior Conservancy goals:** As described in the Project History section, the Conservancy has had a long involvement in Upper Newport Bay. Previous efforts to dredge sediments from the bay have been one-time efforts that did not include a long-term maintenance plan. The Ecosystem Restoration Project includes an ongoing program of maintenance dredging. This project, combined with efforts to reduce erosion within the watershed, should ensure the long-term protection of the aquatic habitats in Upper Newport Bay.

**CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:**

Upper Newport Bay is addressed in two Local Coastal Programs (LCP) – the City of Newport Beach LCP and the Orange County North/Santa Ana Heights LCP. The City of Newport Beach LCP identifies the Upper Newport Bay Ecological Reserve as an environmentally sensitive habitat area that should be preserved and protected. The LCP specifically identifies sediment deposition in the Bay as an issue that needs to be addressed. The LCP restricts dredging, diking, or filling in the Ecological Reserve except for projects that restore wetlands or promote nature study and where the least environmentally damaging alternative has been chosen. The LCP states that dredging or construction designed to enhance the habitat values of environmentally sensitive habitat areas shall be allowed. The proposed project is consistent with the City’s LCP in that dredging would be undertaken to enhance wetland habitat in the upper Bay and the least damaging alternative has been chosen.

The Orange County North/Santa Ana Heights LCP addresses the northeast corner of the bay and identifies this area as an environmentally sensitive habitat area. The County’s LCP also identifies sediment deposition as a negative impact in the bay that needs to be addressed. The County LCP requires new development to prepare a runoff management plan that address erosion and sediment runoff.

**COMPLIANCE WITH CEQA:**

On August 2, 2001, the Conservancy adopted the Final Environmental Impact Statement/Report for the Upper Newport Bay Ecosystem Restoration Project. A Notice of Determination was filed on August 14, 2001 following this Conservancy action. The project remains the same as the project approved by the Conservancy on August 2, 2001.