

RECEIVED

JUN 1 1999  
SACRAMENTO  
FISH & WILDLIFE SERVICE



June 1, 1999

Dan Welsh  
U.S. Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
3310 El Camino, Suite 130  
Sacramento, CA 95821

Dear Mr. Welsh:

I am writing in support of the Crissy Field project as a component of the "Potential Restoration Projects for Natural Resources Impacted by the *Cape Mohican* Oil Spill."

Our Association has been a partner with the National Park Service in the planning and implementation of the overall restoration plan for Crissy Field. This plan achieves a dynamic blending of environmental restoration, community stewardship, public access and environmental education. An amazing restoration effort is now underway, recreating coastal dune habitat and a tidal marsh. Volunteers from throughout the Bay Area are participating in the restoration effort. When completed, ongoing environmental education programs will utilize this recreated habitat as an outdoor classroom.

Few projects could provide such a powerful and accessible example of environmental restoration. Our Association has raised over \$24 million, primarily private contributions, to complete this restoration project. However, a key ingredient to the project's success is an ongoing stewardship program that carefully safeguards, monitors and enhances this restoration effort into the future. This is the element that the National Park Service is seeking from the *Cape Mohican* oil spill funds.

Given the significant impact on Crissy Field caused by the oil spill, this project is a wonderful potential recipient for funding – and fulfills the spirit of restoration, education and public access.

We enthusiastically endorse the project and are confident that the National Park Service, in partnership with our Association, will provide exemplary leadership and results in the use of these funds.

Sincerely,

Greg Moore  
Executive Director

600023

RECEIVED

JUN 01 1999

SACRAMENTO  
FISH & WILDLIFE OFFICE



June 2, 1999

Dan Welsh  
U.S. Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
3310 El Camino, Suite 130  
Sacramento, CA 95821

Dear Mr. Welsh:

As Director of the Crissy Field Center, I write you in enthusiastic support for using Cape Mohican funds to establish a Restoration, Maintenance and Public Access Fund for Crissy Field. For 18 years, the Golden Gate National Parks Association has worked with the National Park Service to enhance public use of this beautiful park and ensure that this resource is preserved and enhanced for future generations. While we have undertaken countless projects with our partners in the NPS, by far our largest project is the restoration of the 100-acre Crissy Field.

The Crissy Field restoration project provides an enormous and exciting opportunity to expand our education and stewardship programs to new, diverse audiences. The site can serve as a living classroom to excite new park users about the responsibilities and fulfillment of park stewardship. We look forward to building upon our existing and very successful volunteer programs to create an expanded base of individuals who appreciate these parks and work for their preservation.

The use of \$850,000 of Cape Mohican Funds to support the establishment of this community-based restoration program is a wise investment, not only in the maintenance of this renewed site, but in the future stewardship of all parklands.

Sincerely,

Arlene Rodriguez  
Director, Crissy Field Center

600024

Author: <wj Sydeman@prbo.org> at ~INTERNET

Date: 05/24/1999 11:38 AM

Priority: Normal

TO: Daniel Welsh at 1PO-SCES2

pduvair@ospr.dfg.ca.gov at ~INTERNET, pkelly@ospr.dfg.ca.gov at ~INTERNET,  
rricker@ospr.dfg.ca.gov at ~INTERNET, kvslater@ospr.dfg.ca.gov at ~INTERNET

Subject: Re: Cape Mohican Public Scoping Document

Dan,

Another thought...

I recently investigated the possibility of eradicating mice from the Farallones. As you know mice can be an effective predator on seabird eggs and chicks. The long and short of it is that it is possible and could be relatively inexpensive (on the order of \$50-100K). Species most likely to benefit would be Ashy Storm-Petrel, Cassin's Auklet, and Rhinoceros Auklet...the crevice nesters. This might be more in keeping with the nuts and bolts type of restoration project that the trustee agencies seem to like. If you'd like more development of this concept, let me know.

Bill

daniel\_welsh@mail.fws.gov wrote:

>

>

> Bill,

>

> Thanks for the comments, and for distributing the scoping document to David  
> Ainley. Your comments will be considered by the trustees as we develop the  
> draft Restoration Plan this summer. The main NRDA documents that I have are  
> the MOU between the Trustees and the Consent Decree settling the case. I  
> think I can send copies to you if you want them. OSPR may have reports on  
> bird

> mortality estimates, habitat injury analyses, herring injury, and lost use of  
> parks. I am cc-ing the OSPR staff who would know about availability of  
> reports so that they can get back to you on this question.

>

> \_\_\_\_\_ Reply Separator

> Subject: Re: Cape Mohican Public Scoping Document

> Author: <wj Sydeman@prbo.org> at ~internet

> Date: 05/21/1999 12:05 PM

>

> Dan,

>

> Thank you for the rapid response. I'd like to verify that the address  
> you indicated for PRBO is correct. I've also added David Ainley,  
> Incoming Chair  
> of the PSG Restoration Committee, to this distribution list; I  
> anticipate you may hear from him requesting a copy of the scoping  
> document as well. Is there an NRDA document?

>

> In reviewing the avian component of the restoration scoping document, I  
> was surprised that there was little emphasis on loons/grebes and murrees,  
> the species apparently most impacted, at least from the body count data,  
> in the scoping document restoration options. Unfortunately, we know  
> little about loons/grebes wintering along the central California coast.  
> However, we do know alot about murrees and clearly some settlement  
> dollars should be allocated to murre population enhancement. In this

600025

> case, I would therefore recommend development of 2 other concept  
> projects, one being an assessment of oil pollution effects on wintering  
> loons/grebes (which form an important part of the public's view of  
> California's coastal bird community), and the other, an effort to  
> enhance  
> communication with fisheries biologists with the long-term goal of  
> maintaining adequate food supplies for murres and other local seabird  
> populations.  
> The latter suggestion comes from a recent incident. As you may know,  
> the Fish and Game Commission, without discussion with  
> appropriate parties, recently approved a significant anchovy fishery in  
> the central California region. Anchovies have been a staple food  
> resource for murres and other species for the past decade as other  
> forage fish (e.g., rockfish) have declined in the ecosystem. The  
> project I propose would be relatively inexpensive and would have the  
> basic of objective of making certain  
> seabird interests were represented at FGC and other meetings. Some of  
> this is  
> happening now (by PRBO and other individuals interested in this topic),  
> but it is being done without directed funding and efforts to date have  
> been somewhat hit and miss. For example, what is unnerving about the  
> Fish  
> and Game Commission's activities is that we didn't know that this topic  
> was on the agenda. Therefore, I see need for a project to develop  
> seabird/fisheries "policies" to facilitate (i) communication between  
> seabird and fisheries biologists and (ii) conservation from an ecosystem  
> perspective. This is a different approach from other typical  
> restoration concepts, but one that deserves thought.

> Please consider these comments an official response to the scoping  
> document. I would be happy to flush out in more detail either of these  
> concepts if they are interesting to the Trustees.

> Bill Sydeman

> daniel\_welsh@mail.fws.gov wrote:

> > Bill,

> > Attached is a copy of the Public Scoping Document that was handed out  
> > at last night's public scoping workshop. I am sorry that you were not  
> > on the mailing list for advance notification of the date and time of  
> > the workshop. PRBO's assistance in assessing impacts of the Cape  
> > Mohican oil spill on snowy plovers was very much appreciated by the  
> > Natural Resource Trustees and we would value your input on the Public  
> > Scoping Document. The deadline for receipt of public comments or  
> > alternative restoration project proposals is June 2, 1999. Please  
> > send your written comments to me by mail, FAX, or e-mail at the  
> > following address by June 2:

> > Daniel Welsh  
> > U.S. Fish and Wildlife Service  
> > Sacramento Fish and Wildlife Office  
> > 3310 El Camino, Suite 130  
> > Sacramento, California 95821  
> > phone: (916) 979-2110  
> > FAX: (916) 979-2128  
> > e-mail: Daniel\_Welsh @ fws.gov

> > The Trustees will also add PRBO to our mailing list for future  
> > mailings. Please verify that the following address is correct (William

600026

> > J. Sydeman, Point Reyes Bird Observatory, 4990 Shoreline Highway,  
> > Stinson Beach, California, 94970). Future mailings will include the  
> > Draft Restoration Plan that will be developed this summer and made  
> > available for public review. The Draft Restoration Plan will consider  
> > additional analysis by the Trustees of the projects described in the  
> > attached Public Scoping Document, the comments received from the  
> > public on these projects, and any additional restoration project  
> > proposals that the public submits by the June 2 deadline.

> > Thanks, Dan Welsh

> > -----

> > Name: sfddall5.wpd  
> > sfddall5.wpd Type: WordPerfect Document  
(application/wordperfect5.1) > > Encoding: base64

Author: Daniel Welsh at 1PO-SCES2  
Date: 05/24/1999 5:14 PM  
Priority: Normal  
TO: <wjysydeman@prbo.org> at ~internet  
Subject: Re[2]: Cape Mohican Public Scoping Document

Bill,

Rest assured that the information you have already given me will be treated as comments received on the public scoping document. Thus, we will respond to the concerns you raised about murre restoration. This does not guarantee that we will develop restoration projects for murre, but we will seriously consider it. If you have time to develop the alternative project descriptions and submit them, they will not only be considered, but will be evaluated for possible funding along with the projects in the scoping document and any other alternative projects submitted by the public. Again, there is no guarantee that every alternative project submitted will be funded, but I think the projects you have suggested would have a greater chance of funding if we receive the project descriptions.

Good luck with your dissertation, and don't hesitate to call or e-mail me if you have any other questions. I will be out Tuesday, but will be in the office the rest of the week.

Thanks, Dan Welsh

Reply Separator

Subject: Re: Cape Mohican Public Scoping Document  
Author: <wjysydeman@prbo.org> at ~internet  
Date: 05/24/1999 4:34 PM

Dan,

Unfortunately, I don't have time this week to prepare "proposals" (as I'm attempting to file my dissertation at UCD by 2 June), but would be happy to work on details thereafter. Can you use the comments I've already provided as an official response to the scoping document which could then allow for greater follow-up at a later date? Also, I'd like to know that there would be serious consideration of these ideas...don't want to spin my wheels too much. Let me know what you suggest.

Bill

daniel\_welsh@mail.fws.gov wrote:

>  
> Bill,  
>  
> We would be interested in receiving a short (1-2 page) description of  
> this project and the other two projects that you mentioned in your  
> e-mail last week. If possible, please use the same format that the  
> trustees used in the public scoping document (i.e., Project Location,  
> Relationship to Damages Caused by the Spill, Background, Project  
> Description, and Project Cost) as this would facilitate direct  
> comparisons between projects. However, if you are short on time and  
> already have a project summary or proposal that contains, at minimum,  
> the information on location, relationship to spill damages,

600028

> background, project description, and cost, it would be acceptable to  
> send it to us without revising the format. I am serving as the  
> trustee contact person for public submittal of comments on the scoping  
> document or alternative project proposals, so please send your  
> proposals to me via e-mail (Daniel\_Welsh @ fws.gov) or mail (Daniel  
Welsh, U.S. Fish & Wildlife Service, Sacramento Fish and Wildlife  
Office, 3310 El Camino SUite 130, Sacramento, CA, 95821) by June 2.

> Thanks, Dan Welsh

> \_\_\_\_\_ Reply Separator

> Subject: Re: Cape Mohican Public Scoping

Document

> Author: <wjssydeman@prbo.org> at ~INTERNET  
> Date: 05/24/1999 11:38 AM

> Dan,

> Another thought...

> I recently investigated the possibility of eradicating mice from the  
> Farallones. As you know mice can be an effective predator on seabird  
> eggs and chicks. The long and short of it is that it is possible and  
> could be relatively inexpensive (on the order of \$50-100K). Species  
> most likely to benefit would be Ashy Storm-Petrel, Cassin's Auklet, and  
> Rhinoceros Auklet...the crevice nesters. This might be more in keeping  
> with the nuts and bolts type of restoration project that the trustee  
> agencies seem to like. If you'd like more development of this concept,  
> let me know.

> Bill

> daniel\_welsh@mail.fws.gov wrote:

> > Bill,

> > Thanks for the comments, and for distributing the scoping document to David  
> > Ainley. Your comments will be considered by the trustees as we develop the  
> > draft Restoration Plan this summer. The main NRDA documents that I have are  
> the > MOU between the Trustees and the Consent Decree settling the case. I  
> think I > can send copies to you if you want them. OSPR may have reports on  
> bird  
> > mortality estimates, habitat injury analyses, herring injury, and lost use  
of > > parks. I am cc-ing the OSPR staff who would know about availability of  
> reports > so that they can get back to you on this question.

> > \_\_\_\_\_ Reply Separator

> Subject: Re: Cape Mohican Public Scoping

> Document

> > Author: <wjssydeman@prbo.org> at ~internet  
> > Date: 05/21/1999 12:05 PM

> > Dan,

> > Thank you for the rapid response. I'd like to verify that the address  
you indicated for PRBO is correct. I've also added David Ainley,  
Incoming Chair

> > of the PSG Restoration Committee, to this distribution list; I  
> > anticipate you may hear from him requesting a copy of the scoping  
> > document as well. Is there an NRDA document?

600029

> > In reviewing the avian component of the restoration scoping document, I  
> > was surprised that there was little emphasis on loons/grebes and murre,  
> > the species apparently most impacted, at least from the body count data,  
> > in the scoping document restoration options. Unfortunately, we know  
> > little about loons/grebes wintering along the central California coast.  
> > However, we do know alot about murre and clearly some settlement  
> > dollars should be allocated to murre population enhancement. In this  
> > case, I would therefore recommend development of 2 other concept  
> > projects, one being an assessment of oil pollution effects on wintering  
> > loons/grebes (which form an important part of the public's view of  
> > California's coastal bird community), and the other, an effort to  
> > enhance  
> > communication with fisheries biologists with the long-term goal of  
> > maintaining adequate food supplies for murre and other local seabird  
> > populations.  
> > The latter suggestion comes from a recent incident. As you may know,  
> > the Fish and Game Commission, without discussion with  
> > appropriate parties, recently approved a significant anchovy fishery in  
> > the central California region. Anchovies have been a staple food  
> > resource for murre and other species for the past decade as other  
> > forage fish (e.g., rockfish) have declined in the ecosystem. The  
> > project I propose would be relatively inexpensive and would have the  
> > basic of objective of making certain  
> > seabird interests were represented at FGC and other meetings. Some of  
> > this is  
> > happening now (by PRBO and other individuals interested in this topic),  
> > but it is being done without directed funding and efforts to date have  
> > been somewhat hit and miss. For example, what is unnerving about the  
> > Fish  
> > and Game Commission's activities is that we didn't know that this topic  
> > was on the agenda. Therefore, I see need for a project to develop  
> > seabird/fisheries "policies" to facilitate (i) communication between  
> > seabird and fisheries biologists and (ii) conservation from an ecosystem  
> > perspective. This is a different approach from other typical  
> > restoration concepts, but one that deserves thought.  
> >  
> > Please consider these comments an official response to the scoping  
> > document. I would be happy to flush out in more detail either of these  
> > concepts if they are interesting to the Trustees.  
> >  
> > Bill Sydeman  
> >  
> >  
> > daniel\_welsh@mail.fws.gov wrote:  
> > >  
> > > Bill,  
> > >  
> > > Attached is a copy of the Public Scoping Document that was handed out  
> > > at last night's public scoping workshop. I am sorry that you were  
not > > > on the mailing list for advance notification of the date and time  
of > > > the workshop. PRBO's assistance in assessing impacts of the Cape  
> > > Mohican oil spill on snowy plovers was very much appreciated by the  
> > > Natural Resource Trustees and we would value your input on the Public  
> > > Scoping Document. The deadline for receipt of public comments or  
> > > alternative restoration project proposals is June 2, 1999. Please  
> > > send your written comments to me by mail, FAX, or e-mail at the  
> > > following address by June 2:  
> > >  
> > > Daniel Welsh  
> > > U.S. Fish and Wildlife Service  
> > > Sacramento Fish and Wildlife Office  
> > > 3310 El Camino, Suite 130

600030

> > > Sacramento, California 95821  
> > > phone: (916) 979-2110  
> > > FAX: (916) 979-2128  
> > > e-mail: Daniel\_Welsh @ fws.gov

> > >  
> > > The Trustees will also add PRBO to our mailing list for future  
> > > mailings. Please verify that the following address is correct  
> > > (William > > > J. Sydeman, Point Reyes Bird Observatory, 4990 Shoreline  
Highway,  
> > > Stinson Beach, California, 94970). Future mailings will include the  
> > > Draft Restoration Plan that will be developed this summer and made  
> > > available for public review. The Draft Restoration Plan will  
consider > > > additional analysis by the Trustees of the projects  
described in the > > > attached Public Scoping Document, the comments  
received from the  
> > > public on these projects, and any additional restoration project  
> > > proposals that the public submits by the June 2 deadline.

> > >  
> > > Thanks, Dan Welsh

> > > -----  
> > >  
> > > Name: sfddall5.wpd  
> > > sfddall5.wpd Type: WordPerfect Document  
> (application/wordperfect5.1) > > Encoding: base64  
> >  
>

# TREASURE ISLAND WETLANDS PROJECT

74 Mizpah Street  
San Francisco, CA 94131  
phone: (415) 585-5304  
e-mail: [gravanis@earthlink.net](mailto:gravanis@earthlink.net)

RECEIVED

June 2, 1999

Dan Welsh  
U.S. Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
3310 El Camino, Suite 130  
Sacramento, CA 95821

Re: Cape Mohican Oil Spill Restoration Projects

Dear Mr. Welsh:

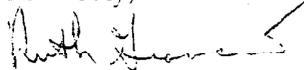
I am grateful for the opportunity to comment on the Scoping Document for the Cape Mohican/San Francisco Drydock oil spill.

As I mentioned at the public scoping workshop on May 10, I believe that the Treasure Island wetlands proposal should be included in the list of restoration projects to be considered for funding. Treasure Island is one of the areas directly impacted by the spill, and it is in the same region as the other affected sites. While all of the projects proposed in the Public Scoping Document have merit, I believe that primary consideration should be given to those in the area of impact.

The Treasure Island proposal (attached) is consistent with the threshold criteria adopted by the Trustees. The wetland creation techniques proposed have proven feasible in many previous projects, and there is a clear relationship to the damages for which compensation is sought: new wildlife habitat will be created, benefiting a variety of shorebirds and waterfowl and the whole Bay ecosystem; water quality will be improved; and the new public uses to be provided will have a direct relationship to the appreciation and understanding of the natural resources to be protected and enhanced.

Please feel free to contact me for further information.

Sincerely,



Ruth Gravanis,  
Project Director

enclosures

600032

Potential Restoration Project for Natural Resources  
Impacted by the Cape Mohican Oil Spill:

**Wetlands Creation on Treasure Island for Habitat and Water Quality**

**Project Location**

Naval Station Treasure Island consists of two islands in the middle of Central San Francisco Bay: the 400-acre artificial island created of Bay mud (Treasure Island) and the naturally formed Yerba Buena Island. Most of the two islands' acreage is currently owned by the US Navy and proposed for conveyance to the City and County of San Francisco under the jurisdiction of the Treasure Island Development Authority.

**Relationship to Damages Caused by the Spill**

The shorelines of both Yerba Buena and Treasure islands were contaminated by the oil spill, and the islands are located near the other impacted areas — the wetlands, mudflats, sandy and rocky beaches and aquatic habitat of the Central Bay. TI and YBI are within the area of wildlife loss as well as loss of public use.

The wetlands creation project proposed for the eastern shore of Treasure Island would compensate in many ways for damages resulting from the Cape Mohican oil spill. Not only will new wetlands habitat be created, benefiting a diversity of waterfowl, shorebirds and the food web which supports them, but a portion of the wetland will be used to treat stormwater (currently discharged to the Bay untreated), thereby improving Bay water quality. In addition, a major component of the wetland project will be public use, including environmental education.

**Background**

Treasure Island is one of several closing Bay Area military bases in the process of being converted to civilian use. The Draft Reuse Plan for the island emphasizes uses consistent with the Public Trust which will draw visitors for a variety of activities. The Treasure Island Wetlands Project, a collaboration of environmental and community groups, has developed a proposal for a multi-faceted wetlands creation project consistent with the Draft Reuse Plan and a number of Bay restoration goals.

**Project Description**

A diverse multi-function, multi-value wetlands habitat of approximately 40 acres will be created on the protected eastern side of Treasure Island. The proposal includes an interpretive center, viewing overlooks, trails and boardwalks. The marsh will serve as an outdoor classroom for students from throughout the Bay Area and as a major recreational and educational attraction for the general public, both local and international.

The project will include two types of wetlands: a freshwater stormwater treatment marsh which may later be modified to also complete the wastewater treatment process, and a tidal salt marsh, with Bay water admitted through one or more

600033

culverts. Adjacent marshes of two different types will attract a greater diversity of resident and migratory wildlife and hence a larger number of human visitors as well.

A) Freshwater treatment marsh

With a pollution prevention grant from the Rose Foundation, LSA Associates of Point Richmond conducted a study of the feasibility of creating a freshwater marsh to treat stormwater runoff on Treasure Island. LSA explored pertinent issues such as: how treatment wetlands will work on TI, the wildlife habitat they provide, construction and maintenance costs, permit requirements, and environmental, recreational and educational benefits. The siting considerations on TI include the existing and proposed stormwater collection infrastructure, toxic remediation needs and seismic instability challenges. The study identifies two sites that would work well.

Using constructed wetlands to treat wastewater and/or stormwater is not a new concept. The LSA study finds that the technology has been proven cost effective, and there are many treatment wetlands with a long record of success as habitat for wildlife and as an attraction for ecotourists, students and recreational users. The Arcata Marsh in Humboldt County is probably the best known. Locally, the Demonstration Urban Stormwater Treatment (DUST) Marsh at Coyote Hills is a good model, as well as the Hayward Marsh, Mt. View Marsh in Martinez, and the Max Graefe Memorial Wildlife Ponds in Tiburon. On TI, construction would involve: leaving the existing perimeter stabilization wall in place; excavating fill, which may have to be removed and hauled off anyway because of toxic contamination; placing an impermeable liner; adding appropriate substrate materials; and introducing appropriate vegetation. Pollutants would be removed by a combination of physical, chemical and biological processes including filtration, sedimentation, adsorption, volatilization, microbial decomposition, precipitation and vegetative uptake. The treated runoff would then be discharged into the Bay or reclaimed for landscape watering or other uses. The study concluded that the treatment marsh would not only be feasible and effective, it would benefit wildlife and people and the economy.

B) Salt marsh habitat

Given that the San Francisco Bay-Delta Estuary has lost 85-95% of its historic tidal marshes and given the position of TI on the Pacific Flyway, even a small increase in tidal wetlands will benefit the ecosystem. The creation of shorebird habitat will be especially important to the pair of peregrine falcons that nest on the eastern span of the Bay Bridge. If studies show that the tidal action needs to be muted, water control structures can be used but may not be necessary. With careful design and monitoring, it would be possible to maintain mudflat feeding areas for a variety of wading shorebirds. And by mixing fresh water with salt water the biodiversity can be increased even more.

An initial feasibility assessment, including both treatment marsh and tidal wetlands components, was conducted for one site by Philip Williams and Associates for the San Francisco Mayor's Office. A comparative sites analysis is currently being prepared by LSA Associates for the Treasure Island Wetlands Project.

### **Project Cost**

The total project cost will be roughly four million dollars and will be influenced by a number of factors including toxic cleanup, potential sea level rise and fresh water supply. Potential sources of revenue include the Coastal Conservancy, Army Corps of Engineers restoration funds, various wetlands mitigation projects, the US Environmental Protection Agency, the Clean Water State Revolving Fund, and foundation grants. The San Francisco Foundation is currently funding the Treasure Island Wetlands Project through its BASES Venture Grant Program. In-kind contributions of labor are expected, and it is hoped that the Treasure Island Homeless Development Initiative and the Job Corps, both located on TI, will participate through their job training programs.

A cost share of \$800,000 is requested from the Cape Mohican settlement fund.

# Treasure Island Wetlands Project

## Background/Summary

Treasure Island is one of several closing military bases built on fill in San Francisco Bay. A number of environmental groups have been working to assure that the conversion of these bases to civilian use respects the need for ecological restoration as well as economic vitality.

In May of 1996, the Treasure Island Citizens Reuse Committee released a Draft Reuse Plan for Treasure Island which included no habitat creation potential and very little open space at all. A number of groups came together to propose an alternative which acknowledges the significance of Treasure Island's special location in the center of San Francisco Bay.

With assistance from pro bono wetlands consultants, project participants outlined a conceptual plan for constructing two types of wetlands – fresh and salt water marshes which would provide habitat values and wildlife viewing opportunities. The fresh water marsh would also serve to treat some of Treasure Island's stormwater runoff, which currently is discharged to the Bay untreated. We made sure that our proposal was consistent with the goals and objectives of the Draft Reuse Plan and the Treasure Island Homeless Development Initiative. We assembled materials from existing treatment wetlands and tried to persuade the Citizens Reuse Committee and City agencies to support the wetlands idea. Fortunately, the Board of Supervisors voted to keep open the option of including wetlands in the Redevelopment Plan.

In November of 1997, after hearing a presentation of the Stormwater Treatment Wetlands Feasibility Study commissioned by the TI Wetlands Project, the Treasure Island Development Authority expressed tentative support and urged the Department of City Planning to include the possibility of a wetland component as it prepared the EIS/EIR and the Redevelopment Plan. At a public workshop in July of 1998, participants showed strong support for inclusion of wetlands in the land use plan, and in the fall the Mayor's Treasure Island Project Office released an "Initial Feasibility Assessment of Wetlands Creation at Treasure Island," prepared by Philip Williams and Associates, Ltd. The Treasure Island Wetlands Project is engaged in a study to determine the most beneficial site and configuration, and it continues to identify potential funding sources for wetlands design, construction and management.

## The Wetlands Concept

We propose the creation of a diverse multi-function, multi-value wetlands habitat of approximately 40 acres. This urban wetland system will be designed with people in mind. The proposal includes an interpretive center, viewing overlooks, trails and boardwalks. The marsh will serve as an outdoor classroom for students from throughout the Bay Area and as a major recreational and educational attraction for the general public, both local and international. The Treasure Island marsh will take advantage of the growing ecotourism industry, a market largely untapped in San Francisco.

The project will include two types of wetlands: a freshwater stormwater treatment marsh which may later be modified to complete the wastewater treatment process as well, and a tidal salt marsh, with Bay water admitted through one or more culverts. Adjacent marshes of two different types will attract a greater diversity of resident and migratory wildlife and hence a larger number of human visitors too.

### **• Freshwater treatment marsh**

In November of '96, with a pollution prevention grant from the Rose Foundation, we commissioned a study of the feasibility of creating a freshwater marsh to treat stormwater runoff on Treasure Island. LSA Associates of Point Richmond conducted the study, exploring pertinent issues such as: how treatment wetlands will work on TI, the wildlife habitat they provide, construction and maintenance costs, permit requirements, and

600036

environmental, recreational and educational benefits. The siting considerations on TI include the existing and proposed stormwater collection infrastructure, toxic remediation needs and seismic instability challenges. The study identifies two sites that would work well, but we are not advocating any specific location at this time. A ten-acre treatment marsh could function well, while a larger marsh could treat a higher percentage of the island's runoff.

Using constructed wetlands to treat wastewater and/or stormwater is not a new concept; there are more than 500 such facilities in Europe and more than 200 in North America. The LSA study finds that the technology has been proven cost effective, and there are many treatment wetlands with a long record of success as habitat for wildlife and as an attraction for ecotourists, students and recreational users. The Arcata Marsh in Humboldt County is probably the best known. Locally, the Demonstration Urban Stormwater Treatment (DUST) Marsh at Coyote Hills is a good model, as well as the Hayward Marsh, Mt. View Marsh in Martinez, and the Max Graefe Memorial Wildlife Ponds in Tiburon. Based on the success of the DUST Marsh, a new treatment marsh is planned for downtown Fremont. New York City and Pacifica, among other places, have treatment wetlands in progress.

On TI, construction would involve: leaving the existing perimeter stabilization wall in place; excavating fill, which may have to be removed and hauled off anyway because of toxic contamination; placing an impermeable liner; adding appropriate substrate materials; and introducing appropriate vegetation. Pollutants would be removed by a combination of physical, chemical and biological processes including filtration, sedimentation, adsorption, volatilization, microbial decomposition, precipitation and vegetative uptake. The treated runoff would then be discharged into the Bay or reclaimed for landscape watering or other uses. The study concluded that the treatment marsh would not only be feasible and effective, it would benefit wildlife and people and the economy.

The 55-page study, entitled *CREATING WATER TREATMENT WETLANDS AT TREASURE ISLAND: An Exploration of Opportunities & Feasibility*, may be ordered from the TI Wetlands Project, (415) 585-5304. The cost is \$6.00, including shipping.

#### • Salt marsh habitat

Given that the San Francisco Bay-Delta Estuary has lost 85-95% of its historic tidal marshes and given the position of TI on the Pacific Flyway, even a small increase in tidal wetlands will benefit the ecosystem. The creation of shorebird habitat will be especially important to the pair of peregrine falcons that nest on the eastern span of the Bay Bridge.

If studies show that the tidal action needs to be muted, water control structures can be used but may not be necessary. Or, fully tidal wetlands could be constructed provided that the elevations and culverts were properly designed. The Chula Vista wetland project in San Diego is a particularly useful examples of wetlands creation on an island constructed in a bay. With careful design and monitoring, it would be possible to maintain mudflat feeding areas for a variety of wading shorebirds. And by mixing fresh water with salt water we can increase the biodiversity even more.

#### Economic Feasibility of Wetlands Construction

- Where excavation is necessary for toxic remediation, the basin for the wetlands can be created at no extra cost, and save the expense of bringing in clean fill.
- The process of obtaining the necessary permits from the RWQCB will be made easier, both for runoff and later for wastewater treatment if desired.
- Funding for the marsh project may be available from the CA Coastal Conservancy, federal Clean Water Program, the Land and Water Conservation Fund, the Wildlife Conservation Board, the Army Corps of Engineers, the RWQCB's administrative civil liabilities program, mitigation funds, and other sources which might not otherwise be available for TI.

## Benefits of Creating Wetland Habitat on Treasure Island

Just a few of the benefits that would accrue to Treasure Island, San Francisco and the region:

### **Economic Benefits**

- Where habitat is constructed instead of buildings, it will save money on infrastructure and seismic stabilization costs.
- The beauty of the marsh and wildlife it attracts will add to the value of the island for the new residents and will increase the marketability of the project.
- The wetland habitat will provide job training and employment opportunities in ecological restoration and management.
- Using constructed marshes for water treatment has been proven cost-effective and environmentally beneficial.
- Wildlife watching has been proven to be a revenue-generating activity in a number of studies. California has the highest retail sales generated by non-consumptive bird use, \$66.2 billion.

### **Environmental Benefits**

- Providing wildlife habitat creates a connection to the life of the Bay, not just view corridors to the water's surface.
- Achieving a "Sustainable San Francisco" requires preserving and restoring the region's biodiversity.
- The marsh creation project will not replace the identical values lost on site, but it will give San Francisco an opportunity to partially compensate for huge historic losses of its shoreline habitat to Bay fill.
- Treating stormwater in the marsh will prevent the pollution of the Bay associated with runoff. Cleaner water means safer fish and healthier people.
- Stormwater detention ponds provide seasonal wetland values so essential to migratory shorebirds and waterfowl, especially given TI's position on the Pacific Flyway.
- Using the final tertiary-treated water for purposes such as fire fighting and landscape watering will help conserve the island's water supply.

### **Recreational Benefits**

- Wildlife watching is one of the most popular and quickly growing forms of recreation in the country, enjoyed by people from a broad socio-economic spectrum.
- The Reuse Plan is intended to provide a variety of recreational opportunities. People who may not be attracted to theme parks, fireworks displays or golf will come to enjoy the "water gardens" and the wildlife they attract. Nearly 75% of California citizens participate in wildlife viewing in one form or another.

### **Educational Benefits**

- The marsh and interpretive center will be, in addition to the TI Museum, a place that draws visitors for learning as well as entertainment.
- The TI Marsh will help make up for the region-wide dearth of shoreline nature interpretive facilities. As an outdoor classroom, the marsh will especially serve the students of TI's elementary school, and inner city youth from San Francisco and Oakland.

## Endorsements

The proposal to construct wetlands on TI has been endorsed in concept by Arc Ecology, Blue Water Network, Clean Water Action, Coalition for Better Wastewater Solutions, Golden Gate Audubon Society, Mission Creek Conservancy, Mission Creek Harbor Association, Public Trust Group, SF Bay Anglers for Environmental Rights, San Francisco BayKeeper, San Francisco League of Conservation Voters, San Francisco Tomorrow, Sierra Club, Save San Francisco Bay Association, Southeast Alliance for Environmental Justice, Sunset Community Democratic Club, Surfrider Foundation, Sustainable San Francisco, Urban Ecology Inc., Urban Watershed Project and Yerba Buena Chapter of the California Native Plant Society.

## Acknowledgments

- Rose Foundation for Communities and the Environment, for funding the treatment wetlands feasibility study and a comparative sites analysis
- Bay Area Communities Initiative (Environmental Careers Organization and Urban Habitat Program), for providing a summer intern
- BASES Venture Grant Program (San Francisco and Irvine foundations), for awarding a grant to support pre-development work necessary for the creation of wetlands habitat
- Arc Ecology, for providing office space

The Treasure Island Wetlands Project is an unincorporated public benefit association, with the Rose Foundation serving as its 501 (c)(3) fiscal sponsor. Tax-deductible contributions may be made payable to Rose Foundation - TIWP, and mailed to 74 Mizpah Street, San Francisco, CA 94131.

For more information about the Treasure Island Wetlands Project, or to request an informational slide presentation for your organization, call (415) 585-5304 or send an e-mail to [gravanis@earthlink.net](mailto:gravanis@earthlink.net).

---

The Treasure Island Wetlands Project is a collaboration of:

Arc Ecology  
Golden Gate Audubon Society  
Military Base Closure Environmental Network  
Public Trust Group  
Urban Ecology

Ronald Miska  
Planning and Acquisition  
Manager

MARIN COUNTY

Ronald Paolini  
Park and Open Space  
Superintendent

OPEN SPACE DISTRICT

May 11, 1999

*Melch*

Mr. John Tarpley, Environmental Specialist  
California Department of Fish & Game  
425 Executive Court North, Suite G  
Fairfield, CA 94585

Marin County  
Department of Parks,  
Open Space and  
Cultural Services  
Frances M. Brigmann  
General Manager  
Dennis Jauch  
Assistant Director

Dear Mr. Tarpley:

I am aware that, as a result of the SS Cape Mohican oil spill settlement agreement, 3.63 million dollars are available for natural resource restoration projects in areas affected by the spill. I am writing to request that you submit the following project to the Cape Mohican Oil Spill Natural Resource Trustees for funding consideration.

**Project Name**

Bolinas Lagoon Fill Removal

**Project Location**

Bolinas Lagoon, Marin County, California  
Bolinas Lagoon is a 1400-acre tidal estuary located in the vicinity of the villages of Bolinas and Stinson Beach in western Marin County. The lagoon was recently designated a "wetland of international importance" by the United States Fish and Wildlife Service per the 1971 Ramsar (Iran) international convention on wetlands. The lagoon is owned by the County of Marin and managed as the Bolinas Lagoon Open Space Preserve by the Marin County Open Space District. The lagoon is also located within the boundaries of the Gulf of the Farallones National Marine Sanctuary.

Maps of oil distribution provided to the County of Marin by the Department of Fish & Game in January 1999 show that the Bolinas-Stinson Beach area had "very light" oiling in sandy beach and rocky intertidal areas (see attached).

**Project Description**

The Marin County Open Space District proposes to remove a number of artificial fill areas adjoining Highway 1 along the lagoon's eastern boundary. A list of potential fill removal sites is attached. Removal of the fill at these locations would create new tidal habitat in the lagoon. This habitat type has declined significantly over the past several decades as a result of sediment accumulation in the lagoon.

The Natural Resources Trustees should be aware of the fact that the lagoon's sedimentation problem is currently being studied by the United States Army

600040

Corps of Engineers as part of an overall effort to restore the lagoon's tidal and subtidal habitats. Removal of fill in the proposed areas would complement other efforts ultimately proposed by the Corps to protect and restore these habitats. Enclosed is an excerpt from a report recently prepared by the Corps of Engineers describing future conditions in the lagoon assuming no actions are taken to remove fill and/or accumulated sediments in the lagoon. I can provide further details of the Bolinas Lagoon Ecosystem Restoration Study if desired by the trustees.

**Project Costs**

Caltrans has agreed to calculate cost estimates for removing the fill areas. District staff will then estimate costs for site restoration. I will provide these figures to you immediately upon my receipt of them.

**Project Scheduling**

If performed independently of other measures ultimately proposed by the Corps to improve tidal flushing and restore tidal and subtidal habitats, fill removal could take place in the summer of 2000. If performed at the same time as the other measures, the proposed fill removal would not take place until 2002 or 2003.

Please let me know if the trustees require additional information. I will call you in several weeks to inquire as to the status of this proposal.

Sincerely,



Ronald Miska  
Planning and Acquisition Manager

c: Supervisor Steve Kinsey  
Martin Nichols, Assistant Administrator  
Frances M. Brigmann, General Manager  
Bolinas Lagoon Technical Advisory Committee  
Ed Ueber - Gulf of the Farallones National Marine Sanctuary  
Roger Golden, United States Army Corps of Engineers  
Don Kiser - Caltrans  
Chuck Morton - Caltrans

600041

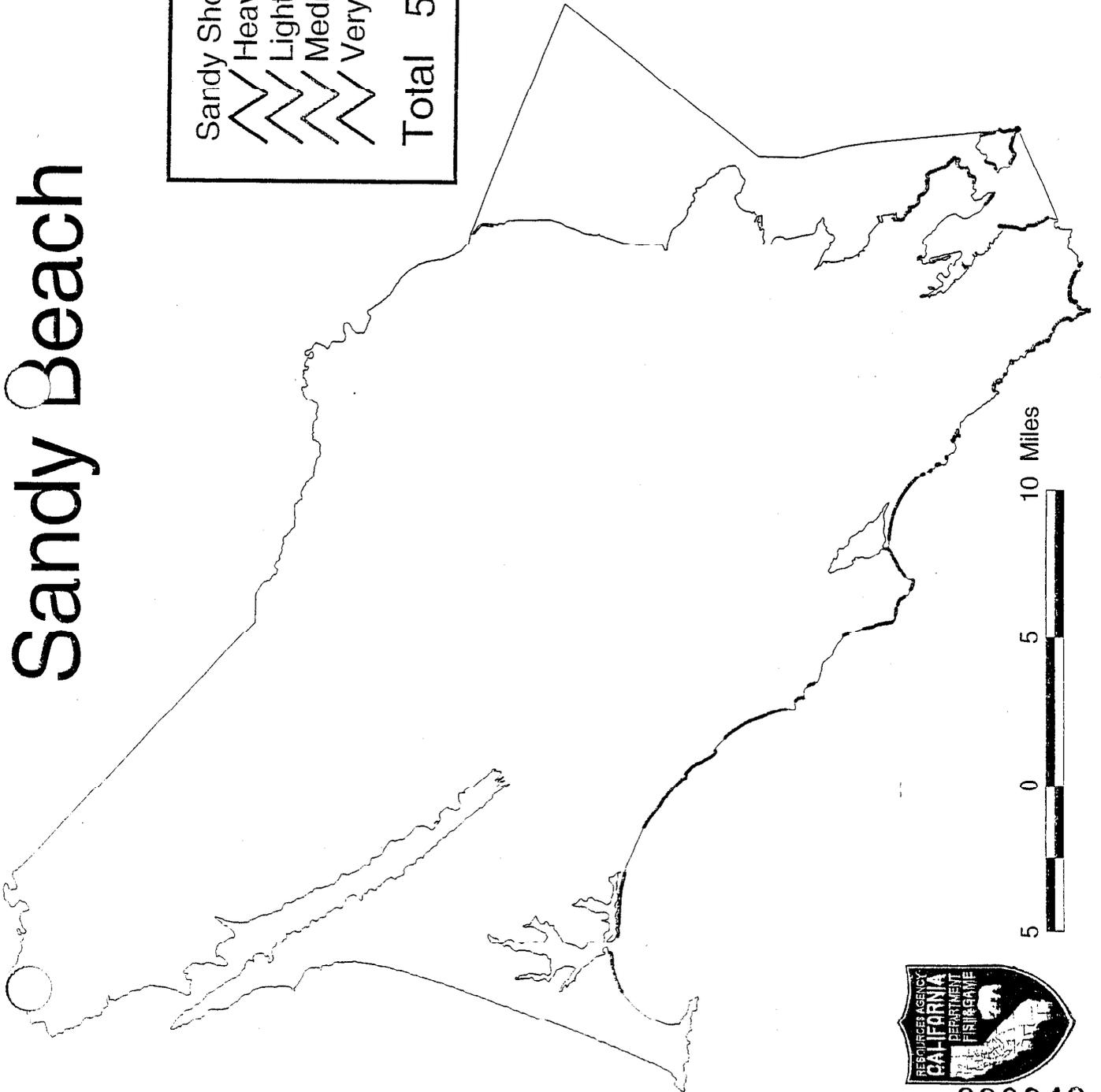
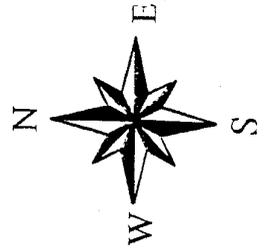
# Sandy Beach



Sandy Shoreline Oiling

- Heavy
- Light
- Medium
- Very Light

Total 53,116 Meters



5 0 5 10 Miles



600042