



Philip Williams & Associates, Ltd.
Consultants in Hydrology

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

July 24, 1997

(PWA Ref. # 97-012)

CALFED Bay-Delta Program Office
1416 Ninth Street, Suite 1155
Sacramento, CA 94814

To the CALFED Bay-Delta Program:

Philip Williams & Associates, Ltd. (PWA) is pleased to submit ten copies of our proposal for the CALFED Ecosystem Restoration Projects and Programs entitled Tidal Marsh Restoration Design Guidelines Based on Monitoring Experience.

Please let us know if you have any questions or if you require any additional information.

Sincerely,

Joan Fleischman, Ph.D. for

Philip Williams, Ph.D., P.E.
Principal

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DWR WAREHOUSE

Environmental Hydrology Engineering Hydraulics Sediment Hydraulics Water Resources

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I. EXECUTIVE SUMMARY

a. PROJECT TITLE AND APPLICANT NAME

Project Title: Tidal Marsh Restoration Design Guidelines Based on Monitoring Experience

Applicants Name: California State Coastal Conservancy
with: Philip Williams & Associates, Ltd., Phyllis Faber Associates, and the San Francisco Estuary Institute

b. PROJECT DESCRIPTION AND PRIMARY BIOLOGICAL/ECOLOGICAL OBJECTIVES

This proposal presents an interdisciplinary approach to develop tidal wetland restoration design guidelines for the San Francisco Bay Estuary. The objective of the project is to describe lessons from past restoration projects throughout the estuary in order to enhance the design effectiveness and ecological viability of future tidal wetland restoration projects.

c. APPROACH/TASKS/SCHEDULE

This proposal presents an interdisciplinary phased approach to develop tidal wetland restoration design guidelines for the San Francisco Bay Estuary. In Phase I, the current state of knowledge of marsh restoration will be described. A reconnaissance of data availability will aid in selection of the restored and natural marshes to be evaluated. Phase I will be completed in 3 months following award of contract. Tasks to complete in Phase I include:

- Task 1. Describe Current State of Knowledge of Marsh Restoration
- Task 2. Develop Site Selection Criteria
- Task 3. Reconnaissance of Available Data
- Task 4. Identify Restored Marshes to Evaluate
- Task 5. Acquire Hydrologic, Geomorphic, and Biologic Data for Selected Sites

In Phase II, the available site history and monitoring data for the selected sites will be evaluated. It is expected that Phase II would be completed in 6 months. No funding is requested for Phase II at this time. Phase II tasks include:

- Task 6. Input Data to GIS (SFEI)
- Task 7. Describe Restoration Designs and Site Histories (PWA)
- Task 8. Analyze Available Monitoring Data (PWA, PFA)
- Task 9. Evaluate Existing Marsh Functions Filling in Gaps with Additional Field Work (PWA, PFA)

Finally, in Phase III, we will discuss the lessons that can be learned from the prior restoration projects and monitoring data, and develop guidelines for tidal marsh restoration in San Francisco Bay. Phase III would be completed in 3 months. No funding for Phase III is requested at this time. Phase III tasks include:

- Task 10. Describe Lessons Learned from Restoration Experience (PWA, PFA)
- Task 11. Develop Guidelines for Tidal Marsh Restoration (PWA, PFA)

d. JUSTIFICATION FOR PROJECT FUNDING FROM CALFED

The CALFED planning process has identified the importance of restoring natural processes and ecologic interactions within the San Francisco Bay-Delta Watershed. Practically, for the Estuary this means restoring extensive areas of fully connected tidal wetlands of all types. It will be important for the design of these new restoration projects to fully utilize prior restoration experience. We are fortunate because in this Estuary we now have a 25-year history of tidal marsh restoration on more than 50 projects of varying size. For a few of these projects there has been some degree of monitoring that enables us to understand how they have evolved over time. For others, it is possible to evaluate the present state of the site, including the ecologic function they are providing, in comparison to the original design goals and intent. With hindsight and evaluation, it will be possible to construct appropriate design lessons in the form of a document that can be used by all restoration practitioners in tidal wetland restoration. In essence this historic learning experience is the starting point for a future adaptive management approach.

e. BUDGET COSTS AND THIRD PARTY IMPACTS

The budget requested at this time include funding for Phase I tasks listed above. The estimated cost for Phase I tasks is \$75,001.57. No negative third party impacts are expected.

f. APPLICANT QUALIFICATIONS

Philip Williams & Associates, Ltd., (PWA) and Phyllis Faber & Associates (PFA) have significant experience and knowledge of tidal wetland restoration projects in the San Francisco Estuary in the past 20 years. We have used monitoring data collected at several tidal wetland restoration projects to develop design for second generation project - the Sonoma Baylands Tidal Wetlands Demonstration Project, which was constructed and opened to tidal circulation in 1996. In addition, we have been collecting and analyzing data for Warm springs, Muzzi and China Camp marshes for the past decade. PWA and PFA have experience monitoring wetlands trends and evolution in the San Francisco Bay Estuary, we can combine our knowledge of the physical and biological processes and the current site conditions at the selected sites to use these data to develop design guidelines to aid future restoration projects. SFEI has experience in developing GIS databases for the Estuary and is currently developing a wetland atlas.

g. MONITORING AND DATA EVALUATION

The restoration guidelines will include monitoring recommendations that are based on the lessons learned from previous projects and monitoring work.

h. LOCAL SUPPORT/COORDINATION WITH OTHER PROGRAMS/COMPATIBILITY WITH CALFED OBJECTIVES

This proposal is compatible with provide useful guidelines for all future tidal habitat restoration programs. The results of this work will support the kinds of ecosystem restoration projects that CALFED has expressed the greatest interest in including those that restore natural physical processes on a broad scale to the benefit of tidal habitat for fish and wildlife.

II. TITLE PAGE

- a. TITLE OF PROJECT**
Tidal Marsh Restoration Design Guidelines Based on Monitoring Experience
- b. NAME OF APPLICANT/PRINCIPAL INVESTIGATORS**
Applicant: California State Coastal Conservancy
- Principal Investigators:**
Reed Holderman, Program Manager, California State Coastal Conservancy
1330 Broadway Suite 1100, Oakland, CA 94612
Phone 510/286-1015; Fax 510/286-0470; e-mail rholderman@igc.org
- Philip Williams, P.E., Ph.D., President, Philip Williams & Associates, Ltd.
Pier 35 The Embarcadero, San Francisco, CA 94133
Phone 415/981-8363; Fax 415/981-5021; e-mail sfo@pwa-ltd.com
- Phyllis Faber, Phyllis M. Faber Associates
212 Del Casa, Mill Valley, CA 94941
Phone and Fax 415/388-6002
- Josh Collins, Ph.D., San Francisco Estuary Institute
180 Richmond Field Station, 1301 South 46th St Richmond, CA 94804
Phone 510/231-9539; Fax 510/231-9414; e-mail josh@sfei.org
- c., d. TYPE OF ORGANIZATION, TAX STATUS AND TAX IDENTIFICATION NUMBER**
California State Coastal Conservancy—State Agency; 94-3164968
Philip Williams & Associates, Ltd.—S-Corporation; 94-3083005
Phyllis Faber Associates—Small business/Sole Proprietorship; 099-22-7922
San Francisco Estuary Institute—Nonprofit Organization
- e. TECHNICAL AND FINANCIAL CONTACT PERSONS**
Technical Contact Persons: Same as above
Financial Contact Person: Alyse Jacobson, CFO Philip Williams & Associates, Ltd.
- f. PARTICIPANTS/COLLABORATORS IN IMPLEMENTATION**
California State Coastal Conservancy will provide matching funds less than \$10,000
Marin Community Foundation (MCF); San Francisco Foundation (SFF)
- g. RFP PROJECT GROUP TYPE**
Other services

III. PROJECT DESCRIPTION

a. PROJECT DESCRIPTION AND APPROACH

This proposal presents an interdisciplinary phased approach to develop tidal wetland restoration design guidelines for the San Francisco Bay Estuary. In Phase I, the current state of knowledge of marsh restoration will be described. A reconnaissance of data availability will aid in selection of the restored and natural marshes to be evaluated. In Phase II, the available site history and monitoring data for the selected sites will be evaluated. Finally, in Phase III, we will discuss the lessons that can be learned from the prior restoration projects and monitoring data, and develop guidelines for tidal marsh restoration in San Francisco Bay.

We have asked for matching funds from Marin Community Foundation and the San Francisco Foundation for monitoring and analysis of past data collection efforts we have conducted at Warm Springs, Muzzi, and China Camp Marshes and the California State Coastal Conservancy will provide up to \$10,000 in matching funds toward data acquisition. This proposal outlines the tasks necessary to evaluate other restored tidal wetlands in the San Francisco Bay Estuary. This approach will allow for greater breadth in developing design guidelines for tidal marsh restoration than is presently possible, since much of this data is dispersed among agencies and is poorly archived.

b. LOCATION AND/OR GEOGRAPHIC BOUNDARIES OF PROJECT

San Francisco Bay Estuary; Marin, Sonoma, Solano, Contra Costa, Alameda, Santa Clara, San Mateo, and San Francisco Counties.

c. EXPECTED BENEFITS

The proposed work will provide guidelines necessary to meet the following CALFED program objectives:

- Provide good water quality for all beneficial uses;
- Improve and increase aquatic and terrestrial habitat and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species.

A benefit of this project will be the guidelines to restore natural processes and ecologic interactions within the San Francisco Bay-Delta Watershed based on lessons learned from prior restoration projects and monitoring data, to maximize the effectiveness of future restoration projects, and to avoid past design mistakes. The primary priority habitats defined by CALFED that will benefit from this project includes tidal perennial aquatic habitat and seasonal wetland and aquatic habitat. The primary priority species that will benefit from improved restoration strategies include migratory birds, fish, and aquatic biota. The proposed work will provide monitoring data results for use in an adaptive management strategy toward tidal habitat restoration.

d. BACKGROUND AND BIOLOGICAL /TECHNICAL JUSTIFICATION FOR PROJECT

The CALFED planning process has identified the critical importance of restoring natural processes and ecologic interactions within the San Francisco Bay-Delta Watershed. Practically, for the Estuary this means restoring extensive areas of fully connected tidal wetlands of all types. It will be important for the design of these new restoration projects to fully utilize prior restoration experience. We are fortunate because in this Estuary we now have a 25-year history of tidal marsh restoration on more than 50 projects of varying size. For a few of these projects there has been some degree of monitoring that enables us to understand how they have evolved over time. For others, it is possible to evaluate the present state of the site, including the ecologic function they are providing, in comparison to the original design goals and intent. With hindsight and evaluation, it will be possible to construct appropriate design lessons in the form of a document that can be used by all restoration practitioners (hydrologists, geomorphologists and biologists) in tidal wetland restoration. In essence this historic learning experience is the starting point for a future adaptive management approach for tidal habitat restoration.

e. PROPOSED SCOPE OF WORK

PHASE I

Task 1. Describe Current State of Knowledge of Marsh Restoration

PWA will review available reports that summarize the current state of knowledge about the physical design criteria for tidal marsh restoration in San Francisco Bay. Phyllis Faber Associates will review available data describing the ecologic design criteria. This review will highlight what we do or do not know about the critical elements of restoration design. The review will rely on reports such as Williams and Harvey (BCDC, 1981), BCDC (1988), The San Francisco Estuary Project (1991), NRC (1992), and Race (1985; 1996).

Deliverable: PWA and Phyllis Faber Associates will provide a brief summary describing the current state of knowledge of marsh restoration as a work product for Task 1.

Task 2. Develop Site Selection Criteria

Over 50 marsh restoration projects have been implemented in San Francisco Bay. Site selection will be based on the availability of data, the geographic representation within San Francisco Bay, or other criteria.

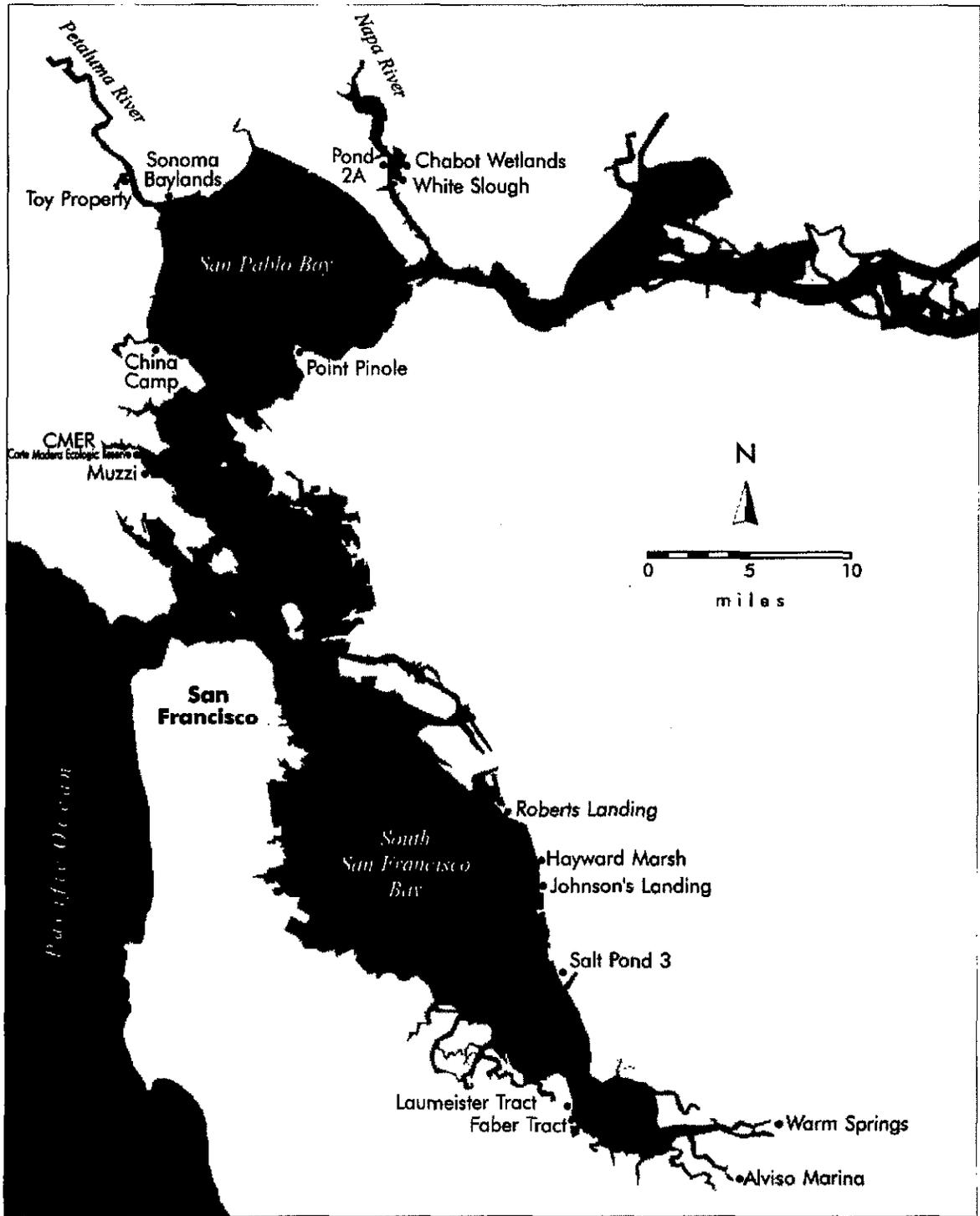
Deliverable: PWA and Phyllis Faber Associates will provide summary of the site selection criteria as a work product for Task 2.

Task 3. Reconnaissance of Available Data

Data acquisition is a critical part of understanding past restoration activities, however, there is no central accessible repository for these data. Data often is disbursed among numerous agencies. PWA and Phyllis Faber Associates will conduct a reconnaissance of available data

figure 1

Selected Marshes in San Francisco Bay



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for numerous restored sites (Figure 1) such as Muzzi, Warm Springs, Chabot Wetlands, White Slough, Johnson's Landing, Roberts Landing, Alviso Marina, Faber Tract, Hayward Marsh, Salt Pond 3, Pond 2A, Toy Property, Petaluma River, Point Pinole, or other sites. Data for natural marshes such as China Camp, Corte Madera Ecologic Reserve (CMER), and Laumeister Tract, will be sought. Data to locate in the reconnaissance will include original objectives and design plans, historic aerial photographs, description of site history, a description of how restoration activities were implemented, and data related to how the site has evolved.

Task 4. Identify Restored Marshes to Evaluate

Using the selection criteria that will be developed in Task 2 and the results of the reconnaissance of available data, PWA and Phyllis Faber Associates will identify 5 to 10 restored and natural marshes to evaluate in Phase II.

Task 5. Acquire Data for Selected Sites

After the sites have been selected, PWA and Phyllis Faber Associates will acquire the data located in the reconnaissance described in Task 3. This task will include interviews with agency staff that collected the data if possible to aid in interpreting archived monitoring data.

Deliverable: PWA and Phyllis Faber Associates will provide a list of data acquired for the selected sites as a work product for Tasks 3-5.

PHASE II Funding for Phase II is not requested at this time

Task 6. Input Data to GIS (SFEI)

Task 7. Describe Restoration Designs and Site Histories (PWA)

Task 8. Analyze Available Monitoring Data (PWA, PFA)

Task 9. Evaluate Existing Marsh Functions Filling in Gaps with Additional Field Work (PWA, PFA)

PHASE III Funding for Phase III is not requested at this time

Task 10. Describe Lessons Learned from Restoration Experience (PWA, PFA)

Task 11. Develop Guidelines for Tidal Marsh Restoration (PWA, PFA)



f. MONITORING DATA AND EVALUATION

This project is not a direct restoration project and is therefore not appropriate for monitoring *per se*. However, the restoration design guidelines will include monitoring recommendations that are based on the lessons learned from previous projects and monitoring attempts. The results in the final report for this project will be disseminated by the State Coastal Conservancy.

g. IMPLEMENTABILITY

This project relates to technical research and development, it is not subject to implementation concerns. This project will provide design guidelines to enhance the implementation and ecological effectiveness of future tidal habitat restoration projects.

IV. COSTS AND SCHEDULE TO IMPLEMENT PROPOSED PROJECT

a. BUDGET COSTS

Phase I. Estimate \$75,001.57 see table on next page for breakdown.
Phase II. Funding not requested at this time
Phase III. Funding not requested at this time

b. SCHEDULE MILESTONES

Phase I. 3 months
Task 1 deliverable: Summary of current state of knowledge— one month
Task 2 deliverable: Site selection criteria—one month
Task 5 deliverable: List of data acquired—three months

Phase II. 6 months
Phase III. 3 months

c. THIRD PARTY IMPACTS

No direct negative third-party impacts are anticipated as a result of this project.

Table 1. Cost Breakdown

Project Phase and Task	Direct Labor Hours	Direct Labor Costs & Benefits	Overhead Labor G&A + Fee	Service Contracts	Misc. & Other Direct Costs	TOTAL
Phase I						
1. Describe current state of knowledge	152	\$5,340.92	\$7,524.52	\$1,600.00	\$440.00	\$14,905.44
2. Develop site selection criteria	40	\$1,768.28	\$2,490.52	\$800.00	\$120.00	\$5,178.80
3. Reconnaissance of available data	196	\$6,793.52	\$8,730.52	\$8,000.00	\$1,700.00	\$25,224.04
4. Identify restored marshes to evaluate	52	\$2,375.16	\$3,345.28	\$800.00	\$120.00	\$6,640.44
5. Acquire data for selected sites	132	\$4,537.32	\$6,392.72	\$1,600.00	\$740.00	\$13,270.04
SUBTOTAL						\$65,218.76
Coastal Conservancy contract coordination cost (10% of total cost) reflects matching fund that the Conservancy staff intends to request from their board if the grant is awarded.						\$9,782.81
GRAND TOTAL						\$75,001.57

V. APPLICANT QUALIFICATIONS

PHILIP WILLIAMS & ASSOCIATES, LTD.

PWA has completed over 400 wetland restoration plans and analysis of tidal, seasonal, and riparian wetlands and has conducted long-term monitoring of several tidal wetland restoration sites in the San Francisco Bay Estuary in the past 10 years. PWA's design experience includes the recently completed Sonoma Baylands Tidal Wetland restoration project. PWA is part of a team with the University of Washington that received CALFED funding to conduct hydrologic monitoring and analysis to predict the evolution of ecological functions of restored Delta Wetlands and has assessed breached-dike restoration potential for juvenile Pacific Salmon habitat in two estuaries in Oregon. **Philip B. Williams, Ph.D., P.E., President, Principal-in-charge:** Dr. Williams has pioneered practical technical analysis of tidal marsh restoration and management, coastal wetland hydrology and hydraulics, flood and riparian management, reservoir operation, harbor maintenance dredging, watershed sediment yield, groundwater management, and the impacts of climate change. Dr. Williams will be assisted by **Joan L. Florsheim, Ph.D., Senior Associate.** Dr. Florsheim is a geomorphologist with an extensive background in hydrology and geology. She has conducted several tidal wetland restoration and monitoring studies and geomorphic and hydrologic investigations on alternatives to improve tidal circulation in wetlands in northern and southern California. She has also conducted studies to predict marsh sedimentation rates, and marshplain and slough channel development.

PHYLLIS M. FABER ASSOCIATES

Phyllis M. Faber is a biological consultant specializing in coastal wetlands and the long-term biological monitoring study of San Francisco Bay marshes. She is currently the editor of *Fremontia*, the Journal of the California Native Plant Society. In the past she has taught as an Instructor in Biology Department at the College of Marin, CA and as Graduate Faculty in Natural Systems Program, at Antioch University, in San Francisco, CA. Ms. Faber is currently monitoring several tidal marshes in San Francisco Bay. She is the author of *Common Wetland Plants of Coastal California* (Pickleweed Press, 1982) and numerous articles describing long-term observations of restored marshes and coastal management. She was the chair of the California Coastal Commission, North Central Region from 1977-1978 and a Commissioner from 1973-1979.

EXPERIENCE IN TIDAL WETLAND RESTORATION

PWA and Phyllis Faber have extensive experience in and knowledge of tidal wetland restoration projects in the San Francisco Estuary in the past two decades. For example, for the past 10 years, we have collected data for Warm springs, Muzzi Marsh and China Camp. We have used monitoring data from other restored sites around the bay to develop design for a second generation project - the Sonoma Baylands design. Because of our past work, we will be able to assess trends in evolution



and development of the wetlands. A description of some of our past work that is relevant to this proposal follows.

Sonoma Baylands Restoration Plan. For the Sonoma Land Trust and the California State Coastal Conservancy, 1992. PWA developed a geomorphic and Hydrologic rationale for tidal marsh restoration of a 322 acre portion of Sonoma Baylands using dredged material. The geomorphic criteria for the design included determination of the maximum elevation for placement of dredged material that would create the physical conditions necessary for successful restoration of the tidal marsh system by allowing natural sedimentation to raise the marshplain after the dikes are breached. A functioning slough channel system in a tidal marsh is critical for tidal circulation and for maintaining a salinity balance and is one of the conditions necessary for successful restoration of a tidal marsh. Using dredged material would accelerate the evolution of the ecosystem by reducing the time required to raise the marshplain. Other important physical design criteria included minimization of wind fetch to control erosion, and the dimensions of the levee breach.

Sonoma Baylands Restoration Project Monitoring, Sonoma, CA. For the State Coastal Conservancy and the San Francisco District Corps, ongoing. PWA and Phyllis Faber are currently monitoring the physical and biological components of the Sonoma Baylands restoration site. Monitoring will provide data to evaluate the design parameters used in the larger Sonoma Baylands design and for future marsh restoration projects.

Monitoring of Marsh Development at Pond 2A. For the California Department of Fish & Game, 1996-97. PWA, together with subcontractors for plants, fish and birds, is monitoring the development of a tidal wetland in a former salt pond near the Napa River. The levee was breached in early 1995. Monitoring includes measuring sedimentation, tidal circulation, sediment salinity, vegetation development and use by birds and fish. The results should be useful for designing the restoration of other similar areas.

San Francisco Bay Restored Marshes Long-Term Monitoring, San Francisco Bay, California. For The Bay Institute and Save San Francisco Bay Association, ongoing. PWA has organized and carried out the only long-term monitoring of the evolution of restored tidal marshes in San Francisco Bay. Since 1986, the firm has been systematically monitoring three sites:

Warm Springs Marsh—Restoration design and long-term monitoring of a 220 acre lagoon that was previously a diked off salt marsh located at the southern terminus of San Francisco Bay. The lagoon design, coupled with the locally high sedimentation rate, is intended to rapidly evolve the site into salt marsh habitat. PWA assisted in restoration design, estimating the size of breach channels likely to develop at the site based on hydraulic geometry and tidal prism relationships developed by PWA. PWA has established baselines, control points and cross-sections for continuous monitoring of the site, beginning in 1986 when the levees were breached.

Muzzi Marsh Monitoring—A long-term monitoring project for a 200 acre site located at the west end of Corte Madera Bay, in Marin County. This site is the longest continuously monitored salt marsh restoration project in San Francisco Bay.



Formerly a salt marsh diked off in the 1950's, 130 acres of this site was returned to tidal action in June of 1976. Golden Gate Bridge, Highway and Transportation District (GGBHTD) used 70 acres of this site for storing dredge materials from a new navigation channel and ferry terminal in Corte Madera Bay. The remaining acres was restored to tidal action as mitigation. PWA has monitored the hydraulic geometry and channel, evolution of this site since 1988.

China Camp Marsh—This is one of the few large intact portions of ancient marshplain still preserved around San Francisco Bay and is used as a control site.

The primary purpose of the monitoring program is to provide information that will help refine future marsh restoration design practices. Monitoring of sedimentation rates, tidal characteristics, slough channel development and rate of vegetative colonization has already provided useful information for the Sonoma Baylands design as well as information used in the report Design Guidelines for Tidal Channels in Coastal Wetlands prepared by PWA for the U.S. Army Corps of Engineers Waterways Experiment Station, January 1995.

JOSHUA N. COLLINS, PH.D., ENVIRONMENTAL SCIENTIST, SAN FRANCISCO ESTUARY INSTITUTE

Dr. Collins is a landscape ecologist with a background of published research in wetlands ecology, avian and plant ecology, wetlands geomorphology, mosquito control, statistical design of ecological sampling programs, and environmental planning. He is responsible for science coordination of multi-agency programs to assess regional change in the form and function of wetlands and watersheds in the Bay Area, and he is responsible for development and maintenance of the Bay Area EcoAtlas, a regional Geographic Information System developed by SFEI to help coordinate and integrate environmental assessments throughout the Bay Area.



VI. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

The required terms and conditions for a Service Contract have been reviewed. The following forms are attached:

- Item 8, Non Discrimination Compliance Statement
- Item 12, Small Business Preference Statement.

We request consideration of the following deviations from the Attachment D Terms & Conditions:

Section 8. Rights in Data: Whereas data and information obtained or received under contract shall be in the public domain, PWA would not be able to disclose or permit use of proprietary software subject to licensing or copyright restrictions. In addition, we wish to limit our liability for misuse or inappropriate use of PWA generated materials for purposes outside the contract given the fact such information will be in the public domain. Therefore, we request the following language to be added to this section: "Proprietary computer software and its applications, unless expressly developed as a work product for use by the Client as part of the scope of services, remains the property of PWA or the software developer. Further, reports, recommendations and other materials resulting from PWA's efforts are intended solely for purposes of this Agreement; any reuse or modification by Client of others for purposes outside this agreement without PWA's written permission shall be at the user's sole risk."

Section 9. Indemnification: PWA requests to limit the indemnification to claims or losses resulting from our negligent performance. Further, we will request that PWA is indemnified and held harmless from claims or losses resulting from the negligent acts or omissions of other parties not under our control.

Section 11. In the event of termination for default, it is customary that the maximum costs applied to a Contractor be limited to the total contract amount. Under the current language a contractor could have unlimited liability which is not insurable nor appropriate (i.e., a Contractor could be asked to pay the State \$100,000 to hire someone else to complete a contract originally executed for \$20,000).

Section 12. We request the substitute language for this section to read: "Without the written consent of the other party, neither the State nor the Contractor may assign this agreement in whole or in part."

In Attachment "D1: Standard Clauses", PWA will request the following modifications:

Termination Clause: Delete "The State" in sentence 1 and substitute "Either party" may terminate this contract without cause upon 30 days' advance written notice.

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

PHILIP WILLIAMS & ASSOCIATES, LTD.

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

JEFFREY P. HALTNER

DATE EXECUTED

7/22/97

EXECUTED IN THE COUNTY OF

SAN FRANCISCO

PROSPECTIVE CONTRACTOR'S SIGNATURE

Jeffrey Haltner

PROSPECTIVE CONTRACTOR'S TITLE

PRINCIPAL

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

PHILIP WILLIAMS & ASSOCIATES, LTD.

Agreement No. _____

Exhibit _____

**STANDARD CLAUSES --
SMALL BUSINESS PREFERENCE AND CONTRACTOR IDENTIFICATION NUMBER**

NOTICE TO ALL BIDDERS:

Section 14835, et. seq. of the California Government Code requires that a five percent preference be given to bidders who qualify as a small business. The rules and regulations of this law, including the definition of a small business for the delivery of service, are contained in Title 2, California Code of Regulations, Section 1896, et. seq. A copy of the regulations is available upon request. Questions regarding the preference approval process should be directed to the Office of Small and Minority Business at (916) 322-5060. To claim the small business preference, you must submit a copy of your certification approval letter with your bid.

Are you claiming preference as a small business?

_____ Yes*

_____/____ No

*Attach a copy of your certification approval letter.