



P.O. Box 2452, Martinez, California 94553 • (510) 228-5460

Martinez Regional Land Trust Fax TransmittalDate: 7/28/97Time: 3pmFrom: Tina Best / Nancy SchaeferTo: Kate Hankel / Calif Fed Bay Delta Program

Phone: _____

Fax: 916-654-9780

Message: Kate,

Nancy Schaefer asked that I fax these two letters to you. I will mail the hard copy as well. We are still waiting for a letter from the City of Martinez, and will forward that on. Thank you, Tina Best

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July 24, 1997

Tina Datt
Executive Director
Martinez Regional Land Trust
P. O. Box 2452
Martinez, CA 94553

Subject: Calfed Proposal - Pt. Edith Wildlife Area Praxis Property

Dear Tina:

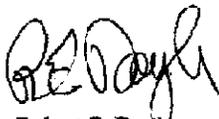
It is our understanding that the Martinez Regional Land Trust is submitting a proposal for the acquisition restoration of the Praxis property adjacent to Suisun Bay and the Pt. Edith State Preserve. Your proposal is similar to an earlier proposal submitted to the Shell Oil Spill Natural Resource Committee established after the Shell Oil spill in Martinez. That Committee was created for the purposes of acquisition and restoration of wetland habitat. The proposal was not funded by that Committee because the property owner at that time was not a willing seller at a reasonable price. Since that time, the funds from the Shell Oil Spill Litigation Settlement Trustee Committee have been expended on other critically important projects. As member and Vice-Chairman of the Trust committee, I would like to reaffirm the importance of that project in the overall restoration and management of habitat along the Suisun Marsh/Carquinez Strait area. I continue to believe that this project is a very important opportunity linking State and Federal properties and restoring and enhancing valuable habitat. The Praxis property sits in an area surrounded by nearly 2,000 acres of other public land managed for the purposes of wildlife and habitat protection. These properties include both federally owned property on the Concord Naval Weapon Station, managed under a joint agreement with the Fish & Wildlife Service; the State owned Pt. Edith wildlife area managed by the Department of Fish & Game and land owned by the East Bay Regional Park District at Shell Marsh and Martinez Shoreline. The inclusion and restoration of this missing link in the 10-mile long wetland system is a very worthwhile and important project. The District's recently revised Master Plan includes the Pt. Edith area as a



Tina Batt
July 24, 1997
Page 2

potential regional shoreline. Therefore the District would be interested in future discussions and cooperative partnerships related to the restoration and management of the area.

Very truly yours,



Robert E. Doyle
Assistant General Manager
Advanced Planning, Land Acquisition
and Regional Trails Division

cc: Pat O'Brien
Board of Directors

CAWFFILES\DOYLE\BATT 97.724

GAYLE B. UILKEMA

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FAX (510) 848-3088

July 25, 1997

Ms. Christina Batt, Executive Director
Martinez Regional Land Trust
P.O. Box 2452
Martinez, CA 94553

Dear Ms. Batt:

The purpose of this letter is to convey my support for your proposal to the CALFED Bay-Delta Program to acquire and restore Pacheco Marsh. Purchase of this area by your organization would enable subsequent restoration of tidal and seasonal wetlands, habitats which are crucial to the health of the Delta ecosystem. I have a strong interest in restoring the health of the Delta ecosystem to the benefit of both wildlife and human activities, and I support your efforts to restore a significant wetland in Contra Costa County.

Sincerely,

Gayle B. Uilkema, Supervisor
Contra Costa County, District 2

GBU/jae

cc: Nancy Schaefer, Coastal Conservancy

**City of Martinez**

325 Henrietta Street, Martinez, CA 94553-2394

(510) 372-3305
FAX (510) 229-5012

July 29, 1997

Tina Batt, Executive Director
Martinez Regional Land Trust
P.O. Box 2452
Martinez, CA 94533

Dear Tina:

RE: PACHECO SLOUGH MARSH ACQUISITION AND RESTORATION PROJECT

The City of Martinez supports the acquisition of the Pacheco Slough Marsh and its restoration to tidal and seasonal wetlands. The property is contingent to the Martinez City limits and within the Martinez Sphere of Influence. Proposals have been presented to the City in the past for development of the property, one for an industrial park and one for a helicopter pad. These proposals have caused the City concern as to the effects development may have on the surrounding wetlands.

The City is excited about the proposed plan to restore the property and believe it is the best use of the property.

Sincerely,

Ronald E. Peterson
City Manager

RONALD E. PETERSON, CITY MANAGER

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F1-062

**PACHECO MARSH ACQUISITION AND RESTORATION
PROJECT PROPOSAL**

July 23, 1997

**Submitted to:
CALFED Bay-Delta Program
Request for Proposals
1997 Category III**

**Submitted by:
Martinez Regional Land Trust
Tina Batt, Executive Director
Nancy Schaefer, Vice Chair**

EXECUTIVE SUMMARY

- a. **Project Title and Applicant Name.** Pacheco Marsh Acquisition and Restoration Project. Submitted by the Martinez Regional Land Trust.
- b. **Project Description and Primary Biological/Ecological Objectives.** The Martinez Regional Land Trust (MRLT) is requesting \$3 million be set aside for the acquisition of Pacheco Marsh, 230 acres located along Carquinez Strait just east of the City of Martinez (see Attachment 1). MRLT is working with the landowners (Crowley Maritime Corporation), the Coastal Conservancy, Phil Williams and Associates and the San Francisco Bay Joint Venture to complete studies, including an appraisal, preliminary restoration study and a Phase I environmental assessment that will determine the technical and financial feasibility of purchasing and restoring the site to tidal and seasonal wetlands habitat. If acquisition and restoration is determined to be feasible and agreement can be reached with Crowley Maritime, then we would request the acquisition funds be released. The actual purchase price will be determined by an appraisal completed according to state standards by a private, independent appraiser and is anticipated to be less than \$3 million. If CALFED agrees to set aside funding, the Coastal Conservancy will fund an enhancement plan up to \$100,000, subject to board approval.

The primary biological/ecological objective of the Pacheco Marsh restoration is to develop saline emergent (tidal) and seasonal wetlands that will benefit delta smelt, chinook salmon, Sacramento splittail, striped bass and migratory birds. Other species that will benefit are the endangered salt marsh harvest mouse, the California clapper rail and the black rail. There may be secondary benefits to water quality resulting from increased and enhanced wetland acreage providing pollutant filtration.

- c. **Approach/Tasks/Schedule.** This proposal requests funding be set aside for the acquisition of Pacheco Marsh while studies are completed to determine the feasibility of acquisition and subsequent restoration. These studies are:

Appraisal: Will be initiated in mid- to late August and completed by late September. Negotiations to option the property will begin once the appraisal has been completed.

Preliminary Restoration Feasibility Study: Phil Williams and Associates will complete a preliminary restoration feasibility study under contract to the Coastal Conservancy. The study will determine the feasibility of restoring the site to tidal and seasonal marsh. The report will also contain a detailed scope of work for a full enhancement plan that would be funded by the Coastal Conservancy (subject to board approval) if acquisition funding is received. This preliminary study will be completed by mid-August.

Phase I Environmental Assessment: If acquisition funding is secured, an expanded Phase I Environmental Assessment will be completed to determine the nature and extent of hazardous materials contamination generated on site and from adjacent properties.

Enhancement Plan: If funding for the acquisition is approved by CALFED, the Coastal Conservancy would recommend funding an enhancement plan up to \$100,000 to its board in the late fall (October/November).

- d. **Justification for Project and CALFED Funding.** The CALFED Bay-Delta Program has

identified four objectives which includes a habitat restoration component to "improve and increase aquatic and terrestrial habitats and improve ecological function in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species." The acquisition of Pacheco Marsh and its subsequent restoration to tidal and seasonal wetland habitat will further this goal. If CALFED is willing to reserve \$3 million to be used for acquisition if the project is deemed feasible, the project partners are willing to undertake the necessary studies to determine if acquisition and restoration are financially and biologically feasible.

- e. **Budget Costs and Third Party Impacts.** The Pacheco Marsh Acquisition budget is \$3 million subject to an independent appraisal completed to state specifications and subsequent negotiations. There are potential impacts to Tidewater Sand and Gravel that operates a sand mining operation on the site. These potential impacts will be given full consideration during the enhancement planning process.
- f. **Applicant Qualifications.** The Martinez Regional Land Trust is a 501(c)(3) nonprofit corporation that was established in 1989. MRLT holds conservation easements on 150 acres of open space, provides annual stewardship for these easements, has successfully raised \$75,000 to complete the acquisition of the Mt. Wanda addition to the John Muir National Historic Site and currently holds an 18-month option to purchase the 242-acre Sky Ranch. Working with the San Francisco Bay Joint Venture, MRLT's main role will be project management and negotiating an option or purchase agreement. MRLT will work closely with the Coastal Conservancy and Phil Williams and Associates to develop an enhancement plan. Both the Conservancy and PWA have a long history of wetlands enhancement and restoration.
- g. **Monitoring and Data Evaluation.** This proposal is for acquisition funding only but monitoring and data evaluation will be included in the subsequent restoration planning phase of the project.
- h. **Local Support.** MRLT is a local, community based nonprofit organization. The acquisition and restoration of Pacheco Marsh is supported by the San Francisco Bay Joint Venture, the Coastal Conservancy, East Bay Regional Park District and Contra Costa County. Other partners and supporters are being developed.

Coordination with other Programs. Acquisition and restoration of Pacheco Marsh is consistent with the San Francisco Estuary Project's Comprehensive Conservation and Management Plan, the goals of the San Francisco Bay Joint Venture and the East Bay Regional Park District's master plan.

Compatibility with CALFED Objectives. Acquisition and restoration of Pacheco Marsh meets CALFED's objective of improving and increasing aquatic and terrestrial habitats and improving ecological functions in the Bay-Delta. Restoration of the marsh may also provide benefits to water quality by increasing the acreage of wetlands available for filtering contaminants from runoff and preventing additional development on the site that could have negative impacts on water quality.

II. TITLE PAGE

a. PACHECO MARSH ACQUISITION AND RESTORATION PROJECT: A proposal to acquire, restore and enhance 230 acres of tidal and seasonal wetlands on the Carquinez Strait Shoreline in Contra Costa County.

b. Name of Applicant:

Martinez Regional Land Trust phone: 510-228-5460
P.O. Box 2452 fax: 510-372-5460
Martinez, CA 94553 e-mail: mrlt@igc.apc.org
Tina Batt, Executive Director

Contact: Nancy Schaefer, MRLT Board Member and Coordinator of the San Francisco Bay Joint Venture
Coastal Conservancy, 1330 Broadway, Suite 1100, Oakland, CA 94553
510-286-6767 fax 510-286-0470 e-mail: nana@aol.com

c. The Martinez Regional Land Trust (MRLT) is a 501(c)(3) private, nonprofit corporation under the Internal Revenue Service Code. A letter verifying our tax exempt status can be furnished on request. The mission of MRLT is to preserve open space resources in and around the community of Martinez.

d. Tax identification number: 68-0194652

e. Technical Contact Person: same as above

f. Partners in Implementation:

San Francisco Bay Joint Venture	East Bay Regional Park District
Coastal Conservancy	Contra Costa County
Crowley Maritime Corporation	Phil Williams and Associates

g. RFP Project Group Type: Group 2. Real estate transactions.

III. PROJECT DESCRIPTION

a. Project Description and Approach. The Pacheco Marsh Acquisition and Restoration Project Proposal is requesting \$3 million dollars for acquisition be set aside while the project proponents pursue the necessary studies to determine if the acquisition and restoration is technically and financially feasible. These studies include an appraisal to determine the value of the property and initiate negotiations, a preliminary restoration feasibility study and a Phase I Environmental Assessment to determine if the property has contaminant problems and if so, develop a remediation plan. If acquisition funding is set aside a complete enhancement plan that included monitoring and evaluation of tidal and seasonal marsh enhancement and restoration. If the appraisal is acceptable, negotiations are successful and planning indicates restoration is feasible, the acquisition funding would be released. Preliminary enhancement planning done in 1991 by Phil Williams and Associates indicates that restoration and enhancement of both tidal and seasonal wetlands is possible.

The property is currently owned by the Crowley Maritime Corporation and they are a willing seller as the attached letter indicates. They have agreed to hire an appraiser who will complete an appraisal according to state specifications. The purchase price will be subject to negotiation upon the completion of the appraisal.

The Coastal Conservancy will fund Phil Williams and Associates (PWA) to update its 1991 evaluation of the site and develop a detailed scope of work for an enhancement plan on the site. If acquisition funding is set aside, the Conservancy will fund the enhancement plan up to \$100,000 subject to board approval. Restoration to saline emergent wetlands will be emphasized to the extent physically and financially feasible.

East Bay Regional Park District strongly supports the acquisition and restoration of the property and will consider long-term management of the site once the restoration is completed.

- b. **Location of project.** Pacheco Marsh is located on Waterfront Road in the unincorporated area of Contra Costa County just east of the city of Martinez (see Attachment 1). The site is bounded by tidal wetlands on three sides that are subject to the jurisdiction of the State Lands Commission. Pacheco Creek forms the eastern boundary of the property. The property is in the Pacheco and Walnut Creek watersheds.
- c. **Expected benefits.** The acquisition of Pacheco Marsh will allow for the restoration of the property to both saline emergent wetland habitat and seasonal wetland habitat as defined by the description in the Implementation Strategy. Expected benefits have been broken down by stressors, habitats and species.

Stressors. Acquisition and restoration of Pacheco Marsh will address stressor 9. Land Use. A large portion of the property has been diked and drained. Acquisition will allow for the enhancement and possible expansion of the existing tidal marsh and the restoration of seasonal wetlands on the site. The project will also favorably address stressor 4. Water Quality. The creation and enhancement of wetlands at Pacheco Marsh should act as a buffer, filtering contaminants from runoff and preventing them from entering the Bay. Acquisition will preclude further development on the site, currently zoned light industrial in the Contra Costa County General Plan, reducing the amount of new contaminants that could negatively impact water quality.

Habitats. The Pacheco Marsh project proposes to restore and enhance both saline emergent wetlands and seasonal wetlands, two priority habitats identified in the Implementation Strategy. The extent of the enhancement and restoration of each habitat type will be explored in greater detail in the enhancement planning phase.

Species. Saline emergent wetlands will provide habitat for Sacramento splittail, striped bass, salt marsh harvest mouse, California clapper rail, black rail, salt marsh yellowthroat and possibly the Suisun song sparrow. Seasonal wetlands along the Carquinez Strait would provide habitat for salmon, splittail, waterfowl and wading birds including the threatened

black rail, marine mammals and river otter by developing a food source.

Using the US Fish and Wildlife Service's November 1996 Recovery Plan for the Sacramento/San Joaquin Delta Native Fishes and the SF Bay Wetlands Ecosystem Goals Project's Fish Focus Team Interim Report (November 1996) as guides, the CALFED priority species benefiting from the project would be delta smelt, Sacramento splittail, chinook salmon, striped bass and migratory birds. Chinook salmon have been found in Pacheco Creek which forms the eastern boundary of the property and research indicates they use brackish and freshwater marshes in the area for foraging and protection/resting. Pacheco Creek is located in the Service's proposed designation of critical habitat for delta smelt. Brackish and freshwater marshes in this area are used by delta smelt for foraging, by splittail for foraging and protection/resting and by striped bass for foraging. (See Goals Project Interim Report in Attachment 3).

The acquisition and restoration of Pacheco Marsh meets the goals of the San Francisco Estuary Project's Comprehensive Conservation and Management Plan. It also meets the goals of the San Francisco Bay Joint Venture which is working to protect and restore wetlands for the benefit of fish and wildlife. East Bay Regional Park District has identified wetlands protection in this area in its recently adopted master plan.

The Pacheco Marsh Acquisition and Restoration Project meets CALFED's goal of improving and increasing aquatic and terrestrial habitats and improving ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species.

- d. **Background and Biological/Technical Justification.** In 1991, MRLT submitted a proposal (along with the Coastal Conservancy and the Trust for Public Land) to the Shell Fund requesting funds for the acquisition of the parcel. The project was strongly supported by the Shell Trustees administering the fund, but the willing seller became unwilling. At that time, the property had been recently purchased for \$6.2 million. Efforts to develop a business park on the site have proven to be unsuccessful and the prior owner has allowed the property to revert to the original owners, Crowley Maritime Corporation. We now have the opportunity to purchase the property for significantly less and pull together partners to complete tidal and seasonal wetlands restoration.

In 1991, MRLT hired PWA to complete a preliminary feasibility study of the site (see Attachment 2). The report concluded that tidal restoration and/or freshwater marsh restoration was possible. This report discussed the use of tertiary treated wastewater which is probably no longer an option. The Coastal Conservancy will hire PWA to revise and expand on this report to further explore the type and extent of restoration of the site.

In addition to the biological benefits described above, the Pacheco Marsh project will address habitat fragmentation in conjunction with several other projects along the Contra Costa Shoreline that have been or are in the process of being restored. The Contra Costa Shoreline is far from pristine and yet numerous restoration projects are in various stages of implementation that will increase the amount of available tidal and seasonal wetlands along

the Strait. Pacheco Marsh is adjacent to approximately 200 acres of tidal marsh owned by the State Lands Commission. The Contra Costa County Mosquito and Vector Control District has implemented a pilot project that restored tidal action to approximately 100 acres at the Concord Naval Weapons Station and has plans to restore several hundred acres more. The Shell Marsh Technical Advisory Committee continues to restore and enhance the 200± acre Shell Marsh property. The East Bay Regional Park District has been acquiring parcels along the shoreline for many years and is planning enhancement and restoration of these sites. PG & E plans to sell its power plant which has several hundred acres of restorable wetlands. The Delta Science Center at Big Break is working cooperatively with the Park District, Ironhouse Sanitary District, Mt. Diablo Audubon and several others to restore wetlands on 3,500 acres of Ironhouse property and develop environmental education programs in Oakley. Dow Chemical has restored 200 acres of tidal and seasonal wetlands on the shoreline with assistance from Ducks Unlimited. The completion of all these projects will greatly enhance the habitat for CALFED's primary species of concern and positively impact the land use and water quality stressors.

- e. **Proposed Scope of Work.** This proposal requests funding for the acquisition phase of the project. Studies to determine the feasibility of the acquisition and subsequent restoration are as follows:

Appraisal: Will be initiated in mid- to late August and completed by late September. The property owner, Crowley Maritime, will select the appraiser from a list of state-approved appraisers and appraisal instructions will be jointly submitted by MRLT and Crowley. Crowley has agreed to pay for this study. Negotiations to purchase or option the property will begin once the appraisal has been completed.

Preliminary Restoration Feasibility: Phil Williams and Associates (PWA) will complete a preliminary restoration feasibility study under contract to the Coastal Conservancy. The study will determine the feasibility of restoring the site to tidal and seasonal marsh. The report will also contain a detailed scope of work for a full enhancement plan that would be funded by the Coastal Conservancy (subject to board approval) if acquisition funding is set aside. This preliminary study will be completed by mid-August.

Phase I Environmental Assessment: If acquisition funding is set aside, an expanded Phase I Environmental Assessment will be completed to determine the nature and extent of hazardous materials contamination generated on site and from adjacent properties. Remediation planning, if necessary, will also be addressed.

Enhancement Plan: If funding for the acquisition is approved by CALFED, the Coastal Conservancy would recommend funding an enhancement plan up to \$100,000 to its board in the late fall (October/November).

- f. **Monitoring and Evaluation.** The enhancement plan proposed to be developed by PWA will include a component developing a monitoring and evaluation program that would measure the success and progress of the restoration work.

- g. **Implementability.** The question of implementability hinges primarily on the availability of acquisition funding which has been one of the main limiting factors for this project for many years. The completion of the feasibility studies and some of the restoration work can be funded from other sources. An appraisal is being completed and negotiations will begin between MRLT and Crowley Maritime. Crowley sold the property to the Praxis Development group for \$6.2 million in 1989. Praxis unsuccessfully pursued the development of a business park on the property and has agreed to allow the property to go back to Crowley. Given the difficulties encountered trying to develop the parcel and a recent road closure, we feel \$3 million should be enough to purchase the property but we will not know until the appraisal is completed. The enhancement plan will help determine if the site can be restored to maximize benefits to CALFED's high priority species given the constraints of the property. The Phase I Environmental Assessment will provide information on potential contaminants and the extent of remediation that might be necessary.

All necessary NEPA/CEQA documentation will be completed if and when the project moves toward the design and construction phases.

IV. Costs and Schedule to Implement Proposed Project.

- a. **Budget Costs.** Our proposal is to set aside \$3 million to be used for the acquisition of Pacheco Slough if the feasibility studies indicate the project is financially and technically possible and meets CALFED's goals. Other funding is coming from the landowner to pay for the appraisal, the Coastal Conservancy for the preliminary feasibility study and perhaps a full enhancement plan. MRLT and the San Francisco Bay Joint Venture are providing an in-kind contribution in the form of project management and technical assistance.
- b. **Schedule Milestones.** The preliminary feasibility study to be completed by PWA is the first milestone and will be done by late August. The second milestone will be the completion of the appraisal, estimated to occur by late September. If the appraisal is acceptable to all parties, negotiations to option the property will begin.
- c. **Third Party Impacts.** Tidewater Sand and Gravel owns 20 acres at the northern end of the property and it is possible that restoration of the site could interfere with their operations. The enhancement planning process will have to take into account Tidewater's need for access to their property to minimize any impacts to their operation.

V. Applicant Qualifications.

The Martinez Regional Land Trust was incorporated and received IRS tax-exempt status in 1989. Since that time the organization has grown steadily and has gradually taken on more complex land protection projects. In December 1996, MRLT secured an 18-month option to purchase the 242-acre Sky Ranch property on Franklin Ridge. A factsheet describing MRLT's accomplishments.

For the Pacheco Marsh Acquisition and Restoration Project, MRLT will serve as the project manager, working closely with the San Francisco Bay Joint Venture and the Coastal Conservancy for technical guidance and the restoration feasibility. East Bay Regional Park District will also be a partner, providing technical guidance and long-term management planning.

The project will be managed for MRLT by Nancy Schaefer, an MRLT board member since 1989 and currently the coordinator of the San Francisco Bay Joint Venture (see factsheet attached). Nancy has had 7 years of experience purchasing and conveying valuable open space properties into public ownership as a project manager for the Trust for Public Land. During her time with TPL, Nancy secured an option on Prospect Island and worked closely with the Bureau of Reclamation, Corps of Engineers and the Department of Water Resources to insure the property was transferred to public ownership and restoration planning was underway. Since early 1995, Nancy has been coordinating the establishment of the San Francisco Bay Joint Venture, a public/private partnership working to protect, restore and enhance wetlands throughout the San Francisco Bay Area. In this role, Nancy has provided guidance and assistance on numerous wetlands acquisition and restoration projects.

Reed Holderman will be overseeing the Pacheco Marsh Restoration for the Coastal Conservancy. Reed has been with the Conservancy since 1985 and has served as the Resource Enhancement Program Manager for six years. He has played a key role in numerous wetlands acquisition and restoration projects on the California coast including Rush Ranch (2,000 acre freshwater marsh acquisition and restoration in Suisun Marsh, Huntington Wetlands (160 acre tidal marsh acquisition and restoration), Carpinteria Marsh (230 acre tidal marsh acquisition and restoration), Ballona Lagoon (30 acre tidal marsh acquisition and restoration) and Laguna Lakes (50 acre freshwater marsh enhancement).

The preliminary feasibility study will be completed by Joan Florsheim, Ph.D., a senior associate at Phil Williams and Associates (PWA). Joan has been with PWA since 1989. She is a geomorphologist with an extensive background in hydrology and geology. She has conducted numerous river and wetland restoration and enhancement plans. For example, she has worked on the Sonoma Baylands Tidal Marsh Restoration Plan and Monitoring, the Long Term Management Strategy for San Francisco Bay, the Russian River Enhancement Plan and the Alhambra Creek Enhancement Plan.

More detailed statements of qualifications can be furnished on request.

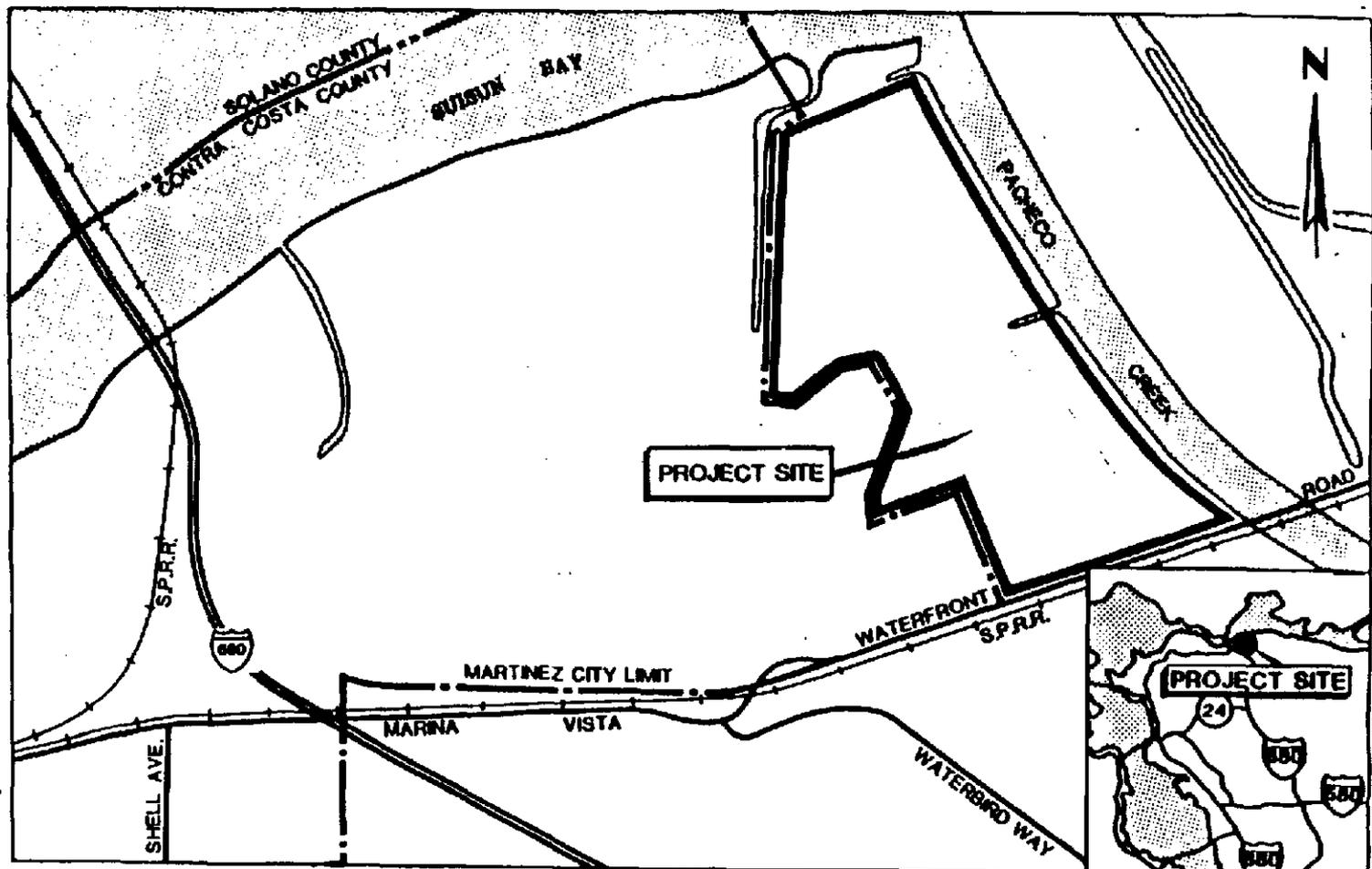
- IV. Compliance with standard terms and conditions.** MRLT has reviewed the terms and conditions contained in Attachment D of the CALFED RFP and compliance will not be a problem.

**PACHECO MARSH ACQUISITION AND RESTORATION
PROJECT PROPOSAL**

ATTACHMENTS

- Attachment 1: Maps**
- Attachment 2: Phil Williams and Associates Report**
- Attachment 3: San Francisco Bay Wetlands Ecosystem Goals Project**
- Attachment 4: Martinez Regional Land Trust Factsheet
San Francisco Bay Joint Venture Factsheet**
- Attachment 5: Letters of Support**

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PACHECO MARSH ACQUISITION AND RESTORATION PROJECT

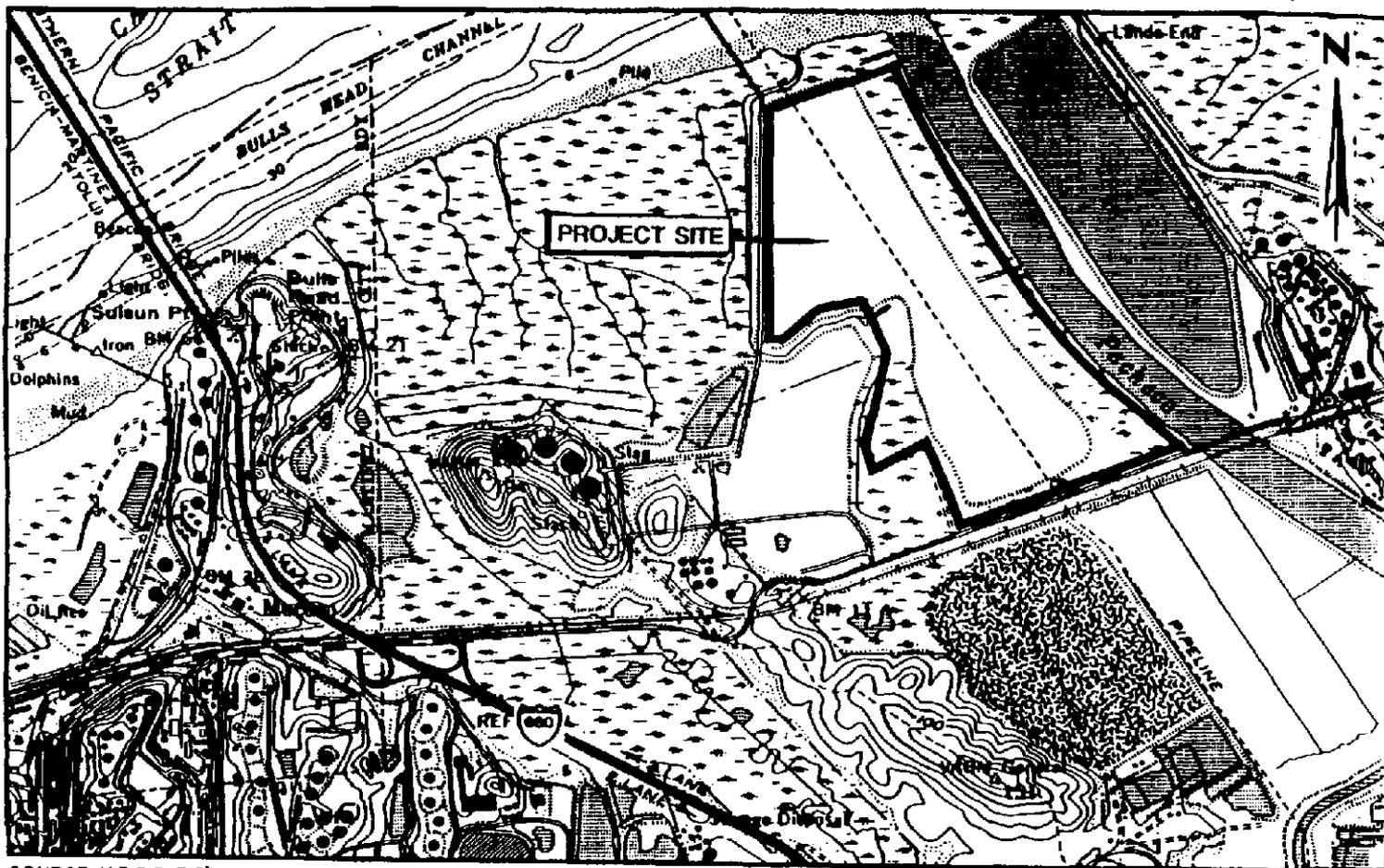
PROJECT SITE LOCATION & REGIONAL SETTING



MILLS ASSOCIATES
Planning and Environmental
Services

1-001538

1-001539



SOURCE: U.S.G.S. 7.5' VINE HILL QUADRANGLE

0 1/4 1/2 MILE

U.S.G.S. TOPOGRAPHIC MAP OF PROJECT SITE
PACHECO MARSH ACQUISITION AND RESTORATION PROJECT



MILLS ASSOCIATI'S
Planning and Environmental
Services

1-001539



Philip Williams & Associates, Ltd.
Consultants in Hydrology

Pier 35, The Embarcadero
San Francisco, CA 94133
Phone: (415) 981-8363
Fax: (415) 981-5021

ATTACHMENT 2

**ALTERNATIVES, OPPORTUNITIES, AND CONSTRAINTS
FOR WETLAND CREATION
PACHECO CREEK AT MARTINEZ**

by

Robert Coats, Ph.D.
Principal

February 22, 1991

Environmental Hydrology Engineering Hydraulics Sediment Hydraulics Water Resources

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I-001540

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I. BACKGROUND

The Pacheco Site is located on the Carquinez Strait shoreline at Martinez, in Contra Costa County. The site is bounded on the east by the floodplain and wetland of Pacheco Creek (aka Walnut Creek), on the south by Waterfront Road, and on the west by a wrecking yard, a partially-tidal salt marsh, and an industrial pipeline (see Figure 1). The 165-acre site was diked off from tidal action and, since the late 1960's, was used for disposal of dredged material. Elevations on the area range from +4 to +8 ft. NGVD over most of the area, with higher elevations on levees. The site is traversed from south to north by a buried 72-inch concrete that conveys treated wastewater from the Martinez Sewage Treatment Plant to deep water in the Strait. The Central Contra Costa Sanitary District maintains the pipe and has a 30-100 ft. wide easement across the property.



Pacheco Marsh Restoration Site



Philip Williams & Associates, Ltd.
Consultants in Hydrology

FIGURE
1

II. ALTERNATIVES

The site presents two possible alternatives for wetland creation. These are:

- 1) a fully-tidal salt marsh, providing the habitat values of the original marsh at the site;
- 2) a fresh to brackish water marsh, using reclaimed wastewater from the CCCSD pipeline.

The choice of these alternatives will depend on project objectives, feasibility, and cost.

III. OPPORTUNITIES AND CONSTRAINTS

A. TIDAL CIRCULATION

There are two opportunities for creating a tidal connection to the site. At existing slough channel curves around the northwestern corner of the parcel, connecting the tidal marsh to the west with the Strait. About 3,000 ft. upstream of the mouth of Pacheco Creek, a remnant channel runs from the levee out to the creek. Either or both of these channels could be enlarged to make the area fully tidal.

B. DREDGED MATERIAL

The dredged material deposited on the site has raised the elevation to between +4 and +8 ft. NGVD. Most of this material came from the channel of Pacheco Creek, but some of it came from the Baldwin Ship Channel in the Bay. The texture is primarily silty clay, with a significant deposit of sand at the northern end of the site. A substantial quantity of material would have to be excavated to create channels and elevations suitable for full tidal circulation. The main channel connecting a fully-tidal marsh of 165 acres to the Bay could be expected to have a channel with a cross-sectional area of 600 ft² and bottom elevation of about -5.5 ft. NGVD. The marsh plain would be between 2.5 and 3.0 ft. NGVD. It would be possible to pile the dredged material on-site and thus create "habitat islands" and reduce hauling costs.

Since the dredged material is compacted, is relatively low in organic matter, and has lower pore space than a developed marsh soil, the site should be slightly over-excavated to allow natural sediment deposition to build up a new marsh soil. The process of soil development on the site might be accelerated by disking the site after excavation.

C. RECLAIMED WASTEWATER

The presence on the site of the CCCSD outfall pipe presents the opportunity to create a freshwater marsh using reclaimed wastewater. At present, three wastewater marshes are operating in the Bay Area: the Union Sanitary District's marsh at Hayward, the Mountain View Sanitary District marsh at Martinez, and Las Gallinas Sanitation District's marsh at San Rafael. These projects are all considered successful, and they continue to provide information and experience that would be useful in designing a new project.

The San Francisco Bay Regional Water Quality Control Board does not permit shallow-water discharge of secondary effluent unless it can be shown that: 1) such discharge will provide water quality and public health protection equivalent to deep-water discharge; 2) the proposed discharge will provide a net environmental benefit; or 3) the water is used for reclamation or enhancement. Freshwater marshes are relatively rare around the Bay, and creation of a new freshwater marsh would probably be viewed by public agencies as a

benefit. The Board thus might permit this project if its concerns about specific water quality problems can be met. These concerns are likely to include:

- a. Heavy metals. Treated wastewater often contains lead, zinc, copper, chromium, cadmium, etc. in concentrations high enough to be deleterious to aquatic organisms. Some of these heavy metals have been known to accumulate through the food chain, causing damage at higher trophic levels. It is likely that the Board would require that the shallow-water discharge criteria be met for heavy metals.
- b. Ammonia. The Hayward marsh has experienced fish kills at times that have been attributed to high concentrations of dissolved ammonia (NH_3). Ammonium (NH_4^+) concentrations in the effluent are typically 20-25 parts per million (ppm), which are not in themselves toxic. Photosynthetic activity by single-celled algae (phytoplankton), however, removes CO_2 from solution, causing an increase in pH. At higher pH, the dissolved ammonium increases to toxic levels (greater than 0.2 ppm). The Regional Water Quality Control Board may require the Union Sanitary District to remove the ammonium by nitrification, as is now done by the Mt. View Sanitary District at Martinez. At Arcata, high ammonia levels decreased after a few years as emergent aquatic plants became established and to some extent replaced phytoplankton. The Regional Board would probably require a solution for the ammonia problem before they would issue a permit.
- c. Public contact. The Board will probably want assurances that the public will not have access to ponds or marsh areas containing treated wastewater. This policy is consistent with the need to protect wildlife from intrusion by humans and dogs.
- d. Circulation. The internal circulation and mixing of fresh water with salt water within the marsh will affect aquatic habitat and salinity levels and residence time of water in the marsh. The existing roads and levees on the site provide an opportunity to control the circulation of water over the site and to provide access for maintenance and monitoring. External circulation is also an important design consideration. At Hayward, the freshwater outfall was placed just upstream from the saltwater intake channel, with the result that some of the water discharged from the marsh is drawn back in and recirculated. At San Jose, treated wastewater discharged from the sewage treatment plant at Artesian Slough has had a profound effect on salinity and vegetation in the South Bay. At Pacheco Creek, water discharge from the marsh would at times be carried up the channel of the creek during flood tides.

- e. **Monitoring and Maintenance.** Any marsh using treated wastewater requires a long-term program of monitoring and maintenance, including frequent water quality sampling and testing. Over the long run, the marsh would have to be managed by a public agency (such as the CCCSD) that is equipped to do so. The Board will be unlikely to issue a discharge permit without a long-term program in place for monitoring and maintenance.

D. MOSQUITO CONTROL

Restoration of a wetland must take account of potential mosquito problems. In tidal wetlands, mosquitos can be controlled by maintaining good circulation, so that small fish have access to all potential mosquito habitat, and larvae are frequently washed out by tidal action. In a non-tidal wetland, edges must be graded steeply so that small pools will not be isolated from the main water body. The design should allow the water level to be changed rapidly if a mosquito problem develops.

IV. DESIGN STEPS

In order to move toward a detailed design for the "Pacheco Marsh," several steps are necessary. These include:

1. Developing a clear statement of project goals and objectives. This will include translating biological and water quality objectives to hydrologic objectives.
2. Making a topographic map of the site, at a scale of 1:1200 or larger, with spot elevations and 1-ft. contour intervals.
3. Developing both alternatives far enough to derive rough comparative cost estimates.
4. Developing circulation and grading plans, and if necessary, a planting plan.
5. Preparing a written enhancement plan and environmental documents for circulation to interested agencies and the public.
6. Preparing design drawings and specifications and contract documents.

V. SUMMARY AND CONCLUSIONS

Creation of both a freshwater marsh and a salt/brackish marsh at Pacheco Creek are technically feasible. A freshwater marsh utilizing treated wastewater would provide a kind of wetland and aquatic habitat that is rare in the Bay Area. The technical and institutional complexity of the freshwater marsh alternative is an order of magnitude greater than that of the fully-tidal alternative, but might require less excavation and hauling of dredged material.

San Francisco Bay Wetlands Ecosystem Goals Project - Fish Focus Team Interim Report
November 1996

TABLE 7 (Cont'd).

Species	ESTUARINE												RIVERINE		
	SUBTIDAL					INTERTIDAL							TIDAL		
	Shallow					Lower					Upper		plg	btm	msh
plg	mf	sf	eg	rky	mf	sf	eg	rky	msh	rky	msh				
rainwater killifish												all All			all All
threespine stickleback												all Br Fo Pr			all Br Fo Pr
prickly sculpin											BF Fo	BF Pr Fo	Ms	Fo Ms	BF Fo Br
striped bass	Fo	Fo			Fo	Fo					Fo		Fo		
tule perch											BF Br Fo Pr	BF Br Fo Pr			BF Br Fo Pr

plg = pelagic/open water
mf = mudflat
sf = sandflat
eg = eelgrass
rky = rocky

btm = bottom
msh = marsh (S = salt; B = brackish;
F = freshwater; all = S, B, and F)
lower intertidal = MLLW to MTL
upper intertidal = MTL to MHHW

Br = breeding (e.g. spawning)
Fo = foraging
Ms = spatial movement
Pr = protection/resting
All = all of the above

TABLE 7. Habitats and Functional Support for Target Species in Suisun Bay (Exercise A).

Species	ESTUARINE												RIVERINE			
	SUBTIDAL						INTERTIDAL						TIDAL			
	Shallow					Lower					Upper		plg	btm	msh	
plg	mf	sf	eg	rky	mf	sf	eg	rky	msh	rky	msh					
white sturgeon	Ms	Fo												Ms		
splittail	Fo	Fo Pr				Fo Pr					BF Fo Pr		BF Fo Pr	Fo	Fo	BF Br Fo Pr
Delta smelt	Fo										BF Fo			Ms		F Br
steelhead trout	Fo Ms													Fo Ms		
chinook salmon	Fo Ms	Fo Ms				Fo Ms					BF Fo Pr		BF Fo Pr	Fo Ms		BF Fo Pr

plg = pelagic/open water
 mf = mudflat
 sf = sandflat
 eg = eelgrass
 rky = rocky

btm = bottom
 msh = marsh (S = salt; B = brackish;
 F = freshwater, all = S, B, and F)
 lower intertidal = MLLW to MTL
 upper intertidal = MTL to MHHW

Br = breeding (e.g., spawning)
 Fo = foraging
 Ms = spatial movement
 Pr = protection/resting
 All = all of the above

The Martinez Regional Land Trust was founded in 1988 by a diverse group of citizens concerned with preserving their natural resources. *The Land Trust promotes protection of land by acquiring it through donation or purchase.*

Our first project was to raise \$75,000 towards the acquisition of the 325 acre Mt. Wanda addition to the John Muir National Historic Site. Sky Ranch, our current acquisition is one property down the Franklin Ridge from Mt. Wanda. While we have yet to request that the National Parks expand their boundaries to include Sky Ranch, we are in fact adding open space to the newly created John Muir National Park. We are currently researching the possibility of creating a Regional Heritage Area in conjunction with the National Trust for Historic Preservation.

At the same time we were fundraising for Mt. Wanda, our Land Acquisition Subcommittee was negotiating with the owner of the Stonehurst Subdivision in Alhambra Valley. Security Owners Corporation wanted to donate Conservation Easements on 150 acres of open space within Stonehurst to Martinez Regional Land Trust. This open space is contiguous with Sky Ranch. In addition, we have accepted the donation of Conservation Easements along the East Bay Regional Park District Trail that runs through Stonehurst.

Two years ago, our newly formed Environmental Education Subcommittee sought funding to start an Interpretive Program at Shell Marsh, the 240 acre Tidal wetland adjacent to the Carquinez Straits. EBRPD bought the Marsh with mitigation funds from the Shell Oil Spill that occurred in 1988. Our program provides a Docent Training Program, Teacher Grant Program, and Teacher Training Workshop for interested teachers, students and community volunteers throughout Contra Costa County.

We are seeking funding to establish a volunteer stewardship on Sky Ranch. Gary Beeman, a wildlife biologist, volunteered to do some preliminary research at Sky Ranch to determine the quality of the existing habitat, identify plant and animal species, and make recommendations for volunteer based habitat enhancement activities. Mr. Beeman will be helping us establish the long term stewardship and habitat restoration program in conjunction with MRLT Stewardship Committee Chair, and the volunteer coordinator at The Lindsay Museum.

Our membership is currently at about 300 members. The Board of Directors, Executive, Land Acquisition, Education, Membership, and newly created Finance Committees meet monthly. All committees are chaired by MRLT Board members, but include individuals outside our Board. That way, businesses, corporations and citizens with a particular expertise or interest can help us in our work. Our general membership meets once a year, and we have a number of special events for our members throughout the year.

THE SAN FRANCISCO BAY JOINT VENTURE FACT SHEET

The San Francisco Bay Joint Venture is a partnership of public agencies, environmental organizations, business groups and agricultural interests working cooperatively to protect, restore, increase and enhance wetlands, riparian habitat and associated uplands in the San Francisco Bay Watershed. Joint Venture partners recognize the vital role wetland and riparian habitats play in maintaining a healthy ecosystem by buffering the impact of floodwaters, cleansing pollutants from runoff, recharging overdrawn water supplies and providing critical habitat for waterfowl and hundreds of fish and wildlife species. Nearly 55 percent of threatened and endangered species depend on wetland and riparian habitat and up to 90 percent of commercial and recreational fish species use these areas for spawning grounds in San Francisco Bay. Wetlands and riparian habitat also provide economic benefits, recreational opportunities and generally contribute to a higher quality of life for residents in the densely populated San Francisco Bay Area. Using a non-regulatory approach and an ecosystem perspective, the Joint Venture is focusing on completing on-the-ground habitat projects that benefit fish and wildlife populations by leveraging existing resources, developing new funding sources and creating unique partnerships.

Goal

To protect, restore, increase and enhance all types of wetlands, riparian habitat and associated uplands throughout the San Francisco Bay region to benefit waterfowl and other fish and wildlife populations.

Objectives

- Secure wetlands, riparian habitat and associated uplands through fee or permanent easement acquisition.
- Restore and enhance wetlands, riparian habitat and associated uplands on both public and private lands using non-regulatory techniques.
- Improve habitat management on publicly and privately owned wetlands, riparian habitat and associated uplands through the use of cooperative management agreements and voluntary incentive programs.
- Develop an Implementation Strategy using existing data on wetlands, riparian habitat and associated uplands to guide Joint Venture protection and restoration efforts from an ecosystem perspective.
- Strengthen existing and promote new funding sources for wetlands acquisition, restoration, enhancement and management programs.
- Support monitoring and evaluation of existing restoration projects, as well as pertinent research studies, to improve future restoration projects.

Background

Waterfowl and all other wetland-associated wildlife in North America have experienced long-term declines due to the loss or alteration of critical wetland and associated upland habitats. To address these losses, the US, Canada and Mexico signed an international agreement known as the North American Waterfowl Management Plan (NAWMP) in 1986. The NAWMP is a federal, state and private cooperative initiative designed to protect wetland habitat and increase wetland wildlife populations while improving water quality, reducing soil loss and addressing many other wetland ecosystem issues. Implementation of the NAWMP occurs through the formation of multi-level partnerships, known as joint ventures, between diverse public and private organizations which share a common interest in the conservation, maintenance and management of key wetland ecosystems. The NAWMP has identified 34 "Waterfowl Habitat Areas of Major Concern" and has targeted these areas for the establishment of joint ventures. To date, 14 joint ventures have been established throughout the US, Canada and Mexico, and their effectiveness is well-documented. San Francisco Bay, with its tremendous wetlands losses, is identified as a Waterfowl Habitat Area of Major Concern. Efforts to establish the San Francisco Bay Joint Venture began in early 1995.

Spring 1997

Geographic Scope

The Joint Venture encompasses the San Francisco Bay Watershed (exclusive of the Sacramento-San Joaquin River Delta), which includes all or part of the nine Bay Area counties. Exceptions to this geographic description are the exclusion of the Suisun Marsh and the inclusion of the west coast of San Mateo County.

Next Steps

A Steering Committee comprised of representatives from the diverse community of agencies, organizations and individuals interested in wetlands protection drafted a Working Agreement and selected a Management Board. The Working Agreement establishes the Joint Venture's objectives and organizational structure and was signed in September 1996. Work has begun drafting the Implementation Strategy to be completed by late 1997. In the interim, Joint Venture partners are developing a list of acquisition, restoration and enhancement projects that could benefit from Joint Venture assistance and researching additional funding sources. Several acquisition and restoration projects have been selected for Joint Venture support including the Oro Loma Marsh Restoration in Hayward, Pillar Point Marsh Enhancement on the San Mateo Coast and the purchase of Bair Island to name a few.

Implementation

The Joint Venture has begun drafting an Implementation Strategy establishing specific goals for wetlands, riparian habitat and associated uplands and identifying strategies to accomplish these goals. Implementation Strategy goals will draw from the Regional Wetlands Ecosystem Goals Project, a scientific process involving state and federal agencies working to identify types, amounts and distribution of wetlands and related habitats needed to sustain healthy fish and wildlife resources. To accomplish these objectives, Joint Venture partners will use a range of wetlands protection strategies include acquiring fee or conservation easement interests in land from willing sellers, developing wetlands management incentive programs, offering wetlands enhancement cost-sharing programs and providing technical assistance for landowners interested in wetlands restoration.

Management Board

- * US Environmental Protection Agency
- * US Fish and Wildlife Service
- * Coastal Conservancy
- * Bay Conservation & Development Commission
- * Wildlife Conservation Board
- * California Department of Fish and Game
- * SF Bay Regional Water Quality Control Board
- * Council of Bay Area Resource Conservation Districts
- * Bay Planning Coalition
- * Coastal Region, Mosquito and Vector Control Districts
- * Save San Francisco Bay Association
- * Ducks Unlimited
- * National Audubon Society
- * Bay Area Audubon Council
- * Sierra Club
- * Bay Area Open Space Council
- * Citizens' Committee to Complete Refuge
- * Bay Area Regional Watershed Network
- * P G & E

Contact

Nancy Schaefer, Coordinator, San Francisco Bay Joint Venture Phone: 510-286-6767 Fax: 510-286-0470
mailing address: California State Coastal Conservancy, 1330 Broadway, Suite 1100, Oakland, CA 94612

Supporters

California Resources Agency * California Waterfowl Association * Citizens for Eastshore State Park * San Francisco Estuary Institute * San Francisco Estuary Project * Save San Pablo Baylands * Sonoma Land Trust * The Trust for Public Land * US Bureau of Reclamation

The San Francisco Bay Joint Venture is an independent project with funding for coordination from the US Environmental Protection Agency, the Coastal Conservancy, the National Park Service Rivers and Trails Conservation Assistance Program and the US Fish and Wildlife Service San Francisco Bay Program.

Spring 1997



CROWLEY MARINE SERVICES, INC.

Christina N. Batt,
Executive Director
Martinez Regional Land Trust
P.O. Box 2452
Martinez, CA 94533

July 21, 1997

Re: Pacheco Slough Marsh Acquisition and
Restoration Project

Dear Ms. Batt:

Tana Shipman and I enjoyed meeting with you and Nancy Schaefer last week regarding the efforts of the Martinez Regional Land Trust and the San Francisco Bay Joint Venture to acquire and/or restore wetlands in the San Francisco Bay area. We also appreciated the Trust's interest in the Pacheco Slough property.

Crowley Marine Services, Inc. is interested in the Trust's efforts and is willing to sell the Pacheco Slough property to the Trust or its designee if acceptable sale terms can be negotiated. Toward that end, we will engage an appraiser to prepare a current market value appraisal of the property. We have already requested a preliminary title report.

Once the necessary information is in hand we would be pleased to meet again with yourself and Ms. Schaefer to commence negotiations. The sale terms would, of course, be subject to acceptance by the boards of the Trust and Crowley.

We look forward to meeting with you again after we have each received and reviewed the title report and appraisal.

Yours very truly,
CROWLEY MARINE SERVICES, INC.

Bruce Love
Corporate Counsel

cc: Tana Shipman
Brent Stienecker
Brent Sutherland

155 Grand Avenue, Oakland, California 94612 - Telephone (510) 251-7500 - Facsimile (510) 251-7625



July 22, 1997

Christina Batt, Executive Director
Martinez Regional Land Trust
P.O. Box 2452
Martinez, CA 94553

RE: CALFED Proposal for the Pacheco Marsh Acquisition and Restoration Project

Dear Ms. Batt:

I am writing to indicate our support for the Pacheco Marsh Acquisition and Restoration Project. There are few opportunities to restore wetland habitat along the Contra Costa shoreline and Pacheco Marsh would provide benefits to the fish and wildlife that live in and around the Carquinez Strait. As you know, the Coastal Conservancy submitted a proposal with the Land Trust and the Trust for Public Land and was very interested in working with the Shell Trustee Committee in 1991 to see this property purchased and restored. Unfortunately, we did not have a willing seller at that time. We support your efforts to seek funding from the CALFED Bay-Delta Program.

The Coastal Conservancy has agreed to fund a preliminary feasibility study to be completed by Joan Florsheim of Phil Williams and Associates that will revise and expand on a similar report completed by Bob Coates in 1991. This should be completed by mid-August.

In conjunction with this study, PWA will develop a detailed scope of work for an enhancement plan that would thoroughly evaluate the opportunities and constraints of restoring the site to both tidal and freshwater wetlands. If CALFED agrees to fund the acquisition phase of the project, the Coastal Conservancy will consider funding the enhancement plan up to \$100,000 subject to board approval.

Thank you for your work on this project. Please feel free to give me a call if you have questions or need more information.

Sincerely,

Reed Holderman
Program Manager

Cc: Nancy Schaefer, San Francisco Bay Joint Venture

1330 Broadway, 11th Floor
Oakland, California 94612-253
510-286-1015 Fax: 510-286-047

C a l i f o r n i a S t a t e C o a s t a l C o n s e r v a n c y

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ATTACHMENT 5

Pending Letters of Support

East Bay Regional Park District

Contra Costa County

City of Martinez