COASTAL CONSERVANCY

Staff Recommendation
December 4, 2008

SAN ELIJO LAGOON RESTORATION PROJECT: DESIGN AND ENGINEERING

File No. 08-118
Project Manager: Megan Johnson

RECOMMENDED ACTION: Authorization to disburse up to $680,000 to the San Elijo Lagoon Conservancy for conceptual designs, technical studies, environmental review, and permit applications for the San Elijo Lagoon Restoration Project, San Diego County.

LOCATION: San Elijo Lagoon, Cities of Encinitas and Solana Beach, County of San Diego

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: Project Location and Site Map

Exhibit 2: San Elijo Lagoon Restoration Project Data and Information Gaps Analysis: Summary Report

Exhibit 3: San Elijo Lagoon Area Enhancement Plan

Exhibit 4: San Elijo Lagoon Action Plan

Exhibit 5: Project Letters

RESOLUTION AND FINDINGS:

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

"The State Coastal Conservancy hereby authorizes the disbursement of up to six hundred eighty thousand dollars ($680,000) to the San Elijo Lagoon Conservancy (SELC) to fund conceptual designs, technical studies, environmental review, and permitting for the San Elijo Lagoon Restoration Project. Prior to the disbursement of funds, the Conservancy's Executive Officer shall approve in writing a work program, including budget and schedule, and any contractors to be employed for these tasks."

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 Project Selection Criteria and Guidelines, last updated by the Conservancy on September 20, 2007.
2. The proposed authorization is consistent with the purposes and objectives of Chapter 6 of Division 21 of the Public Resources Code regarding the enhancement of coastal resources.
3. The San Elijo Lagoon Conservancy is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code. ”

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize the disbursement of up to $680,000 to the San Elijo Lagoon Conservancy (SELC) for conceptual designs, technical studies, environmental review, and permit applications for the San Elijo Lagoon Restoration Project (SELRP). The goal of the SELRP is to enhance and restore the biological functions and values of the San Elijo Lagoon Reserve with a balance of habitat types, taking into account regional historic losses. The SELRP will protect, restore, and maintain, via adaptive management, the San Elijo Lagoon ecosystem and the adjacent uplands. This will perpetuate native flora and fauna characteristics of southern California, as well as restore, and maintain estuarine and brackish marsh hydrology. These goals can be further refined into three categories of objectives: 1) physical restoration of lagoon estuarine hydrologic functions; 2) biological restoration of habitat and species within the lagoon; and 3) management and maintenance to ensure long-term viability of the restoration efforts. The current project will complete the studies and analyses needed to identify a preferred design alternative for the SELRP.

The project proposed here, identified in the *San Elijo Lagoon Restoration Project Data and Information Gaps Analysis: Summary Report* (Exhibit 2) includes components of the following pre-construction activities for the SELRP:

- Coastal Engineering Review and Preliminary Design
- Environmental Review (CEQA/NEPA)
- Regulatory Authorizations and Permitting

San Elijo Lagoon is owned by the California Department of Fish and Game (DFG), the County of San Diego and SELC. It is designated as a State Ecological Reserve (SER) and is located at the southern boundary of the City of Encinitas adjacent to Solana Beach (Exhibit 1). It is a critical coastal wetland with significant biological and ecological resources. The lagoon is approximately 1,066 acres and it supports a variety of wildlife including six endangered and thirty two threatened/rare plant and animal species. Birds visit and reside at San Elijo Lagoon in large numbers; more than 319 species have been recorded at the lagoon and adjacent Cardiff State Beach. Over 106 of these species are rare or uncommon migrants. Least terns feed in the lagoon and have nested on several islands created for them in the east basin. Clapper rails inhabit the dense fresh and brackish marsh vegetation. Belding’s savannah sparrows nest in isolated stands of pickleweed. The lagoon is a popular destination for nature enthusiasts and students from around the County because of the wildlife viewing and passive recreation opportunities.

Over the past several decades San Elijo Lagoon has gradually deteriorated due to the cumulative effects of hydrological and land use changes within the watershed, increased sedimentation, sewage spills, poor water quality, growth of invasive species, severely limited tidal flushing, and frequent closures of the ocean inlet. Sediment has been accumulating in the lagoon as a result watershed influences and limited tidal circulation resulting from constrictions in flow resulting from transportation infrastructure such as roads, culverts, and berms. This sediment accumulation has lead to a shift in habitat types, indicated by a 33% decrease in mudflat habitat in the last three years. At this rate, most of the mudflat habitat at the lagoon will be transformed to vegetated marsh in the next seven years. Mudflats have been identified by the lagoon restoration committee as a primary habitat to retain and restore at the lagoon because of their regional loss throughout Southern California and the loss within the lagoon.

The muted tidal conditions and sedimentation have resulted in the proliferation of freshwater plant species such as cattail and bulrush which out-compete salt marsh species and block tidal channels, further impacting lagoon hydrology and tidal exchange. If measures are not taken to remove the excess sediment and improve hydrology, tidal exchange and water circulation will continue to degrade and habitat succession from tidal wetlands to upland will likely continue to occur.

Substantial efforts have been made to actively manage the lagoon's ecosystem. Mechanical breaching of the ocean inlet is routinely performed to maintain tidal flushing within the lagoon. The Conservancy funded an endowment for the maintenance of tidal flushing to prolong the healthy function of the lagoon (see Project History section). This Tidal Circulation Program was identified as part of Phase 1 of the *San Elijo Lagoon Area Enhancement Plan* (Exhibit 3). These efforts over the past eight years to keep the lagoon open to tidal circulation have succeeded in maintaining the minimal ecological function of the lagoon, as evidenced by increased diversity and abundance of fish, improved water quality, reduced production of mosquitos and midges, enlarged nesting areas for California least terns, Belding's savannah sparrows, and Western snowy plovers, and increased foraging by birds. If it were not for the mechanical inlet opening, the lagoon ecosystem would have crashed long ago. However, despite regular tidal inlet opening, the tidal prism of the lagoon remains muted because of the configuration of the lagoon channels, the sedimentation that continues to occur, and the tidal inlet location.

The SELRP, identified as Phase II of the *San Elijo Lagoon Area Enhancement Plan*, will restore and enhance the diversity and quality of habitats through restoration of tidal circulation and wetland functions. This project will also maintain the functions and quality of habitats over time through a rigorous maintenance and monitoring plan, designed to strive for successful benchmark criteria and measurable adaptive management practices. The SELRP is currently in the conceptual design phase and specific restoration activities have not yet been identified. Several restoration alternatives have been proposed through previous studies and plans, and these alternatives must be evaluated by the restoration committee and the public before a preferred alternative can be chosen. Possible restoration alternatives for the SELRP include widening tidal constriction points such as culverts and bridges, removing fill, altering marsh elevations, and moving the ocean inlet. The proposed project will provide the further analyses and studies needed to choose a preferred restoration alternative. The planning for the SELRP is being done concurrently with the planning for a major expansion of Interstate 5, one of the three major transportation corridors that bisect the lagoon. Not only will changes to the Interstate 5 crossing

be incorporated into the restoration planning, but the mitigation requirements for the Interstate 5 project could potentially fund the SELRP or portions thereof (see Project Financing section).

The SELRP will be lead by a "core" committee consisting of the federal National Environmental Policy Act (NEPA) lead agency, the U.S. Fish and Wildlife Service; the California Environmental Quality Act (CEQA) co-lead agencies, the County of San Diego and DFG; the SELC; and the City of Encinitas. Additional stakeholders involved include the Southern California Wetlands Recovery Project, the Conservancy, the California Coastal Commission, the Environmental Protection Agency (EPA), North County Transit District, CalTrans, San Diego Association of Governments (SANDAG, Surfrider, and the general public.

The SELC will undertake the project in partnership with the core committee. SELC manages the San Elijo Lagoon SER in partnership with the County of San Diego and the DFG. Together, they have successfully implemented a wide range of projects including land acquisitions, wetlands restoration, and comprehensive planning. The SELC completed the San Elijo Lagoon Action Plan in 1999 and has effectively been accomplishing the objectives of this plan for the past decade.

Site Description: The focus area for the SELRP includes the shoreline and inland areas around San Elijo Lagoon (Exhibit 1). The communities of Cardiff-by-the-Sea, Encinitas, Olivenhain, Solana Beach, and an unincorporated area of San Diego County are included in the study area. The San Elijo Lagoon, formally known as the San Elijo Lagoon State Ecological Reserve, is collectively owned and managed by the State of California (managed by the DFG), County of San Diego, and the SELC. Highway 101, the San Diego Northern Railway, and Interstate 5 divide the lagoon into three basins connected by narrow channels. The lagoon is bordered on the west by the Pacific Ocean and the fill used to create Highway 101, which most likely lies on top of the historic sand dunes of San Elijo Lagoon. The lagoon inlet is located in the northwest corner of the lagoon where Highway 101 crosses a bridge over the inlet to the bluffs of Cardiff-by-the-Sea. Escondido Creek and La Orilla Creek discharge runoff to the East Basin, and drain a 205 square kilometer (79 square mile) watershed (Exhibit 1).

San Elijo lagoon is comprised of a high diversity of habitats, which include saltmarsh, mudflats, tidal creeks, salt pannes, freshwater and brackish water marsh, and adjacent upland habitats which include coastal strand, coastal sage scrub, mixed chaparral, and riparian. In total there are about 129 hectares (522 acres) of wetlands. Vegetation communities in the west basin include saltmarsh, coastal strand, and some mudflats. Saltmarsh, mudflats, brackish marsh, riparian, San Diego coastal sage, and chaparral are found in the central basin; and the east basin has remnant saltmarsh, brackish marsh, salt pan, freshwater marsh, riparian, and San Diego coastal sage. The basins exhibit varying salinity regimes, generally grading from the most saline in the west basin, to brackish in the central basin, to nearly fresh in the upper end of the east basin.

Project History: The proposed project would implement several past objectives of the Conservancy. In 1989 and 1991, the Conservancy approved grants to the County of San Diego for preparation of the *San Elijo Lagoon Area Enhancement Plan* (Exhibit 3). This Enhancement Plan was completed in 1996. It evaluates a range of hydrological and biological enhancement opportunities, and concludes that restoration of continuous tidal circulation would achieve a wide range of hydrological, water quality, and biological improvements in the lagoon. Technical

studies prepared in conjunction with the Enhancement Plan identify the following three possible methods for increasing tidal circulation:

- Periodically remove sand and cobble from the lagoon mouth;
- Excavate several feet of sediment from approximately 107 acres; and
- Relocate the ocean inlet to minimize flow constrictions.

In 1996, the Conservancy granted funds to the SELC to prepare the *San Elijo Lagoon Action Plan* to describe and prioritize 25 projects aimed at achieving the goals of the Enhancement Plan (Exhibit 4). The Enhancement Plan and Action Plan were approved by the Conservancy on May 27, 1999.

In 2002, the Army Corps of Engineers, City of Encinitas, and City of Solana Beach published the *Draft EIS/EIR for the Encinitas and Solana Beach Shoreline Protection and San Elijo Lagoon Restoration Project* (EIR/EIS). The core committee for the draft EIR/EIS consisted of the co-sponsors of the restoration project (the City of Encinitas and Solana Beach), the U.S. Fish and Wildlife Service, the DFG, SELC, the National Marine Fisheries Service, the Conservancy, and the County of San Diego. Through this draft EIR/EIS process, much of the modeling and the baseline biological report, as well as a Habitat Evaluation Procedure (HEP) analysis and development of several alternative proposals, was completed. A lack of funding slowed the completion of the draft EIR/EIS and the restoration project stalled for the past few years. The potential funding from transportation impacts associated with the widening of Interstate 5 spurred the process again. However, the project description for the draft EIR/EIS now focuses only on the restoration of the lagoon, and not the shoreline protection element.

The goals of the SELRP are also identified within the *Carlsbad Watershed Management Plan*, which includes the Escondido Creek Watershed (KTU&A 2001), and the *Escondido Creek Watershed Action Strategy* (SELC 2005), both of which were funded by the Conservancy. In addition, the SELRP is a Tier 1 project on the Southern California Wetlands Recovery Project Work Plan.

PROJECT FINANCING:

Coastal Conservancy	$680,000
SANDAG (Transnet)	910,000 (pending)
Total Project Cost	**$1,590,000**

Staff expects to use funds appropriated to the Conservancy in fiscal year 2008-09 from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). This funding source may be used for the protection of coastal watersheds in San Diego County. Proposition 84 allows for the utilization of funds for expenditures pursuant to Division 21 of the Public Resources Code, as specified in Section 75060(b), and for projects that protect San Diego Bay and adjacent watersheds, as specified in Section 75060(f). As specified in Section 75072.6, for purposes of Section 75060(f), "San Diego Bay and adjacent watersheds" includes the coastal and bay watersheds within San Diego County. Pursuant to Section 75060(b), funds may be allocated to the improvement and protection of

coastal and marine water quality and habitats, so long as the project is compliant with Division 21 of the Public Resource Code.

The SANDAG and the Department of Transportation (CalTrans) are currently proposing a major expansion of Interstate 5, one of the three major transportation corridors that bisect the lagoon. SANDAG has agreed to partially fund the proposed project because of its interest in identifying potential environmental mitigation projects for the Interstate 5 widening project. The funding for the Interstate 5 widening will come from a half-cent sales tax for local transportation projects called TransNet, which includes $850,000,000 for an environmental mitigation program. This environmental mitigation program will fund the acquisition, restoration, and maintenance of many open spaces and wetlands throughout San Diego County.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project would be undertaken pursuant to Chapter 6 of the Conservancy's enabling legislation, Public Resource Code Sections 31251-31270.

Consistent with Section 31251 of the Public Resources Code, the proposed project would award a grant to a nonprofit organization to undertake activities necessary for the enhancement of the natural and scenic character of San Elijo Lagoon, which has been impacted by sedimentation, improper location of improvements, human-induced events, and incompatible land uses and has suffered the loss of natural and scenic values. This project will provide studies and plans necessary to restore and enhance the biological and hydrological resources of San Elijo Lagoon by improving tidal circulation.

As required in Section 31252, the proposed project has been identified in the City of Encinitas Local Coastal Program as described in the "Consistency with Local Coastal Program Policies" section, below.

Section 31253 permits the Conservancy to provide up to the total cost of any coastal resource enhancement project, consistent with established project eligibility and priority factors. In determining the amount of Conservancy funding for this project, the factors identified in Section 31253 have been considered and applied, as described in detail below, under the heading "Consistency With Conservancy's Project Selection Criteria & Guidelines".

Pursuant to Section 31263, the Conservancy may authorize a nonprofit organization to undertake resource enhancement activities consistent with an approved resource enhancement plan for the area. In 1996 the Conservancy approved the San Elijo Lagoon Enhancement and Action Plans, which identify restoration of tidal circulation as one of the key goals.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 5, Objective A** of the Conservancy's 2007 Strategic Plan, the proposed project would develop a plan for the enhancement of 1,066 acres of tidal wetland habitat by restoring tidal circulation and re-establishing native habitats.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on September 20, 2007, 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:** San Elijo Lagoon is a highly regarded natural area by the community. The community and public agencies concerned with the lagoon's management are in full support of the SELRP. Exhibit 5 provides letters of support from the City of Encinitas, the San Diego Regional Water Quality Control Board, the County of San Diego, the DFG, SANDAG, and the Surfrider Foundation.
4. **Location:** The proposed project would be located within the coastal zone of the City of Encinitas, County of San Diego.
5. **Need:** The funding of the gaps identified in the *San Elijo Lagoon Restoration Project Data and Information Gaps Analysis: Summary Report* (Exhibit 2) is critical for the SELRP to move forward in a timely manner in order to take advantage of the funding opportunity presented by TransNet. The members of the restoration committee do not have the funds available to fill the data gaps that are necessary to implement the SELRP. Therefore Conservancy funds are needed to complete the project.
6. **Greater-than-local interest:** Protecting and enhancing the San Elijo Lagoon is of regional interest because it supports federal and state listed species, serves as a stopover along the Pacific flyway, and is identified by the Southern California Wetlands Recovery Project as a top priority coastal wetland resource in the region. In addition, visitors from around the County and the State make San Elijo Lagoon a destination for bird watching and nature enjoyment.

Additional Criteria

7. **Urgency:** Timing is critical for completing the restoration planning for San Elijo Lagoon. Major transportation infrastructure improvements are being planned along the I-5 corridor and the adjacent rail lines. Planning work must be completed in time to incorporate potential habitat enhancements into these infrastructure projects.
8. **Resolution of more than one issue:** The proposed project will provide data and information that will help develop solutions for improving water quality, restoring and protecting coastal habitat, and improving recreational opportunities.
9. **Leverage:** See the "Project Financing" section above.

12. **Readiness:** The SELC is prepared to begin work immediately.

13. **Realization of prior Conservancy goals:** a Tier 1 project on the Southern California Wetlands Recovery Project's Work Plan.

15. **Cooperation:** The proposed project is a collaborative effort between the City of Encinitas, the County of San Diego, the DFG, the National Marine Fisheries Service, and the SELC.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The City of Encinitas Local Coastal Program (LCP) designates San Elijo Lagoon as an environmentally sensitive habitat and states that "The City will encourage the preservation and the function of San Elijo Lagoon . . . as viable wetlands, ecosystems and habitat for resident and migratory wildlife. . . ." The proposed project is consistent with the LCP because it will lead to the restoration and enhancement of the habitats at the lagoon.

COMPLIANCE WITH CEQA: The proposed project is statutorily exempt from the provisions of CEQA under 14 California Code of Regulations, Section 15262 exempting feasibility studies for possible future actions that the Conservancy has not approved, adopted or funded and which do not require preparation of an EIR or negative declaration. Staff will file a Notice of Exemption upon approval of the proposed authorization.