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In Reply Refer To:

FEB 20 2008

Mr. Eric Becker  
California Regional Water Quality Control Board, San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, California 92123-4353

Re: Notice of Proposed Settlement Administrative Civil Liability against the Cities of Vista and Carlsbad for Violations Alleged in Complaint No. R9-2007-0099

Dear Mr. Becker:

The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Game (Department), collectively the "Wildlife Agencies", have reviewed Tentative Order No. R9-2008-0004 in settlement of Administrative Civil Liability (ACL) Complaint No R9-2007-0099 issued to the Cities of Vista and Carlsbad, developed by the San Diego Regional Water Quality Control Board (SDRWQCB) for the Buena Vista Lagoon Sewage Spill.

Although we are developing separate agreements with the Cities to fully address impacts to our trust resources for this incident, the Wildlife Agencies have reviewed the tentative order and support the proposed settlement. We support the use of a Supplemental Environmental Project (SEP) to offset impacts to the lagoon and are working with the Cities to ensure that the SEP proposal that we previously submitted to the SDRWQCB on December 6, 2007, be modified to meet requirements of the proposed settlement as well as address the impacts on the resource. If approved, this SEP would provide funding towards completion of engineering studies and modeling needed for the Buena Vista Lagoon restoration plan. We respectfully request that this revised SEP proposal be considered by the SDRWCQB and the responsible parties.

We look forward to completing the settlement process and to working in concert with SDRWQCB and the Cities to restore the natural resources within the lagoon. If you have questions regarding this letter, please contact Dr. Sharon Taylor (Service) at (760) 431-9440 x220 or Mr. Warren Wong (Department) at (858) 467-4249.

Sincerely,

Scott A. Sobiech  
Deputy Field Supervisor  
U.S. Fish and Wildlife Service

Theresa A. Stewart  
Supervising Biologist  
California Department of Fish and Game

Mr. Eric Becker

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cc:

John Robertus, SDRWQCB

Michael McCann, SDRWQCB

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Judy Gibson, USFWS

John Brooks, USFWS

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Bill Paznokas, CDFG

Bryan Gollhofer, CDFG

Noel Richards, CDFG

Deborah Ruddock, State Coastal Conservancy

Glenn Prium, City of Carlsbad

Darold Pieper, City of Vista

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

**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, January 8, 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 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.

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>
<b>Total Project Cost</b>	\$ <u>500,000</u>

**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 a mutually agreed upon escrow account. Funds 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.

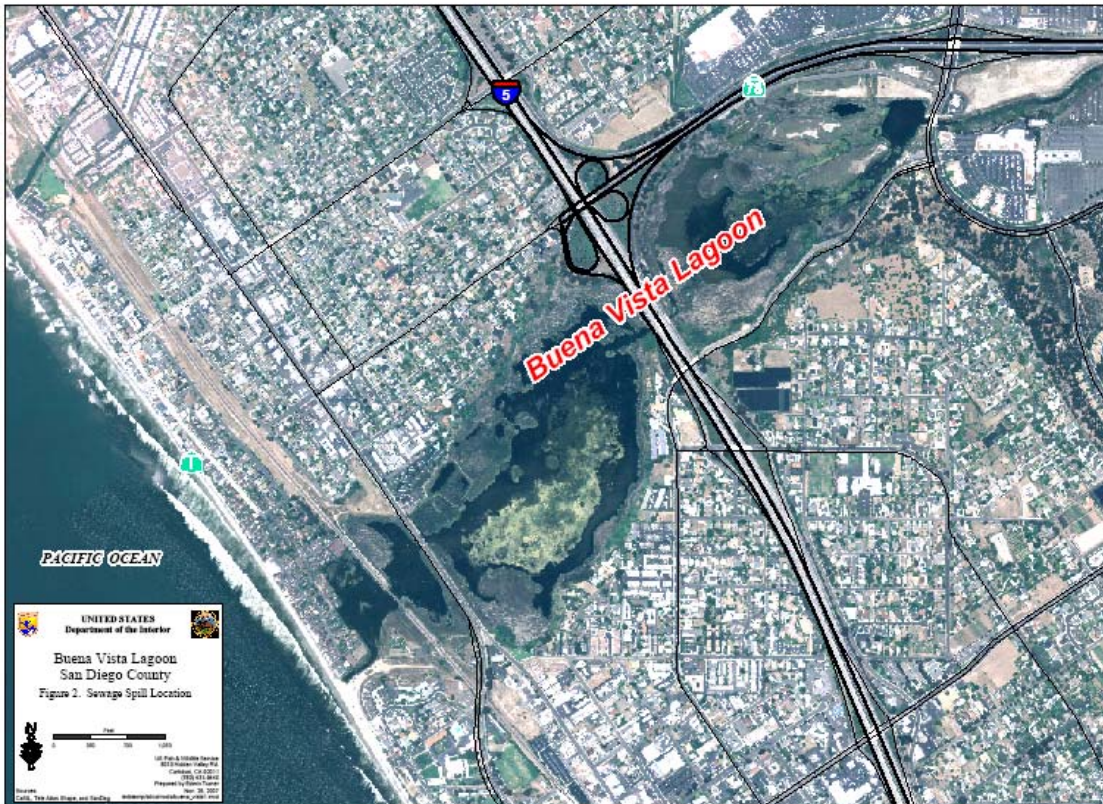
### **5. DETAILED WORK PLAN**

Please see the attached detailed work plan.

***I certify that the information provided in this application is an accurate and complete report of the costs, scope of work and expectations of this proposed project I am submitting to the SDRWQCB.***

SIGNATURE Steven R. Taylor Date 2/20/08

SIGNATURE [Signature] Date 2/20/08





## **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**

Analysis	Grouping	Timeframe	Allowance
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.