

154-5, 156, 157, 158

COMMITTEES:  
APPROPRIATIONS  
BANKING, HOUSING, AND  
URBAN AFFAIRS  
BUDGET  
ENVIRONMENT  
AND PUBLIC WORKS

# United States Senate

HART SENATE OFFICE BUILDING  
SUITE 112  
WASHINGTON, DC 20510-0505  
(202) 224-3553  
senator@boxer.senate.gov  
http://www.senate.gov/~boxer

FI-154

July 25, 1997

Kate Hansel  
CALFED Bay-Delta Program  
1416 9th Street, #1155  
Sacramento, CA 95814

Dear Ms. Hansel:

I am writing in support of the Sonoma County Water Agency's application for CALFED Bay-Delta funding.

I understand that the five proposed projects would create significant environmental benefits while improving the quality of life for Sonoma County residents.

These important restoration efforts are designed to provide critical improvements to water quality, protect and restore the ecosystem by helping sustain diverse and valuable plant and animal species, and facilitate wetlands restoration. More specifically, the Sonoma County Water Agency plans to upgrade wastewater treatment centers to meet tertiary-treatment levels, reduce discharges of treated wastewater to San Pablo Bay, provide recycled water to local agriculture, supply an alternative to freshwater use for wetland restoration, and off-set freshwater diversions in the San Antonio Creek Watershed.

CALFED funding is important to the advancement of these worthy projects. I urge you to give Sonoma County Water Agency's application your most serious consideration. If you have any questions, please contact Gia Daniller in my San Francisco office at 415-403-0113.

Thank you for your attention to this matter.

Sincerely,



Barbara Boxer  
United States Senator

BB/gd/jls

- |   |  |   |  |   |  |
|---|--|---|--|---|--|
| <input type="checkbox"/> 1700 MONTGOMERY STREET<br>SUITE 240<br>SAN FRANCISCO, CA 94111<br>(415) 403-0100 | <input type="checkbox"/> 2250 EAST IMPERIAL HIGHWAY<br>SUITE 546<br>EL SEGUNDO, CA 90245<br>(310) 414-5700 | <input type="checkbox"/> 850 CAPITOL MALL<br>SUITE 8544<br>SACRAMENTO, CA 95814<br>(916) 448-2787 | <input type="checkbox"/> 2300 TULARE STREET<br>SUITE 130<br>FRESNO, CA 93721<br>(209) 497-5109 | <input type="checkbox"/> 525 B STREET<br>SUITE 990<br>SAN DIEGO, CA 92101<br>(619) 239-3894 | <input type="checkbox"/> 210 NORTH E STREET<br>SUITE 210<br>SAN BERNARDINO, CA 92401<br>(909) 888-8525 |
|---|--|---|--|---|--|

PRINTED ON RECYCLED PAPER



FI-1521  
DWR WAREHOUSE

97 JUL 28 PM 2:31

July 28, 1997

Kate Hansel  
CALFED Bay-Delta Program  
1416 Ninth Street, Suite 1155  
Sacramento, CA 95814

SUBJECT: CALFED Bay-Delta Program Proposals for Ecosystem Restoration Projects and Programs from the Sonoma County Water Agency in Response to the 1997 Category III Request for Proposals (RFP)

Dear Ms. Hansel:

Enclosed please find ten (10) copies of each of the following five (5) CALFED Bay Delta Program Proposals submitted to you, as required, by 4:00 p.m., on July 28, 1997, by the Sonoma County Water Agency:

1. Napa -Sonoma Marsh Wildlife Area Wetland Restoration
2. City of Petaluma Treatment Plant Upgrade
3. Sonoma Valley County Sanitation District Treatment Plant Upgrade
4. Reclaimed Water Pipeline Connecting City of Petaluma and City of Santa Rosa Subregional Treatment Plants
5. San Antonio Creek Watershed Restoration Feasibility Study

Each of these projects meets the eligibility criteria as presented in the RFP. Please direct all questions and correspondence regarding these grant requests to Carolyn Barbulesco on my staff. She can be reached at (707)521-1807.

We look forward to your prompt review and favorable response to these proposed projects, which are located within the identified geographic priority area of the North San Francisco Bay. Thank you.

Sincerely,

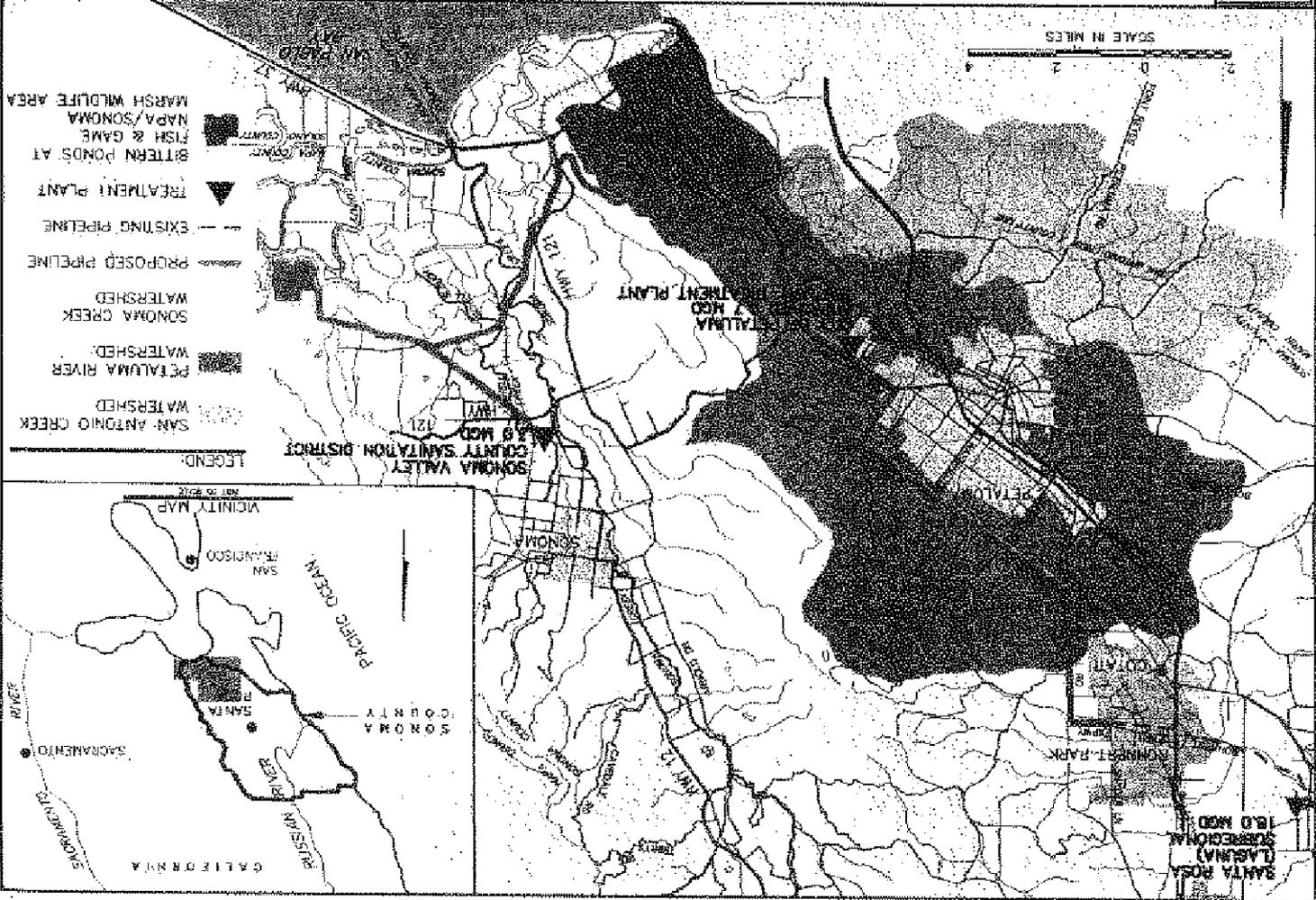
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Randy D. Poole  
General Manager/Chief Engineer  
Sonoma County Water Agency

cc: Carolyn Barbulesco

**PROPOSED WETLANDS RESTORATION AND RECYCLED WATER PROJECTS IN NEED OF FUNDING**

SONOMA COUNTY WATER AGENCY  
 2150 West College Avenue  
 Santa Rosa, CA 95401



1-003537

1-003537



Madrone Audubon Society  
INCORPORATED

E1-154

JUL 28 1997

July 22, 1997

CALFED  
1416 9th Street #1155  
Sacramento, CA 95814

Re: Bay Delta Program  
Sonoma County Water Agency

Dear Sir or Madam:

The Madrone Audubon Society, a local chapter of the National Audubon Society, expresses its support for a CALFED grant for the Napa-Sonoma Marsh Wildlife Project proposed by the Sonoma County Water Agency.

This project would enable millions of gallons of tertiary treated wastewater from the Laguna Subregional Wastewater Treatment Plant to be piped to the former Cargill Salt Ponds in order to de-salinize the ponds so that they may be used for wildlife habitat. Madrone Audubon supports the concept of re-use of wastewater because it furthers the laudable goal of the Clean Water Act to prevent outfall to our natural waterways while at the same time reducing the strain on natural water sources. Madrone Audubon Society also strongly favors restoring former wetlands to their original state as we have lost far too many acres of wetlands to development and agriculture. Another potential benefit from this project is that it may encourage the City of Santa Rosa to opt for a re-use method, rather than discharge into the Russian River, when it determines which wastewater disposal option it will choose later this year. The project, as proposed by the Water Agency, is truly a win-win situation.

The support of Madrone Audubon is premised upon the understanding that there will be a significant and direct environmental benefit from the project. We urge CALFED to approve the grant request of the Water Agency but with the proviso that the capital improvement that results from the grant continue to be used in a way that is of primary benefit to the environment.

Thank you for your consideration of our position in this important issue.

Very truly yours,

Dan Kahane, Vice-President



P1-15  
DWR WAREHOUSE

97 JUL 28 PM 2:31

July 28, 1997

Kate Hansel  
CALFED Bay-Delta Program  
1416 Ninth Street, Suite 1155  
Sacramento, CA 95814

**SUBJECT:** CALFED Bay-Delta Program Proposals for Ecosystem Restoration Projects and Programs from the Sonoma County Water Agency in Response to the 1997 Category III Request for Proposals (RFP)

Dear Ms. Hansel:

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5. San Antonio Creek Watershed Restoration Feasibility Study

Each of these projects meets the eligibility criteria as presented in the RFP. Please direct all questions and correspondence regarding these grant requests to Carolyn Barbulesco on my staff. She can be reached at (707)521-1807.

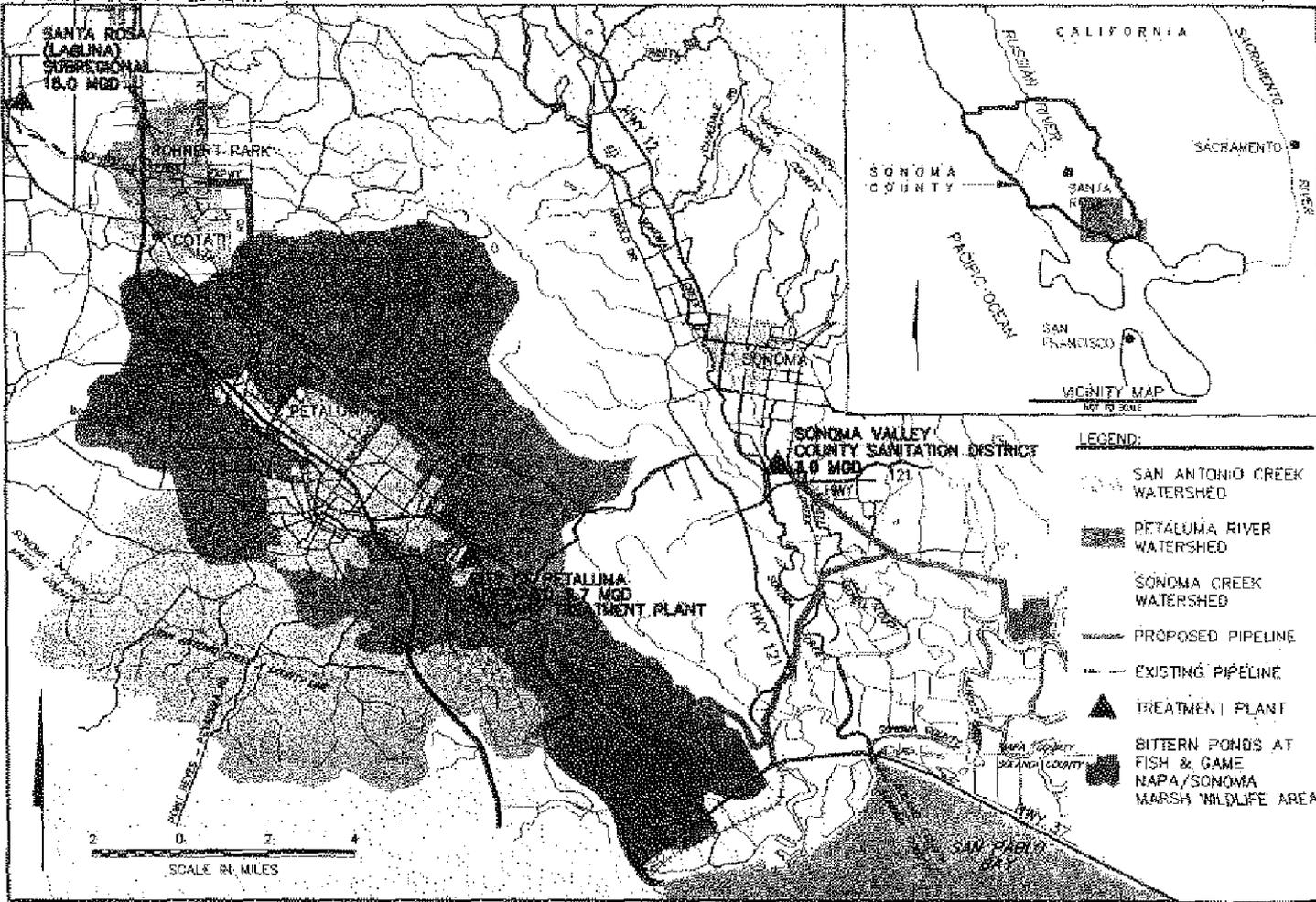
We look forward to your prompt review and favorable response to these proposed projects, which are located within the identified geographic priority area of the North San Francisco Bay. Thank you.

Sincerely,

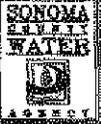
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Randy D. Poole  
General Manager/Chief Engineer  
Sonoma County Water Agency

cc: Carolyn Barbulesco



1-003540



SONOMA COUNTY WATER AGENCY  
 2150 West College Avenue  
 Santa Rosa, CA 95401

PROPOSED WETLANDS RESTORATION AND  
 RECYCLED WATER PROJECTS  
 IN NEED OF FUNDING

FI-134

PI-154

# NAPA-SONOMA MARSH WILDLIFE AREA WETLAND RESTORATION

## SUBMITTED BY:

SONOMA COUNTY WATER AGENCY

2150 WEST COLLEGE AVENUE

SANTA ROSA CALIFORNIA 95401

PHONE: (707) 526-5370

FAX: (707) 544-6123

TAX ID # 94-6000

## TECHNICAL CONTACT:

John Woodward

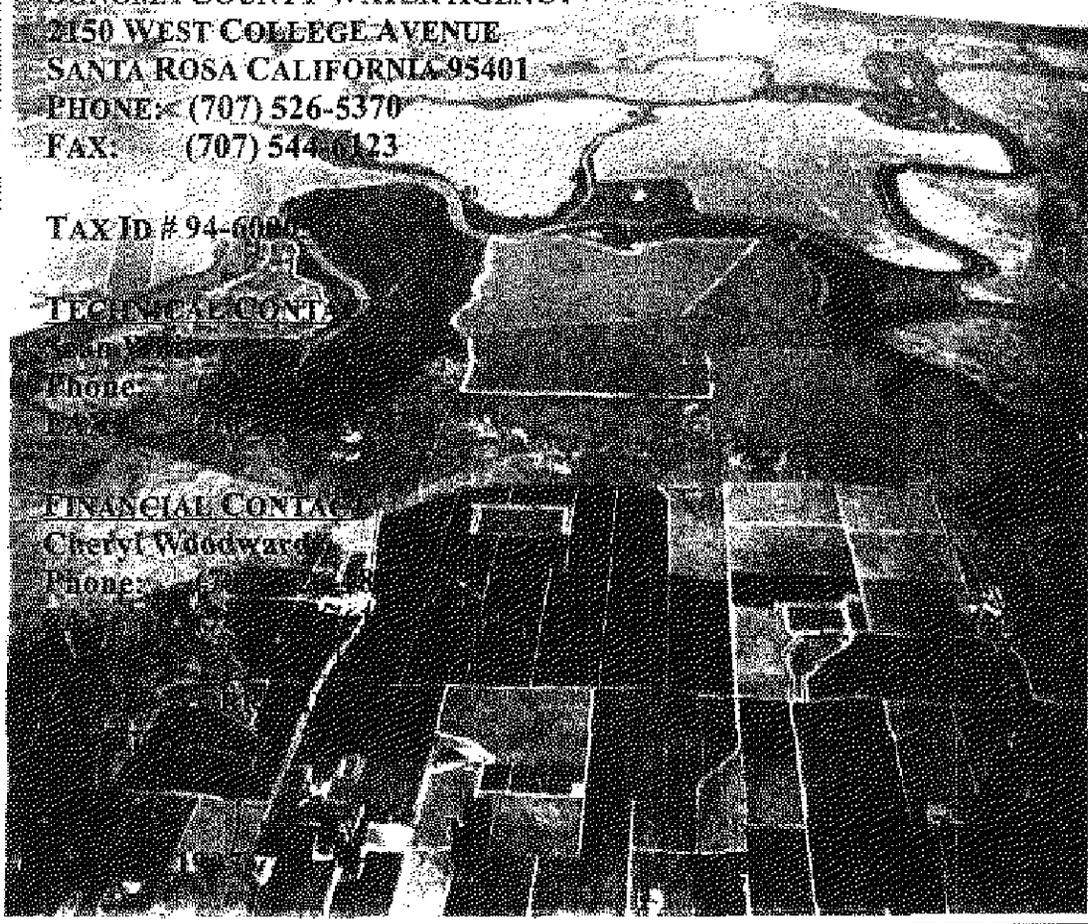
Phone: (707) 544-6123

Fax: (707) 544-6123

## FINANCIAL CONTACT:

Cheryl Woodward

Phone: (707) 544-6123



## EXECUTIVE SUMMARY

### NAPA-SONOMA MARSH WILDLIFE AREA WETLAND RESTORATION

The purpose of the proposed project is to provide an appropriate source of freshwater to facilitate restoration of several of the former bittern ponds at the California Department of Fish and Game (CDFG) Napa-Sonoma Marsh Wildlife Area. The North Bay Marshes and San Pablo Bay provide habitat for all of the fisheries on the Priority Species list including chinook salmon, delta smelt, splittail, steelhead trout, green sturgeon, striped bass, and also for hundreds of thousands of migratory waterfowl, shorebirds, and wading birds.

In 1950, Leslie Salt Company acquired many of the diked farmland areas in the North Bay region and converted them to salt ponds. Following the annual salt harvest, a small residual liquid containing extremely high concentrations of seawater compounds, including salts other than NaCl, remains in the salt crystallizers. This byproduct is known as "bittern." Each year, the bittern is pumped from the crystallizers into a bittern pond to be stored indefinitely.

In 1994, the State of California acquired all of the salt ponds in the North Bay and created the CDFG Napa-Sonoma Marsh Wildlife Area. The bittern ponds are located in the northern portion of the CDFG Napa-Sonoma Marsh Wildlife Area near Fly Bay and Coon Island and are approximately 750 acres in size. Restoring these ponds through levee breaching or other more common techniques is not feasible because the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) does not allow bittern to be discharged into the Bay. However, the SFBRWQCB will allow discharge from these ponds if the compounds in the bittern are diluted to near background levels. To sufficiently dilute the quantity of bittern stored in the three ponds will require enormous amounts of fresh water. Unfortunately, adjacent surface waters are brackish, rendering them unsuitable for the dilution process.

The Sonoma County Water Agency (SCWA) is requesting CALFED funds to construct the necessary pipelines and pump stations from the Sonoma Valley County Sanitation District (Sonoma Valley CSD) and City of Petaluma (Petaluma) wastewater treatment plants to provide reclaimed water to these bittern ponds for the dilution process. The project would provide approximately 5,000 acre feet (AF) of secondary- and/or tertiary-treated reclaimed water per year to the bittern ponds. A similar amount of reclaimed water would also be provided to agricultural areas in the southern Petaluma and Sonoma Valleys. With sufficient funding, the distribution pipeline system could be completed in approximately 6 years.

Implementation of the proposed project will improve water quality in San Pablo Bay, the North Bay Marshes, and their tributaries. Currently, the Petaluma and Sonoma Valley treatment plants discharge 2.9 billion gallons of secondary treated reclaimed water into the San Pablo Bay/North Bay Marshes complex between November 1 and April 30. The proposed project will reduce, and potentially eliminate, discharges from both plants to their respective receiving waters by making reclaimed water available for wetland restoration and agricultural irrigation. In addition, the project will reduce the number of instream diversions as agricultural irrigators substitute reclaimed water for instream diversions. Eliminating riparian diversions will increase fresh water inflows from tributaries as well as decrease potential fish screening problems. The improvements necessary to complete the project include distribution pipelines and pumping stations.

## **PROJECT DESCRIPTION**

### **A. Project Description and Approach**

The purpose of the proposed project is to provide an appropriate source of freshwater to facilitate restoration of several of the former bittern ponds at the CDFG Napa-Sonoma Marsh Wildlife Area (Figure 1).

In 1950, Leslie Salt Co. acquired many of the diked farmland areas in the North Bay region and converted them to salt ponds. In salt production, bay water is transferred through a series of ponds called evaporators. Through intensively managed evaporation this process eventually creates a series of ponds with increasing salinities, with some ponds attaining salinities exceeding 200 ppt. Finally, the concentrated seawater is transferred to crystallizers where the salt is harvested. After the salt is harvested from these ponds, a small residual liquid containing extremely high concentrations of seawater compounds, including salts other than NaCl, remains. This byproduct is known as "bittern." Each year, the bittern is pumped from the crystallizers into a bittern pond to be stored indefinitely (Figure 1).

In 1994, the State of California acquired all of the salt ponds in the North Bay from the Cargill Corporation and created the CDFG Napa-Sonoma Marsh Wildlife Area. Three of the ponds (covering approximately 750 acres) at the Napa-Sonoma Marsh Wildlife Area contain bittern from 45 years of salt pond operations. Restoring these ponds through levee breaching or other more common techniques is not feasible because the SFBRWQCB does not allow bittern to be discharged into the Bay. However, the SFBRWQCB will allow discharge from these ponds if the compounds in the bittern are diluted to near background levels. To sufficiently dilute the quantity of bittern stored in the three ponds will require enormous amounts of fresh water. In addition, since adjacent surface waters are brackish, they are unsuitable for the dilution process.

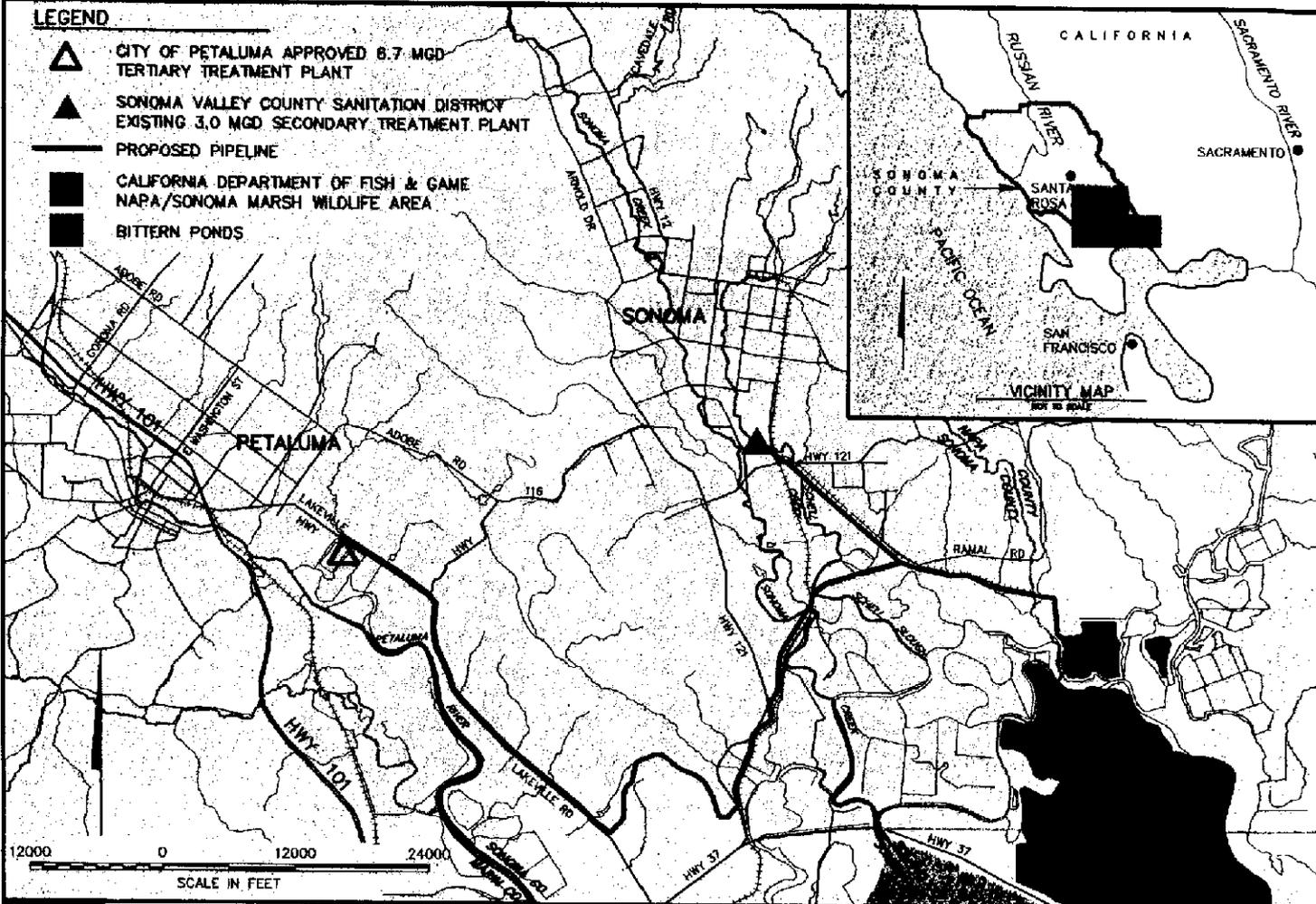
The proposed project would consist of constructing the necessary pipelines and pump stations from the Sonoma Valley CSD and Petaluma wastewater treatment plants to provide reclaimed water to these bittern ponds for the dilution process. The project would provide approximately 5,000 acre feet (AF) of secondary- and/or tertiary-treated reclaimed water per year to the bittern ponds. A similar amount of reclaimed water would also be provided to agricultural areas in the southern Petaluma and Sonoma Valleys.

Petaluma and Sonoma Valley CSD operate treatment plants that provide wastewater treatment to a population of approximately 100,000 people in Petaluma, the City of Sonoma, and surrounding areas (Figure 1). These treatment plants annually produce 2.9 billion gallons of reclaimed water that meets secondary standards. Between November 1 and April 30, reclaimed water from these plants is discharged to the Petaluma River and Schell Slough, which are tributaries to San Pablo Bay. Between May 1 and October 31, the water is stored until the winter and some is used for agricultural irrigation in Sonoma Valley and the southern Petaluma area.

The improvements necessary to complete the project include distribution pipelines and pumping stations. Installation of the pipeline will require the acquisition of pipeline easements from private property owners, a railroad company, and public agencies. With sufficient funding, the distribution pipeline system could be completed in approximately 6 years. The project would also result in a

**LEGEND**

-  CITY OF PETALUMA APPROVED 8.7 MGD TERTIARY TREATMENT PLANT
-  SONOMA VALLEY COUNTY SANITATION DISTRICT EXISTING 3.0 MGD SECONDARY TREATMENT PLANT
-  PROPOSED PIPELINE
-  CALIFORNIA DEPARTMENT OF FISH & GAME NAPA/SONOMA MARSH WILDLIFE AREA
-  BITTERN PONDS



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SCALE IN FEET



SONOMA COUNTY WATER AGENCY  
2150 West College Avenue  
Santa Rosa, CA. 95401

PROPOSED RECYCLED WATER DISTRIBUTION SYSTEM  
TO CALIFORNIA DEPARTMENT OF FISH & GAME  
NAPA/SONOMA MARSH WILDLIFE AREA

FIGURE 1

1-003544

1-003544

reduction or elimination of reclaimed water discharges to Schell Slough from the Sonoma Valley CSD treatment plant and to the Petaluma River from the Petaluma treatment plant. Additionally, reclaimed water would be available from the pipeline for agriculture in the Lakeville area located south of Petaluma.

## **B. Location and/or Geographic Boundaries of Project**

The CDFG Napa-Sonoma Marsh Wildlife Area is located along San Pablo Bay, between the Napa River and Sonoma Creek, and is approximately 8,000 acres in size. The bittern ponds are located in the northern portion of the CDFG Napa-Sonoma Marsh Wildlife Area near Fly Bay and Coon Island and are approximately 750 acres in size (Figure 1).

The City of Petaluma is located in southern Sonoma County approximately 30 miles north of San Francisco (Figure 1). The Petaluma River bisects the town of Petaluma and flows in a southerly direction into San Pablo Bay. The Petaluma River watershed covers an area of 146 square miles. Several of the tributaries to the Petaluma support anadromous fisheries. The lower portion of the Petaluma River forms one of the largest tidal marshes in the Bay-Delta region.

The Sonoma Valley CSD is located in southern Sonoma County in the center of the Sonoma Creek watershed (Figure 1). The Sonoma Creek watershed covers an area of approximately 170 square miles. Sonoma Creek flows in a southerly direction through the Sonoma Valley into central San Pablo Bay. Sonoma Creek has many small tributaries, most of which still support small anadromous fisheries. The lower portion of the creek is joined by a number of tidal sloughs and bordered by tidal marsh. The Sonoma Valley CSD treatment plant discharges into Schell Slough.

## **C. Expected Benefits**

The primary stressor categories (as defined by the ERPP) addressed by the proposed project are (1) Water Quality, and (2) Alteration of Flows and Other Effects of Water Management. Priority species, habitat and expected benefits are summarized in Table 1. Further details on expected benefits are discussed below for each primary stressor.

### Primary Stressors and Benefits

The ERPP has identified several water quality stressor subcategories within the North Bay region, including increased contaminants and increased salinity, that will benefit from implementation of the proposed project.

*Increased Contaminants:* Currently the Sonoma Valley CSD and Petaluma treatment plants annually discharge 2.9 billion gallons of secondary-treated wastewater into the San Pablo Bay/North Bay Marsh complex. Implementation of the proposed project will make this water available for wetland restoration at the CDFG Napa-Sonoma Marsh Wildlife Area and to agricultural irrigators along the pipeline alignment. This process will reduce, and potentially eliminate, discharge from both facilities by using the water for agriculture and allowing any water that is to be discharged to be put to a beneficial use by diluting the residual salts in the Napa-Sonoma Marsh Wildlife Area.

*Increased Salinity:* Reducing the salinity in the salt ponds at the Napa-Sonoma Marsh Wildlife Area was identified by the Technical Team Report of Stressors and Example Restoration Action Summary Report as a project consistent with 1997 Category III funding. Dilution of the accumulated salts will be a complex process that is being addressed by a number of agencies including the CDFG, the US Army Corps of Engineers (USACE), the Environmental Protection Agency (EPA), and SCWA. While CDFG and USACE have not yet determined the final methodology, they have acknowledged the obvious need for a consistent supply of fresh water to accomplish the task. The proposed project could supply up to five million gallons of reclaimed water per day to assist in the process. Completion of the dilution process will restore 750 acres of wetland habitat which is currently too saline for use by fish or wildlife.

Table 1. Summary of priority species, habitat usage and expected benefits from implementation of the proposed Napa Sonoma Marsh Wildlife Area Wetland Restoration project.		
Priority Species	Habitat in Project Vicinity	Expected Benefits
Winter-run and spring-run chinook salmon	Chinook juveniles were found in the North Bay Marshes by CH2M Hill in 1996. Although these specimens were determined to be fall-run progeny, their presence suggests that the North Bay Marshes are suitable rearing habitat for chinook juveniles.	The North Bay Marshes and San Pablo Bay provide habitat for all of the fisheries on the Priority Species list. Implementation of the proposed project will improve water quality in San Pablo Bay, the North Bay Marshes, and their tributaries. Currently, the Petaluma and Sonoma Valley treatment plants discharge secondary-treated reclaimed water into the San Pablo Bay/North Bay Marshes complex between November 1 and April 30. The proposed project will reduce, and potentially eliminate, discharges from both plants to their respective receiving waters by making reclaimed water available for wetland restoration and agricultural irrigation. In addition, the project will reduce the number of instream diversions as agricultural irrigators substitute reclaimed water for instream diversions. Eliminating riparian diversions will increase fresh water inflows from tributaries as well as decrease potential fish screening problems.
Delta smelt	Delta smelt have been documented in the North Bay Marshes by CDFG (1977) and Wetlands Research Associates (1995). Delta smelt do not breed in the North Bay Marshes but use the area for juvenile rearing and foraging.	
Splittail	Sacramento splittail have been observed in the North Bay Marshes by CDFG (1977) and CH2M Hill (1996). Splittail use the North Bay Marshes during all life history phases including spawning, juvenile rearing and foraging.	
Steelhead trout	Steelhead are known to inhabit every major tributary to San Pablo Bay and the North Bay Marshes. Steelhead spawn in the tributaries and use the North Bay Marshes during migration and rearing.	
Green sturgeon	Green sturgeon have been collected in San Pablo Bay (Moyle 1976).	
Striped bass	Striped bass are an economically important game species throughout the entire San Pablo Bay region.	
Migratory birds	Hundreds of thousands of migratory waterfowl, shorebirds, and wading birds rely on the North Bay Marshes. The marsh is used by migratory birds during all phases of life history including breeding, foraging, roosting, and overwintering.	

The ERPP has identified several water flow and management subcategories within the North Bay region including hydrograph alterations, entrainment, and migration barriers that will be addressed through implementation of the proposed project.

*Hydrograph Alterations:* By making reclaimed water available for agricultural irrigation, farmers will be able to substitute reclaimed water for existing riparian diversions. This substitution process may potentially augment stream flows in tributaries by eliminating numerous small scale diversions.

*Entrainment:* Reducing entrainment in the North Bay and Napa River vicinity was identified by the Technical Team Report of Stressors and Example Restoration Action Summary Report as a project consistent with 1997 Category III funding. By making reclaimed water available for agricultural irrigation, farmers will be able to substitute this source for existing riparian diversions. This substitution process may potentially eliminate many small scale unscreened diversions.

*Migration Barriers:* In addition to unscreened or poorly screened intakes, many riparian diverters use summer dams to retain water during low flow periods. Summer dams can be a significant migrational barrier for juvenile anadromous fish. Substituting reclaimed water for riparian diversions will make summer dam structures obsolete.

#### Potential Benefits to Other Ecosystem Restoration Programs

The project will provide reclaimed water to the former bittern ponds in the CDFG Napa-Sonoma Marsh Wildlife Area for wetland restoration. These ponds contain large amounts of extremely concentrated sea water constituents that must be diluted to make the ponds suitable for fish and wildlife. Currently this proposal would use secondary-treated reclaimed water produced by these treatment plants for dilution of the bittern pond water. SCWA has also submitted proposals for projects to upgrade the Petaluma and Sonoma Valley CSD treatment plants to meet tertiary-treatment standards. The benefits of the proposed treatment plant upgrade projects would significantly increase the quality of water supplied to these ponds if the reclaimed water met tertiary-treatment standards.

#### Potential Benefits to Third Parties

*Agriculture:* See Table 1 and above section entitled *Increased Contaminants*.

#### **D. Biological Justification**

Project Need: Currently the Sonoma Valley CSD and Petaluma treatment plants annually discharge a combined total of 2.9 billion gallons of secondary-treated wastewater into San Pablo Bay. The proposed project would significantly reduce, and potentially eliminate that discharge.

Proposed Approach and Alternatives: The proposed approach is presented in detail in Project Description. Alternatives to the proposed project include continued discharge of secondary-treated wastewater into San Pablo Bay, or potentially upgrading either, or both plants to tertiary treatment to improve the water quality of the discharge.

Basis for Expected Benefits: All of the priority species listed in *C. EXPECTED BENEFITS* are known to exist in the vicinity of the proposed project. The proposed project will restore approximately 750 acres of tidal wetlands (freshwater and brackish) and improve water quality in the largest (approximately 8,000 acres) contiguous marsh in California.

Durability of Expected Benefits: The expected benefits associated with the proposed infrastructure are anticipated to continue as long as the proposed facilities remain operable. Benefits associated with the restoration of the bittern ponds at the Napa-Sonoma Marsh Wildlife Area are expected to last in perpetuity.

Project Status: See *E. PROPOSED SCOPE OF WORK* and *G. IMPLEMENTABILITY* for information regarding Project Status. In addition, SCWA has submitted a grant proposal to the US EPA to obtain additional funds for this project.

### **E. Proposed Scope of Work**

Completion of the proposed project will require the preparation of a CEQA/NEPA compliance document, an engineering feasibility study, and a financial plan. The proposed project will also include design and specifications of a distribution pipeline system; project construction, and distribution system operation and maintenance. Descriptions of these tasks are presented below.

Task 1 - CEQA/NEPA Compliance Document: An evaluation of potential environmental impacts associated with the construction of the distribution pipeline system and the delivery of reclaimed water to the bittern ponds at the CDFG Napa-Sonoma Marsh Wildlife Area will be required. It is anticipated that this CEQA/NEPA compliance process will be completed within 18 to 24 months of receiving authorization to proceed.

Task 2 - Engineering Feasibility Study: As part of the CEQA/NEPA process, an engineering feasibility study would be performed to evaluate pipeline alignment alternatives for the project. An engineering feasibility study report would be prepared concurrent with preparation of the CEQA/NEPA compliance document and would be completed within 18 to 24 months of receiving authorization to proceed.

Task 3 - Financial Plan: As part of the CEQA/NEPA process, a financial plan would be prepared that evaluates the financing options for the proposed project. A financial plan would be prepared concurrent with preparation of the CEQA/NEPA compliance document and would be completed within 18 to 24 months of receiving authorization to proceed.

Task 4 - Project Design: Following certification of the EIR, design plans and specifications for construction of the project would be prepared. These plans and specifications will be prepared within 18 to 24 months after the CEQA/NEPA compliance process has been completed.

Task 5 - Project Construction: Project construction activities will include solicitation of bids for construction of the project based on the design plans and specifications, selection of a construction contractor, construction of improvements, project management, and construction inspection. The deliverable product resulting from these activities will be the distribution pipeline system. This task will be completed within 24 to 36 months after preparation of the design plans and specifications.

Task 6 - Pipeline Distribution Operation and Maintenance: Following completion of the proposed project, the distribution system will require ongoing operations and maintenance. Monitoring reports that are associated with the operation of the system will be used to document these operations.

#### **F. Monitoring and Data Evaluation**

To analyze the effectiveness of this program in improving quality of San Pablo Bay and tributary waters, a water quality monitoring program would be implemented. Water quality monitoring would be conducted near former discharge points into Schell Slough and the Petaluma River. Monitoring would involve analyzing water quality and quantity (flow volume). Baseline sampling would be conducted in these areas to determine water quality prior to reducing wastewater discharge and to provide data for future comparison. Monitoring would incorporate all elements typically tested in wastewater prior to discharge, including biological oxygen demand (BOD), total suspended solids, pH, chlorine residuals, copper, zinc, instream flow and others.

To analyze the effectiveness of this program in improving water and habitat quality of the bittern ponds, a comprehensive monitoring program would be implemented in conjunction with CDFG, USACE, and other relevant agencies or groups. Prior to project implementation, baseline sampling would be conducted on the following variables -- water quality, sediments, vegetation, invertebrates, fish, and birds. Once the project is initiated, water quality monitoring would be conducted on 1) reclaimed water prior to entering the bittern ponds and 2) the bittern ponds. Water quality monitoring would begin immediately after the project is implemented and would be conducted during neap tide series on a monthly to quarterly basis, depending on funding levels. Water quality variables assessed in bittern ponds would include: salinity, pH, dissolved oxygen (DO), and temperature.

Monitoring of additional variables would begin one year after the project is implemented. In addition to water quality monitoring, analysis of marine salts (NaCl), bittern salts (NaMgCl, etc.), pH, and reduction-oxidation of sediments would be conducted. Establishment of marsh vegetation would be assessed through monitoring of permanent transects and aerial photography mapping. For monitoring of fish and bird species, surveys would be designed to assess density/abundance and species number during periods when both migratory and/or resident species would be present, such as late fall, spring, and summer. Abundance and species number of benthic invertebrates would also be sampled several times annually. Depending on the time scale anticipated for reclamation of the bittern ponds, monitoring could be conducted during years 1, 3, 5, 7, and 10 or on an annual basis for five years following project implementation. Subsequent monitoring of habitat development would be assumed by the managing agency.

#### **G. Implementability**

Construction of a distribution pipeline can be performed using conventional pipeline and pumping equipment. The Sonoma Valley CSD and Petaluma treatment plants currently provide reclaimed water to several agricultural users in the southern Sonoma and Petaluma Valleys that use the water for irrigating vineyard, hayfields, and pastures. Since July 1996, SCWA has worked with local agriculture and community representatives to evaluate the potential for increasing the use of reclaimed water for wetland restoration and irrigation. Based on these efforts, there is wide ranging support for providing reclaimed water for beneficial use. The CDFG has indicated their support for the proposed Napa-Sonoma Marsh Wildlife Area Wetland Restoration project.

**COSTS AND SCHEDULE TO IMPLEMENT PROPOSED PROJECT**

**A. Budget Costs**

SONOMA VALLEY CSD AND CITY OF PETALUMA				
Task Description	Direct Salary and Benefits	Service Contracts	Construction Contracts	Total Cost
CEQA/NEPA Compliance Document	\$20,000	\$70,000	\$0	\$90,000
Engineering Feasibility Study	\$20,000	\$30,000	\$0	\$50,000
Financial Plan	\$10,000	\$0	\$0	\$10,000
Project Design	\$50,000	\$250,000	\$0	\$300,000
Project Construction	\$500,000	\$0	\$2,000,000	\$2,500,000
<b>Total - SVCSD/Petaluma Funding</b>	<b>\$600,000</b>	<b>\$350,000</b>	<b>\$2,000,000</b>	<b>\$2,950,000</b>

CALFED GRANT				
Task Description	Direct Salary and Benefits	Service Contracts	Construction Contracts	Total Cost
CEQA/NEPA Compliance Document	\$0	\$400,000	\$0	\$400,000
Engineering Feasibility Study	\$0	\$150,000	\$0	\$150,000
Financial Plan	\$0	\$100,000	\$0	\$100,000
Project Design	\$0	\$900,000	\$0	\$900,000
Project Construction	\$0	\$0	\$20,500,000	\$20,500,000
<b>Total - CALFED Grant Funding</b>	<b>\$0</b>	<b>\$1,550,000</b>	<b>\$20,500,000</b>	<b>\$22,050,000</b>

PROJECT TOTALS				
Task Description	Direct Salary and Benefits	Service Contracts	Construction Contracts	Total Cost
CEQA/NEPA Compliance Document	\$20,000	\$470,000	\$0	\$490,000
Engineering Feasibility Study	\$20,000	\$180,000	\$0	\$200,000
Financial Plan	\$10,000	\$100,000	\$0	\$110,000
Project Design	\$50,000	\$1,150,000	\$0	\$1,200,000
Project Construction	\$500,000	\$0	\$22,500,000	\$17,990,000
<b>Total - Project</b>	<b>\$600,000</b>	<b>\$1,900,000</b>	<b>\$22,500,000</b>	<b>\$25,000,000</b>

**B. Schedule Milestones**

It is anticipated that this project could be completed within 6 years of receiving the necessary funding. Schedule milestones for each task are presented below.

Task	Estimated Completion (from start of project)
CEQA/NEPA Compliance Document	24 months
Engineering Feasibility Study	24 months
Financial Plan	24 months
Project Design	48 months
Project Construction	84 months

## **APPLICANT QUALIFICATIONS**

### **Organization of Staff and Other Resources:**

The Sonoma County Water Agency (SCWA) is a special District created by the California State Legislature (Statutes of 1949, Chapter 994 as amended). SCWA is empowered to produce and furnish surface and groundwater for beneficial uses; to control and dispose of flood, storm, and other waters; to generate electrical energy; to provide sanitary sewerage services; and to provide recreational services in connection with flood control and water conservation works. SCWA exercises all of these powers.

New legislation was enacted in 1994, to add wastewater disposal to SCWA's responsibilities. SCWA assumed management responsibilities for County sanitation districts and zones on January 1, 1995, from the former Sonoma County Department of Public Works. Included in the Sonoma County sanitation districts and zones are the Sonoma Valley CSD, Forestville County Sanitation District, Graton Sanitation Zone, Sonoma County Airport Sanitation Zone, Geyserville Sanitation Zone, South Park County Sanitation District, and Occidental County Sanitation District. SCWA's principal sanitation functions are to oversee, operate, and maintain the sanitation zones as determined by the various terms required by the National Pollution Discharge Elimination System (NPDES) permits issued by the North Coast and/or San Francisco Bay Regional Water Quality Control Boards.

SCWA has two principal water supply functions. SCWA owns and operates a water transmission system which delivers water to a number of public and investor-owned water distribution systems in Sonoma and Marin Counties. This transmission system is financed, constructed, and maintained pursuant to an Agreement for Water Supply and Construction of the Russian River-Cotati Intertie Project, dated October 25, 1974, and last amended June 28, 1995. SCWA also regulates the flow of the Russian River for the benefit of agricultural, municipal and instream beneficial uses within Mendocino and Sonoma Counties and municipal uses in Marin County. This function is carried out pursuant to Decision 1610 of the California Water Resources Control Board dated April 17, 1986. This Decision amended the several appropriate water rights permits held by SCWA and established the criteria for the coordinated operation of two federal projects, the Coyote Valley Dam Project on the East Fork Russian River and the Warm Springs Dam Project on Dry Creek. SCWA controls the water supply storage space of the U. S. Army Corps of Engineers Projects under contracts with the United States Government. The water transmission system is operated as an enterprise with revenues derived from water and power sales. The regulation of the Russian River is a governmental function and all costs associated with the USACE projects are paid with the proceeds of countywide levied property taxes, except in the case of Marin and Mendocino County beneficiaries which pay a water charge in lieu of the Sonoma County property tax.

Pursuant to a license from the Federal Energy Regulatory Commission, SCWA constructed and operates a 2.6 megawatt hydroelectric project at Warm Springs Dam. The power is sold to Pacific Gas and Electric Company pursuant to an "as delivered" Public Utilities Commission approved Interim Standard Offer No. 4 power purchase contract. The project was financed by the water transmission system enterprise fund and power sales revenues are pledged to that fund.

SCWA maintains recreational areas at a number of its facilities. The most important of these is Spring Lake Park which was constructed by SCWA and is operated by the County of Sonoma Regional Parks Department under a service contract with SCWA.

The County of Sonoma Board of Supervisors is, *ex officio*, the Board of Directors of SCWA. The County Administrator, County Clerk, County Assessor, County Tax Collector, County Auditor, County Treasurer, County Counsel, County Purchasing Agency and District Attorney are, unless otherwise provided by the Board of Directors, also *ex officio* officers of SCWA. SCWA is administered by the General Manager/Chief Engineer, Randy D. Poole, who serves at the pleasure of the Board of Directors.

### **Collaborating Participants**

SCWA is seeking statements of support for this project application from various agencies and organizations with shared environmental interests and concerns. SCWA's solicitation of support letters is taking place concurrently with the preparation of this application. A complete list of the 35 agencies and organizations contacted is provided in Appendix 1. Letters received prior to the application deadline will be attached for your review. Additional letters will be forwarded to CALFED as they are received.

### **Technical, Administrative and Project Management Roles**

Randy D. Poole, General Manager/Chief Engineer of the Sonoma County Water Agency (SCWA) will serve as the Principal Administrator for the project, providing direction and assigning project management and technical functions to SCWA staff. Fiscal review will be supervised by the Administrative Services Officer for SCWA. Grant reporting requirements will be monitored and coordinated by the Grants Procurement Manager.

### **Biosketches**

Randy D. Poole, General Manager/Chief Engineer, Sonoma County Water Agency  
Randy D. Poole holds a Bachelor of Science degree in Agricultural Engineering from Oregon State University (1976) and is a registered Professional Civil Engineer in the States of California and Oregon. He is currently the General Manager/Chief Engineer for the Sonoma County Water Agency. Prior to that, his professional career includes service as Chief Engineer for the Sonoma County Water Agency (1991-94), Chief Engineer/Assistant General Manager for the Marin Municipal Water District (1989-91), and Senior Engineer for the City of Portland, Bureau of Water Works, in Portland, Oregon (1986-89).

Mr. Poole is experienced in CEQA/NEPA and environmental issues, all levels of management for the design, construction, operation, and maintenance of major water, wastewater, and recreational water facilities, including dams, treatment plants, reservoirs, pump stations, storage tanks, groundwater well field systems, larger-diameter pipelines, and other appurtenant facilities. He is also experienced in all phases of water and wastewater supply transmission, storage, pumping, distribution, water rights issues, and groundwater recharge-extraction programs. His professional memberships include the American Water Resources Association, American Water Works Association, and the American Society of Civil Engineers.

Renee T. Webber, Supervising Environmental Specialist, Sonoma County Water Agency

Renee T. Webber holds a Bachelor of Arts degree in Environmental Studies, with a minor in Water Resources, from California State University, Sacramento (1984). She is currently the Supervising Environmental Specialist (Environmental Impact Studies and Reports) for the Sonoma County Water Agency, where she supervises and coordinates the environmental review of public and private construction and development projects, is responsible for the preparation of appropriate environmental reports for such projects, and performs related duties as required.

Ms. Webber has a thorough knowledge of Federal, State, and local laws, regulations, current programs and court decisions pertaining to environmental protection. She is well informed about environmental considerations in the design, location, and construction of public (flood control, highway, water supply, sanitation) and private (residential, commercial, industrial) projects as well as citizen and public interest groups dealing with environmental matters.

Sean K. White, Supervising Environmental Specialist, Sonoma County Water Agency

Sean K. White holds a Bachelor of Science degree in Fisheries Biology from Humboldt State University (1991). He is currently the Supervising Environmental Specialist (Fisheries) for the Sonoma County Water Agency, where he manages the Fisheries Enhancement Program. Prior to that, his professional career includes service as the resident Fisheries Biologist and Wildlife Ecologist for Wetlands Research Associates, Inc., in San Rafael, California, and also a Director on the Marin Municipal Water District Board of Directors.

Mr. White has authored the fisheries component for numerous environmental documents, including *Biological Assessment, Route 37 Improvements White Slough Specific Area Plan Environmental Studies (1995)*, *Cargill Salt Environmental Assessment (1994)*, and *Redwood High School Marsh Enhancement Monitoring(1993)*. In addition, he has engaged in a wide variety of fishery resource surveys and has utilized numerous restoration techniques.

Michael D. Thompson, Civil Engineer, Sonoma County Water Agency

Michael D. Thompson holds a Bachelor of Science degree in Civil Engineering from California Polytechnic State University, San Luis Obispo (1982). In addition, he holds a Master of Science degree in Civil Engineering and a Master of Business Administration degree, both from the University of California, Davis (1987). He is a registered Professional Civil Engineer as well as a Registered Environmental Assessor in the State of California. He is currently a Civil Engineer for the Sonoma County Water Agency. Prior to that, his professional career includes service at two Novato, California, firms -- as Senior and Associate Engineer for PES Environmental, Inc. (1989-96), Project Engineer for Harding Lawson Associates (1987-89) and as Staff Engineer for S. S. Papadopoulos, Davis, California.

Mr. Thompson has provided environmental engineering services to both private and public sector clients. He is familiar with a wide variety of civil and environmental engineering projects. He has prepared structural designs using steel, concrete, and earth building materials, performed groundwater modeling, become familiar with regulations associated with drinking water quality and wastewater discharge, directed earthwork grading projects, supervised and trained technical staff, and managed complex environmental investigation and remediation projects.

**COMPLIANCE WITH STANDARD TERMS AND CONDITIONS**

**Conflicts of Interest**

The Sonoma County Water Agency, as Applicant, will comply with all State and Federal conflict of interest laws, including but not limited to, Government Code Section 1090, and Public Contract Code 10410 and 10411 for State conflict of interest requirements.

**References for Similar Projects**

Similar projects in which the Sonoma County Water Agency has served as a partner, participant, or lead agency are described in the following project reports:

1. Sonoma Valley County Sanitation Districts Hudeman Slough Discharge Management Plan, 1994
2. Hudeman Slough Mitigation and Enhancement Wetlands, 1996
3. Sonoma County Water Agency Fisheries Enhancement Program
4. Adobe Creek Fishway Construction and Habitat Restoration
5. Russian River Action Plan

**APPENDICES**

**LETTERS OF SUPPORT**

**Richard Charter**

6947 Cliff Avenue, Bodega Bay, CA 94923  
(707)875-3482 (707)875-2345 fax (707)875-2947

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July 22, 1997

CALFED Bay-Delta Program  
1416 Ninth Street, Suite 1155  
Sacramento, CA 95814

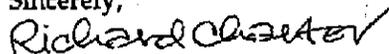
To Whom It May Concern:

I am writing in support of a grant proposal by the Sonoma County Water Agency for a recycled water distribution pipeline connecting the City of Petaluma and the City of Santa Rosa Subregional Treatment Plants. It is clear that this project could facilitate the restoration of degraded bayfront wetland habitat at the Cargill site and would also provide a very significant contribution to the utilization of treated wastewater for agricultural irrigation and for other constructive purposes.

I have been a direct participant in the restoration of tidal wetlands at the Sonoma Baylands Project and the Petaluma River Tidal Marsh Restoration Project during my former tenure as Executive Director of the Sonoma Land Trust. I appreciate the complexity of habitat restoration projects and the challenges faced by agencies seeking to carry out such projects, particularly when it comes to securing an allocation of fresh water in a water-scarce region.

My support is contingent upon thorough environmental review of the proposed project and the concurrence of all relevant regulatory agencies that the project would enhance the health of San Francisco Bay.

Sincerely,



Richard Charter

# SONOMA COUNTY CONSERVATION ACTION

540 Pacific Avenue, Santa Rosa, CA 95404

Phone: (707) 571-8566 • FAX: (707) 575-8903

Tuesday, July 22, 1997

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Sheri Cardo  
Richard Day  
Una Glass  
Kate Sater  
Jerry Waxman

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Krista Rector  
Rick Theis

## Executive Director

Mark Green

## Program Director

Joelle Goncalves

FPCC ID #911196

Randy Poole  
General Manager  
Sonoma County Water Agency  
2150 West College Ave.  
Santa Rosa, CA 95401

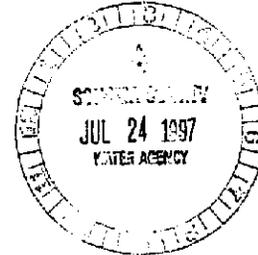
Dear Randy:

I am writing on behalf of Sonoma County Conservation Action, the county's largest conservation organization with more than 7,500 member households in Sonoma County. Conservation Action organizers personally contact 50,000 households per year, which provides us with a clear sense of the local political pulse.

We are writing in reference to the application for Cal/Fed grant funding by the Sonoma County Water Agency for proposed wastewater pipeline projects which would serve to provide irrigation with tertiary-treated wastewater to agriculture in southern Sonoma County and to flush the Cargill salt pond site in southern Napa County with overflow wastewater for purposes of restoring the Cargill site as a functioning bay wetland.

Conservation Action supports the Agency's application for Cal/Fed funding for the southern Sonoma County project, for the following reasons and subject to the caveats listed on the following page:

- Tertiary treated wastewater is a high-quality resource developed at great cost by the communities of our county.
- Local agriculture should benefit from the use of this water rather than demanding more withdrawal of fresh water from the Russian River.
- A vital agricultural economy is the best defense against urban encroachment into the world-class agricultural lands of Sonoma County.
- In light of the historical eradication of 90% of San Francisco Bay's wetlands, the restoration of 10,000 acres of bay wetlands at the Cargill site would constitute a major step forward in enhancing the biological health of the Bay.



July 22, 1997

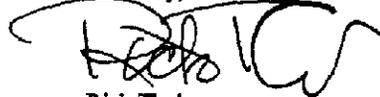
CALFED Bay Delta Program  
1416 Ninth St., Suite 1155  
Sacramento, CA 95814

RE: Sonoma County Water Agency Fund Requests

The Sonoma County Grape Growers Association urges you to support the five major restoration planning efforts by the Sonoma County Water Agency. All projects will have a beneficial effect on the Sonoma County environment. These projects will significantly improve habitat for fisheries, migratory waterfowl, shorebirds and wading birds in the Bay Area. A healthy wildlife habitat is important to achieve a sustainable Bay Area where agriculture can thrive. Also, one of the projects may potentially benefit agriculture in the Lakeville area, which we strongly support.

Thank you for your consideration.

Cordially,



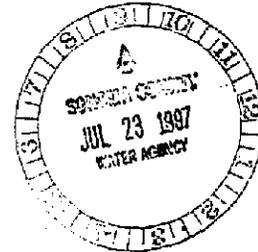
Rick Theis  
Executive Director



SONOMA COUNTY  
grape  
growers  
ASSOCIATION

850 Second Street, Suite C • Santa Rosa, California 95404 • (707) 576-3110

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Madrone Audubon Society  
INCORPORATED

JUL 23 1997

July 22, 1997

CALFED  
1416 9th Street #1155  
Sacramento, CA 95814

Re: Bay Delta Program  
Sonoma County Water Agency

Dear Sir or Madam:

The Madrone Audubon Society, a local chapter of the National Audubon Society, expresses its support for a CALFED grant for the Napa-Sonoma Marsh Wildlife Project proposed by the Sonoma County Water Agency.

This project would enable millions of gallons of tertiary treated wastewater from the Laguna Subregional Wastewater Treatment Plant to be piped to the former Cargill Salt Ponds in order to de-salinate the ponds so that they may be used for wildlife habitat. Madrone Audubon supports the concept of re-use of wastewater because it furthers the laudable goal of the Clean Water Act to prevent outfall to our natural waterways while at the same time reducing the strain on natural water sources. Madrone Audubon Society also strongly favors restoring former wetlands to their original state as we have lost far too many acres of wetlands to development and agriculture. Another potential benefit from this project is that it may encourage the City of Santa Rosa to opt for a re-use method, rather than discharge into the Russian River, when it determines which wastewater disposal option it will choose later this year. The project, as proposed by the Water Agency, is truly a win-win situation.

The support of Madrone Audubon is premised upon the understanding that there will be a significant and direct environmental benefit from the project. We urge CALFED to approve the grant request of the Water Agency but with the proviso that the capital improvement that results from the grant continue to be used in a way that is of primary benefit to the environment.

Thank you for your consideration of our position in this important issue.

Very truly yours,

*Dan Kahane*

Dan Kahane, Vice-President



North Bay Chapter, 632 Fifth Street, Santa Rosa, CA 95402

July 22, 1997

CALFED Bay-Delta Program  
1416 Ninth Street Suite 1155  
Sacramento, CA 95814

Dear CAL-FED Bay-Delta Program:

This letter is to confirm Trout Unlimited's support for the Sonoma County Water Agency proposal to reuse reclaimed water from the Santa Rosa Subregional Treatment plant for restoration of Bay Wetlands at the Cargill Salt Ponds.

Trout Unlimited is a cold water fishery conservation organization with 95,000 members internationally and 1,100 members in the North Bay Chapter. Our membership is particularly concerned about the Coho Salmon and Rainbow Steelhead Trout fisheries of the Russian River and opposes any further degradation of the Laguna de Santa Rosa (an Impaired Waterway), Mark West Creek, and the Russian River by resource wasteful waste water discharges to threatened and endangered salmonid habitat.

A program to reuse the Subregional plant's reclaimed water for restoration of Bay Wetlands is the type of proposal we can support that will actually use this valuable water resource for environmental enhancement rather than waste over 8 billion gallons of water annually discharging it to the once thriving salmonid habitat of the Russian River.

We urge CALFED to approve funding for the upgrading of the Sonoma Valley and Petaluma treatment plants to tertiary treatment and restoring 8,000 acres of Cargill salt pond to important wetland and fishery nursery habitat by providing a pipeline from Santa Rosa's Subregional treatment plant to the Petaluma Plant and the Sonoma Valley plant to the Cargill salt ponds. This pipeline will also allow for North Bay agricultural economic development by reuse of the nutrient-rich water along the pipeline's route.

Trout Unlimited would be pleased to be represented on a citizen advisory committee to the Sonoma County Water Agency to help in the implementation of this project and restoration work planned in the North Bay and Russian River watersheds.

Sincerely,  
TROUT UNLIMITED

R. Brian Hines  
Board of Directors  
North Bay Chapter

Sincerely,  
TROUT UNLIMITED

Mike Swaney  
Conservation Chairman  
California State Council

cc: Stan Griffin, Regional VP

**LITERATURE CITED**

California Department of Fish and Game. 1977. The Natural Resources of the Napa Marsh. Coastal Wetlands Series #19.

CH2M Hill. 1996. Sonoma Baylands Fish Sampling and Water Quality Monitoring Results: February-April, 1996. Technical Memorandum prepared for US Army Corps of Engineers, San Francisco District.

Moyle, P.B. 1976. Inland Fishes of California. University of California Press, Berkeley.

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