

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**PROPOSED ORDER NO. R9-2008-0072**

**ASSESSING**

**ADMINISTRATIVE CIVIL LIABILITY**

**FOR VIOLATIONS OF**

**STATE WATER RESOURCE CONTROL BOARD**

**GENERAL WASTE DISCHARGE REQUIREMENTS NO. 2006-0003-DWQ**

**TO**

**CITY OF VISTA AND CITY OF CARLSBAD**

This Order is issued in reference to an adjudicative proceeding initiated by the issuance of Administrative Civil Liability Complaint No. R9-2007-0099, dated September 12, 2007 (Complaint). The parties to this proceeding are the California Regional Water Quality Control Board, San Diego Region's (Regional Board) Prosecution Team, and the Cities of Vista and Carlsbad. Collectively, they are herein referred to as the "Parties."

The Regional Board has been presented with a proposed settlement of the claims alleged in the Complaint that has been developed during negotiations between the Parties' representatives (Attachment 1). The proposed settlement represents a mutually agreed-upon resolution of the Prosecution Team's claims through the payment of an administrative civil liability in the amount of \$1,095,000 consisting of a cash payment of \$595,000 to the State Water Resources Control Board's Waste Discharge Permit Fund Abatement Account and \$500,000 in funding of a Supplemental Environmental Project (SEP) entitled "Buena Vista Lagoon Restoration—Engineering Studies and Analyses." A full description of the proposed SEP can be found at Exhibit B to Attachment 1. The parties recommend that the Regional Board issue this Order to effectuate the proposed settlement. Having provided public notice of the proposed settlement and an opportunity for public comment, the Regional Board finds that:

1. The Cities of Vista and Carlsbad independently own and operate approximately 412 miles of sewer lines within their municipal jurisdictions. The Cities jointly own and operate a sewer interceptor line that originates in Vista and terminates at the Encina Wastewater Treatment Plant in Carlsbad. The Cities jointly own and operate a 24-inch diameter force sewer main that conveys sewage from the Buena Vista Pump Station to the Encina Wastewater Treatment Plant.
2. From March 31, 2007, to April 3, 2007, a total of 7.3 million gallons of untreated sewage discharged from the force sewer main into the Buena Vista lagoon. The discharge constitutes a violation of Prohibition C.1 of Order No. 2006-0003-DWQ.

The Regional Board is authorized to impose an administrative civil liability assessment for the violation under authority of Water Code Section 13350.

3. The proposed SEP seeks funding to provide critical engineering analyses and studies to help restore the habitat and recreational resources of Buena Vista Lagoon. These studies would include coastal and fluvial processes and wetlands engineering. Approval of the SEP proposal would significantly contribute to these ongoing efforts to restore Buena Vista Lagoon and enhance the natural resources it supports. The Cities have represented and warranted that the contribution to the project that would serve as a SEP under this Order is not and was not previously being contemplated, in whole or in part, by the Cities, for any other purpose except to partially satisfy the Cities' obligations in this Order, and that the Cities' contribution to the project that serves as a SEP would not be made in the absence of this enforcement action.
4. In accepting the proposed settlement, the Regional Board has considered each of the factors prescribed in Water Code Section 13327. The Regional Board's consideration of these factors is based upon information obtained by the Regional Board in investigating the Claims or otherwise provided to the Regional Board; including the information presented at the noticed hearing of this matter. In addition to these factors, the administrative civil liability recovers the costs incurred by the staff of the Regional Board in evaluating the Claims and preparing the Complaint and related documents.
5. A notice of the settlement and assessment of civil liability was published in the North County Times on August 8, 2008, notifying the public of the review period and soliciting public comments on the terms of the settlement. The proposed settlement supports the assessment of administrative civil liability in the amount of \$1,095,000 for the Claims and is in the public interest. This settlement and assessment of administrative civil liability provides for the full and final resolution of each of the Claims.
6. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000 *et seq.*) in accordance with section 15321, Chapter 3, Title 14, California Code of Regulations.
7. The Regional Board incurred costs totaling \$141,722, which includes investigation, preparation of enforcement documents, and communication with the Dischargers regarding the enforcement action.

IT IS HEREBY ORDERED that:

1. The Settlement Agreement (Attachment 1) is approved.
2. Administrative civil liability under Water Code Section 13350 is imposed upon the Cities in the amount of \$1,095,000 to be paid as follows:
  - a. The amount of \$595,000 is due to the State Water Resources Control Board (State Board) for deposit into the Waste Discharge Permit Fund Abatement Account. This payment is to be paid by the Cities within 30 days from the date of this Order; and
  - b. The amount of \$500,000 is due to the National Fish and Wildlife Foundation for deposit into the Buena Vista Lagoon Restoration Project Incident Specific Subaccount of the Environmental Fund for Habitat and Incident Specific Restoration Projects as a Supplemental Environmental Project (SEP) entitled "Buena Vista Lagoon Restoration—Engineering Studies and Analyses." This payment is to be paid by the Cities within 30 days from the date of this Order. Failure of the Cities to pay the full amount within 30 days from the date of this Order will result in the full amount being due and payable to the State Board for deposit into the Waste Discharge Permit Fund Abatement Account.
3. If the Cities publicize the SEP or the results of the SEP, they will state in a prominent manner that the SEP is being undertaken as part of the settlement of this enforcement action by the Regional Board.
4. The Executive Officer is authorized to refer this matter to the Office of the Attorney General for enforcement if the Cities fail to comply with paragraphs 1 or 2.
5. Fulfillment of the Cities' obligations under this Order constitutes full and final satisfaction of any and all liability for each Claim in the Complaint and the Settlement Agreement (Attachment 1).

I, \_\_\_\_\_, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order imposing civil liability assessed by the California Regional Water Quality Control Board, San Diego Region, on September 10, 2008.

# Attachment No. 1 to Proposed Order

## SETTLEMENT AGREEMENT AND MUTUAL RELEASE

### ADMINISTRATIVE CIVIL LIABILITY

#### COMPLAINT NO. R9-2007-0099

**THIS SETTLEMENT AGREEMENT AND MUTUAL RELEASE** (“Agreement”) is made and entered into effective July 31, 2008, by and between the City of Vista, the City of Carlsbad and the Prosecution Team (“Prosecution Team”) of the California Regional Water Quality Control Board, San Diego Region (“Regional Board”) (collectively, the “Parties”) with reference to the following facts:

#### **RECITALS:**

A. On September 28, 2007, the Assistant Executive Officer of the Regional Board issued Administrative Civil Liability Complaint No. R9-2007-0099 (the “Complaint”), which sought to impose an Administrative Civil Liability order on the Cities of Vista and Carlsbad for a discharge of sewage from their collection system into the Buena Vista Lagoon that occurred on or about March 31, 2007.

B. The Parties, through their respective representatives, have reached a proposed settlement that includes the issuance of an Administrative Civil Liability Order for the discharge from the Cities’ collection system, as described in ACL Complaint No. R9-2007-0099, attached hereto as Exhibit A. The Parties have agreed to present the proposed Administrative Civil Liability, Order No. R9-2008-0072, to the Regional Board for adoption at its September 10, 2008, meeting following the required public notice.

C. The terms of the proposed settlement are that the Cities will jointly pay a total assessment of \$1,095,000, which shall include the following:

- a. The amount of \$595,000 is due to the State Water Resources Control Board (State Board) for deposit into the Waste Discharge Permit Fund Abatement Account. This payment is to be paid by the Cities within 30 days of the adoption of Order No. R9-2008-0072; and
- b. The amount of \$500,000 is due to the National Fish and Wildlife Foundation for deposit into the Buena Vista Lagoon Restoration Project Incident Specific Subaccount of the Environmental Fund for Habitat and Incident Specific Restoration Projects as a Supplemental Environmental Project (SEP). This payment is to be paid by the Cities within 30 days of the adoption of Order No. R9-2008-0072. The SEP entitled “Buena Vista Lagoon Restoration—Engineering Studies and Analyses” is more fully detailed and attached as Exhibit B, California Regional Water Quality Control Board, San Diego Region, Supplemental Environmental Project Application Form.

D. As a material condition of this Agreement, the Cities represent and warrant that the contributions to the projects that would serve as SEPs under this Agreement are not and were not previously being contemplated, in whole or in part, by the Cities for any purpose other than to partially satisfy the Cities obligations in settling the discharges set forth in the ACL Complaint, and that the Cities contributions to the projects that serve as SEPs would not be made in the absence of this enforcement action.

E. In order to facilitate the approval of the proposed settlement, and to carry out its terms, the Parties desire to enter into the following agreement.

**NOW, THEREFORE**, in exchange for their mutual promises and for other good and valuable consideration specified herein, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. The Parties agree to support, advocate for, and promote the proposed Administrative Civil Liability, Order No. R9-2008-0072, described above.
2. The Parties covenant and agree that they will not contest the proposed Administrative Civil Liability before the Regional Board, the State Board, or any court if the proposed Order No. R9-2008-0072 is adopted by the Regional Board.
3. The Cities agree to pay the proposed Administrative Civil Liability assessment within 30 days of adoption of Order No. R9-2008-0072.
4. In the event that the SEP described above in C.b., cannot be performed by the U.S. Fish & Wildlife Service and California Department of Fish & Game then the remaining funds shall be paid to the State Board's Waste Discharge Permit Fund Abatement Account.
5. Performance of paragraph 3 (and if applicable, paragraph 4) shall effect a mutual release and discharge of the Parties and their respective successors and assigns, agents, attorneys, employees, officers, and representatives from any and all claims, demands, actions, causes of action, obligations, damages, penalties, liabilities, debts, losses, interest, costs, or expenses of whatever nature, character, or description, that they may have or claim to have against one another by reason of any matter or omission arising from any cause whatsoever relating to the proposed Administrative Civil Liability, Order No. R9-2008-0072, the Discharges, or the Complaint.
6. In the event that the Regional Board does not adopt Order No. R9-2008-0072 at its regular meeting on September 10, 2008, the Cities shall have the right to a hearing on the Complaint at a future Regional Board meeting to be scheduled by the Chair. The Cities agree to a limited waiver of the requirement to have a hearing on the Complaint within 90 days of service under Water Code section 13323(b) conditioned on the hearing on the proposed settlement being conducted at the September 10, 2008,

Regional Board meeting and the hearing on the Complaint, if necessary, being conducted at the October 8, 2008, Regional Board meeting, or if no such meeting occurs, at the next regularly scheduled meeting thereafter. Any further rescheduling of the hearings is subject to the written approval of the Cities. The Parties also agree that, in the event that the Regional Board does not adopt Order No. R9-2008-0072, they waive any and all objections related to their attempt to settle this matter, including, but not limited to, objections related to prejudice or bias of any of the Regional Board members or their advisors and any other objections that are premised in whole or in part on the fact that the Regional Board members and their advisors were exposed to some of the material facts and the parties' settlement positions, and therefore may have formed impressions or conclusions, prior to conducting an evidentiary hearing on the merits of the Complaint.

7. The Parties intend that the procedure that has been adopted for the approval of the settlement by the Parties and reviewed by the public, as reflected by the proposed Order No. R9-2008-0072, and this Agreement, will be adequate. In the event objections are raised during the public comment period for the proposed Order No. R9-2008-0072, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the procedure as necessary or advisable under the circumstances.

8. Each person executing this Agreement in a representative capacity represents and warrants that he or she is authorized to execute this Agreement on behalf of and to bind the entity on whose behalf he or she executes the Agreement.

9. This Agreement shall not be construed against the Party preparing it, but shall be construed as if the Parties jointly prepared this Agreement and any uncertainty and ambiguity shall not be interpreted against any one party.

10. This Agreement shall not be modified by any of the Parties by oral representation made before or after the execution of this Agreement. All modifications must be in writing and signed by the Parties.

11. Each Party to this Agreement shall bear all attorneys' fees and costs arising from that Party's own counsel in connection with the matters referred to herein.

12. The Parties shall execute and deliver all documents and perform all further acts that may be reasonably necessary to effectuate the provisions of this Agreement.

13. This Agreement shall be executed as duplicate originals, each of which shall be deemed an original Agreement, and all of which shall constitute one agreement to be effective as of the Effective Date.

14. This Agreement is entered into and shall be construed and interpreted in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date set forth above.

**REGIONAL BOARD PROSECUTION TEAM By:**



Mike McCann  
Assistant Executive Officer

Date: 7/31/08

Approved As To Form:

\_\_\_\_\_ Date: \_\_\_\_\_  
Jorge A. Leon  
Counsel to the Regional Board Prosecution Team

**CITY OF VISTA By:**

\_\_\_\_\_ Date: \_\_\_\_\_

Approved As To Form:  
Darold Pieper, City Attorney

By: \_\_\_\_\_ Date: \_\_\_\_\_

**CITY OF CARLSBAD By**

\_\_\_\_\_ Date: \_\_\_\_\_

Approved As To Form:  
Ronald R. Ball, City Attorney

By: \_\_\_\_\_ Date: \_\_\_\_\_


July 31, 2008

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date set forth above.

**REGIONAL BOARD PROSECUTION TEAM By:**

\_\_\_\_\_  
Date: \_\_\_\_\_  
Mike McCann  
Assistant Executive Officer

Approved As To Form:

  
\_\_\_\_\_  
Date: Aug 1, 2008  
Jorge A. Leon  
Counsel to the Regional Board Prosecution Team

**CITY OF VISTA By:**

\_\_\_\_\_  
Date: \_\_\_\_\_  
Approved As To Form:  
Darold Pieper, City Attorney

By: \_\_\_\_\_ Date: \_\_\_\_\_

**CITY OF CARLSBAD By**

\_\_\_\_\_  
Date: \_\_\_\_\_  
Approved As To Form:  
Ronald R. Ball, City Attorney

By: \_\_\_\_\_ Date: \_\_\_\_\_



July 31, 2008

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date set forth above.

**REGIONAL BOARD PROSECUTION TEAM By:**

\_\_\_\_\_  
Date: \_\_\_\_\_  
Mike McCann  
Assistant Executive Officer


Approved As To Form:

\_\_\_\_\_  
Date: \_\_\_\_\_  
Jorge A. Leon  
Counsel to the Regional Board Prosecution Team

**CITY OF VISTA By:**

  
\_\_\_\_\_  
Date: 07/30/08

Approved As To Form:  
Darold Pieper, City Attorney

By:   
\_\_\_\_\_  
Date: 7/30/08

**CITY OF CARLSBAD By**

\_\_\_\_\_  
Date: \_\_\_\_\_

Approved As To Form:  
Ronald R. Ball, City Attorney

By: \_\_\_\_\_ Date: \_\_\_\_\_

July 31, 2008

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date set forth above.

**REGIONAL BOARD PROSECUTION TEAM By:**

\_\_\_\_\_  
Date: \_\_\_\_\_  
Mike McCann  
Assistant Executive Officer

Approved As To Form:

\_\_\_\_\_  
Date: \_\_\_\_\_  
Jorge A. Leon  
Counsel to the Regional Board Prosecution Team

**CITY OF VISTA By:**

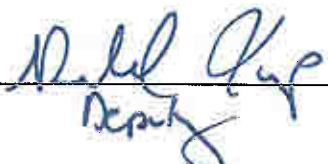
\_\_\_\_\_  
Date: \_\_\_\_\_  
Approved As To Form:  
Darold Pieper, City Attorney

By: \_\_\_\_\_ Date: \_\_\_\_\_

**CITY OF CARLSBAD By**

  
\_\_\_\_\_  
Date: 7/31/08

Approved As To Form:  
Ronald R. Ball, City Attorney

By:   
\_\_\_\_\_  
Date: 7/24/08  
Deputy



September 28, 2007

**ALLEGATIONS**

6. The Dischargers violated Prohibition C.1 of Order No. 2006-0003-DWQ by discharging 7.3 million gallons of untreated sewage from March 31, 2007 through April 3, 2007 from their 24-inch diameter sewer main at the Buena Vista Pump Station to Buena Vista Lagoon, a water of the United States.

**PROPOSED CIVIL LIABILITY**

7. Persons or entities that discharge waste in violation of Waste Discharge requirements are subject to civil liability pursuant to CWC Sections 13350, either on a daily basis not to exceed five thousand dollars (\$ 5,000) for each day the violation occurs, or on a per gallon basis, not to exceed ten dollars (\$ 10) for each gallon of waste discharged, but not both. The statutory maximum ACL amount for the March 31, 2007 through April 3, 2007 sewage discharges therefore is \$ 73,000,000.
8. It is recommended that, pursuant to sections 13350 (a) and (e)(2) of the CWC, the Regional Board impose a civil liability of one million ninety-five thousand dollars (\$1,095,000) on the Dischargers for the violations alleged herein.
9. The factual and legal bases supporting this Complaint are contained in the attached "Staff Report Buena Vista Lagoon Sewage Discharge City of Vista & City of Carlsbad."

Dated this 28 day of September 2007

BY THE EXECUTIVE OFFICER



MICHAEL McCANN

Assistant Executive Officer (Acting)

Signed pursuant to the authority  
delegated by the Executive Officer to  
the Assistant Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL  
BOARD  
SAN DIEGO REGION  
(SDRWQCB)

**Exhibit B to Settlement Agreement**

**SUPPLEMENTAL ENVIRONMENTAL PROJECT APPLICATION FORM**

**Project Requested by:** Natural Resource Co-Trustees - U.S. Fish & Wildlife Service (USFWS) and California Department of Fish and Game (DFG)

**Name of Project:** Buena Vista Lagoon Restoration – Engineering Studies and Analyses

**Date of Request:** November 30, 2007 Original, May 28, 2008 revised

**Point of Contact:** Natural Resource Co-Trustees USFWS (Sharon K. Taylor) and DFG (Warren Wong)

**Phone:** USFWS - Sharon K. Taylor (760) 431-9440 ext 220  
DFG - Warren Wong (858) 467-4249

**E-Mail:** USFWS - Sharon K. Taylor [sharon\\_taylor@fws.gov](mailto:sharon_taylor@fws.gov)  
DFG - Warren Wong [wwong@dfg.ca.gov](mailto:wwong@dfg.ca.gov)

**Project Summary**

Buena Vista Lagoon has been adversely impacted over time by a concrete weir built across the ocean entrance in the 1940's that controls the water level. Unique among the county's six coastal lagoons, Buena Vista Lagoon currently has no tidal flushing due to its present elevation and configuration. Historically, the lagoon was a tidal system. The presence of the weir at the mouth of the lagoon, combined with increasing sediment and nutrient loading, has reduced the depth and circulation of the lagoon, accelerated the growth of cattail, bulrush, and algal growth, and has led to the decline of biodiversity and increased vector problems. Numerous agencies and organizations have been working toward restoring the lagoon including, but not limited to, the USFWS, DFG, State Coastal Conservancy, Southern California Wetlands Recovery Project, and the Carlsbad Watershed Network.

This SEP proposal seeks funding to provide critical engineering analyses and studies to help restore the habitat and recreational resources of Buena Vista Lagoon. These studies would include coastal and fluvial processes and wetlands engineering. Approval of this SEP proposal would significantly contribute to these ongoing efforts to restore Buena Vista Lagoon and enhance the natural resources it supports.

**Total Life Cycle Cost for the Project**

Cost estimates for engineering analyses and studies, including the administrative overhead and contingency, required for the Buena Vista Lagoon restoration based on funding in FY 2008 are listed below.

Coastal Processes	\$ <u>250,000</u>
Construction and Maintenance	\$ <u>50,000</u>
Water Quality	\$ <u>200,000</u>

**Total Project Cost** \$ 500,000

**Watershed/Water Body/Location for Project (attach maps)**

Buena Vista Lagoon is located approximately 35 miles north of San Diego, on the border between the cities of Oceanside and Carlsbad in San Diego County, California. The lagoon, which is bordered by the Pacific Ocean on the west, Vista Way / Freeway 78 on the north, and Jefferson Street on the east and south, covers an area of approximately 225 acres. The lagoon is part of the El Salto Watershed. See attached Figures 1 and 2.

**Project Proposed Start Date and Time Line**

The proposed project is anticipated to commence as soon as contracts are in place, which is estimated to occur within 3-6 months of funding. Some of the studies are sequential in nature, so these would be initiated upon completion of others. Studies and analyses are estimated to be completed within 2 years upon funding.

**Organization Sponsoring Project (tax I.D. #):** DFG 94-1697567

**Name of Project Manager:** Natural Resource Co-Trustees - USFWS (Sharon K. Taylor) and DFG (Warren Wong)

**Phone:** USFWS - Sharon K. Taylor (760) 431-9440 ext 220  
DFG - Warren Wong (858) 467-4249

**Designated Project Trustee:** Natural Resource Co-Trustees USFWS (Sharon K. Taylor) and DFG (Warren Wong)

**Description of Project Trustee capability to ensure that the project will be complete**

As co-trustees, both the USFWS and DFG have agency mandates to protect the natural resources that are proposed under this SEP proposal. DFG has the mandate to manage Buena Vista Lagoon as an ecological reserve and has direct responsibility for overseeing the site. The US Fish & Wildlife Service has trustee resource responsibilities that include threatened and endangered species, as well as migratory birds and compliance with the National Environmental Policy Act (NEPA). Both agencies have extensive documented histories and commitments in working to restore Buena Vista Lagoon.

### **Statement of Project Trustee ability/authority to receive and disburse funds**

Funds are proposed to be held in the Environmental Fund for Habitat and Incident Specific Restoration Projects with the National Fish and Wildlife Foundation pursuant to the Memorandum of Agreement between the California Department of Fish and Game and the National Fish and Wildlife Foundation to Establish the Environmental Fund for Habitat and Incident-Specific Restoration Projects (attached). Funds will be placed in an Incident Specific Subaccount within the above referenced fund for the Buena Vista Lagoon Restoration Project and would be disbursed upon joint approval of the USFWS and DFG co-trustees. USFWS and DFG have jointly worked together on multiple projects as co-trustees.

## **DETAILED PROJECT INFORMATION**

### **1 and 2. PROPOSAL DESCRIPTION AND PROBLEM STATEMENT**

Buena Vista Lagoon has been adversely impacted over time by a concrete weir built across the ocean entrance in the 1940's that controls the minimum water level. Unique among the county's six coastal lagoons, Buena Vista Lagoon currently has no tidal flushing due to its present elevation and configuration. Historically, the lagoon was a tidal system. The presence of the weir at the mouth of the lagoon, combined with increasing sediment and nutrient loading has reduced the depth and circulation of the lagoon, accelerated the growth of cattail, bulrush, and algal growth, and led to the decline of biodiversity and increased vector problems. Numerous agencies and organizations have been working toward restoring the lagoon including, but not limited to, the USFWS, DFG, State Coastal Conservancy, Southern California Wetlands Recovery Project, and the Carlsbad Watershed Network.

The first phase of the restoration effort was completed in 1999 and consisted of a field program to collect data on the fauna, flora, and water quality of the lagoon. The second phase, initiated in 2004, would characterize existing conditions, identify constraints, develop restoration alternatives, analyze the restoration alternative, and would prepare and apply potential alternative evaluation methodology in determining the ultimate configuration of the lagoon and its hydrologic regime. Initial studies and analyses required in this second phase have been funded by the USFWS and State Coastal Conservancy (SCC), yet additional engineering studies and analyses are required for the completion of the lagoon restoration plan and have not been completed due to the lack of a funding source. Without completion of these studies, restoration of Buena Vista Lagoon cannot proceed.

This SEP proposal seeks funding to provide critical engineering analyses and studies to help restore the habitat and recreational resources of Buena Vista Lagoon. These studies would include coastal and fluvial processes and wetlands engineering that will result in plans and specifications to then implement the restoration. Specifically, these engineering analyses include:

- I) Coastal Processes
  - a. Ebb and Flood Bar Growth
  - b. Shoreline Morphology
  - c. Coastal Erosion Protection

- II) Construction and Maintenance
  - a. Construction Cost Estimates
  - b. Maintenance Cost Estimates
  
- III) Water Quality
  - a. Lagoon Water Quality
  - b. Nearshore Water Quality

### **3. HOW WILL THE PROJECT BENEFIT WATER QUALITY AND BENEFICIAL USES?**

Historically, Buena Vista Lagoon had periodic tidal influence. A weir installed at the ocean inlet in the 1940's isolates the lagoon from tidal influence and regulates water levels. Thus the lagoon has become a very efficient sediment trap. Estimates of the 1940-1982 sedimentation rate, based on cores of the lagoon bed, was 35,000 tons accrued per year.

If funded, this SEP will provide critical engineering analyses and studies to help restore the habitat and recreational resources of Buena Vista Lagoon. Approval of the project would provide information necessary to develop a long-term, sustainable configuration for the lagoon. Beneficial Uses identified in the Basin Plan are: REC1, REC2, BIOL, WILD, RARE, MAR, and WARM. Restoration would provide habitat for sensitive wildlife including light-footed clapper rail, California least tern and Belding's savannah sparrow and other wildlife. Removal of sediment and nutrients from the lagoon would provide additional habitat for fish and recreational opportunities for users and would also reduce fish die-offs. Water quality would be enhanced through a reduction in turbidity and nutrient load and the reduced potential for eutrophication. Depending on the final hydrologic regime, restoration could also potentially add EST, MIGR, and SPAWN uses to the lagoon.

### **4. HOW WILL THE SUCCESS OF THIS PROJECT BE MEASURED?**

The success of this project will be measured by the completion and acceptance by the co-trustees of the engineering studies and analyses reports. These studies will be included in environmental documents to be circulated for agency and public review.

### **5. DETAILED WORK PLAN**

Please see the attached detailed work plan.







## **Work Plan for Supplemental Environmental Project Proposal**

### **Buena Vista Lagoon Restoration – Engineering Studies and Analyses January 8, 2008**

#### **A. Scope of work**

Buena Vista Lagoon has been adversely impacted over time by a concrete weir built across the ocean entrance in 1940's that controls the water level. Unique among the county's six coastal lagoons, Buena Vista Lagoon currently has no tidal flushing due to its present elevation and configuration. Historically, the lagoon was a tidal system. The presence of the weir at the mouth of the lagoon, combined with increasing sediment and nutrient loading has reduced the depth and circulation of the lagoon, accelerated the growth of cattail, bulrush, and algal growth, and lead to the decline of biodiversity and increased vector problems. Numerous agencies and organizations have been working toward restoring the lagoon including, but not limited to, the USFWS, DFG, State Coastal Conservancy, Southern California Wetlands Recovery Project, and the Carlsbad Watershed Network.

The first phase of the restoration effort was completed in 1999 and consisted of a field program to collect data on the fauna, flora, and water quality of the lagoon. The second phase, initiated in 2004, would characterize existing conditions, identify constraints, develop restoration alternatives, analyze the restoration alternative, and would prepare and apply potential alternative evaluation methodology in determining the ultimate configuration of the lagoon and its hydrologic regime. Initial studies and analyses required in this second phase have been funded by the USFWS and State Coastal Conservancy (SCC), yet additional engineering studies and analyses required for the completion of the lagoon restoration plan and have not been completed due to a lack of a funding source.

This SEP proposal seeks funding to provide critical engineering analysis and studies to help restore the habitat and recreational resources of Buena Vista Lagoon. These studies would include coastal and fluvial processes and wetlands engineering.

#### **B. Task descriptions**

Below is a list of task descriptions of the currently unfunded engineering studies and analysis for the Buena Vista Lagoon Restoration Project. Descriptions are excerpted from the Everest International Consultants, Inc. Buena Vista Lagoon Restoration Report.

##### Coastal Processes

###### Ebb and Flood Bar Growth

This task consists of analyses aimed at estimating the volume and growth rate of the ebb bar and flood bar that would form after opening the new tidal inlet. This information is needed to evaluate maintenance (dredging, excavation, and disposal) as well as to assess impacts to upcoast and downcoast beaches associated with sand trapped in the bar system. This task is interrelated with the shoreline morphology task described below.

### Shoreline Morphology

This task consists of numerical modeling aimed at estimating the change in shoreline position (e.g., mean sea level shoreline) due to project-related changes to the littoral processes. This information is needed to assess the impacts of inlet channel stabilization structures (e.g., jetties) as well as the impacts of the ebb and flood bar system on upcoast and downcoast beaches. This task is interrelated with the ebb bar and flood bar growth task above.

### Coastal Erosion Protection

This task consists of analyses aimed at designing erosion protection for the area in the immediate vicinity of the tidal inlet. This information is needed to protect the properties on either side of the tidal inlet from project-induced erosion associated with the jetties and ebb/flood bar system. This task is interrelated with the shoreline morphology task described above.

## Construction & Maintenance

### Construction Cost Estimates

This task consists of the preparation of construction cost estimates for the three restoration alternatives. This information is needed to assess the funding requirements for construction of the various restoration alternatives.

### Maintenance Cost Estimates

This task consists of the preparation of maintenance cost estimates for the three restoration alternatives. This information is needed to assess the funding requirements for long-term maintenance of the various restoration alternatives as well as to help establish maintenance responsibilities for the various agencies and organizations. This task is interrelated with the ebb/flood bar task described above.

## Water Quality

### Lagoon Water Quality

This task consists of numerical modeling and/or empirical analyses aimed at estimating the concentration of water quality constituents within the lagoon under the three restoration alternatives. This information is needed to help assess the project-related impacts on lagoon water quality.

### Nearshore Water Quality

This task consists of numerical modeling and/or empirical analyses aimed at estimating the concentration of water quality constituents within the nearshore coastal waters near the project site under the three restoration alternatives. This information is needed to help assess the project-related impacts on nearshore water quality. This task is interrelated with the ebb/flood bar task described above.

## **C. Budget & Schedule**

Potential timeframes and budget allowances to complete the engineering analyses were developed based on prior experience with similar wetlands restoration projects in Southern California. The analyses were also grouped according to work type. The results of this effort are shown in Table 1, which presents the grouping, timeframe, and allowance for each analysis. Adjustments in the project plan may need to occur based on initial studies. The total budget allowance, including overhead and contingency to complete these preliminary engineering tasks, was estimated to be \$ 500,000.

**Table 1. Timeframe and Budget Allowance Estimates for Engineering Analyses**

<b>Analysis</b>	<b>Grouping</b>	<b>Timeframe</b>	<b>Allowance</b>
Ebb & Flood Bar Growth Shoreline Morphology Coastal Erosion Protection	Coastal Processes	6-12 months	\$250,000
Construction Cost Estimates Maintenance Cost Estimates	Construction & Maintenance	1 - 2 months	\$50,000
Lagoon Water Quality Nearshore Water Quality	Water Quality	3 - 6 months	\$200,000
<b>TOTAL:</b>		<b>18 -24 months</b>	<b>\$500,000</b>

\* Based on simultaneous completion of parallel tasks with full funding.

#### **D. Methods and materials**

Standardized engineering methods that are accepted throughout the industry will be utilized. A quality assurance/quality control review process will be developed and utilized to ensure data collected and reports provided meet the needs of the restoration effort.

#### **E. Resources needed**

The co-trustees have access to the resources needed, if this SEP proposal is funded. The engineering work will be contracted out and administered through the DFG. Both the FWS and DFG will oversee the completion of projects as co-trustees.

#### **F. Regulatory issues (environmental reviews, permits, etc.)**

In spring 2006, work began on the environmental review process required to comply with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). A public meeting was held in April 2007 to solicit input regarding the scope of the environmental document. Preparation of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) is underway and is the next step in the CEQA/NEPA process. The analyses/studies must be completed in order to provide the information necessary to prepare the EIR/EIS.

#### **H. Work products and documents to be retained for records**

Copies of all final work products and documents will be retained for records. In addition, both the USFWS and DFG as federal and state agencies have records retention policies.