

Members

Diane Dillon
Mark Luce
Eric Sklar
Steven Rosa
Mark Van Gorder
Karen Slusser
Leon Garcia
David Graves
Jeff Reichel
Phill Blake
Don Gasser
Kate Dargan
Jeffrey Redding
Robert Steinhauer
Charles Slutzkin
Marc Pandone
Richard Camera

Alternates

Harold Moskowitz

AGENDA

REGULAR BOARD MEETING

Thursday, July 27, 2006 at 4:00 p.m.

**2nd Floor Conference Room, Hall of Justice Building,
1125 Third Street, Napa CA**

Staff Representatives

Patrick Lowe,
Secretary
Deputy Director,
Conservation Div., CDPD

Jeff Sharp,
Watershed Coordinator
Planner III,
Conservation Div., CDPD

Laura Anderson,
Counsel
Attorney IV,
County Counsel's Office

1. **CALL TO ORDER & ROLL CALL** (Chairman)
2. **APPROVAL OF ACTION MINUTES**
Regular meeting of January 26, 2006 and February 23, 2006 (Chairman)
3. **PUBLIC COMMENT**
In this time period, anyone may comment to the Board regarding any subject over which the Board has jurisdiction, or request consideration to place an item on a future Agenda. No comments will be allowed involving any subject matter that is scheduled for discussion as part of this Agenda. Individuals will be limited to a three-minute presentation. No action will be taken by the Board as a result of any item presented at this time. (Chairman)
4. **ANNOUNCEMENTS** (Board/Staff)
 - a. **California Bay-Delta Authority announced CALFED Science Program 2006 Focused Proposal Solicitation** (grant opportunity) for projects that advance environmental understanding and aid policy-makers and resource managers (Staff)
 - b. Others (Board/Staff)
5. **UPDATES/REPORTS:**
 - a. Update on County **General Plan Update** process, workshops and General Plan **Steering Committee activities** (Board/Staff)
 - b. Others (Board/Staff)

6. **DISCUSSION AND POSSIBLE DIRECTION FOR THE CHAIR TO SIGN A LETTER TO THE WILDLIFE CONSERVATION COMMISSION FINDING THE PROPOSED I.C.A.R.E. MONITORING PROJECT CONSISTENT WITH GOALS IN THE WICC BOARD'S STRATEGIC PLAN:**

Discussion and possible direction for the Chair to sign a letter to the Napa County Wildlife Conservation Commission finding the proposed Institute for Conservation, Advocacy, Research and Education's (ICARE) Napa River aquatic insect monitoring project consistent and supportive of a number of goals outlined in the WICC Board's Strategic Plan (Staff)

7. **REVIEW, DISCUSSION AND POSSIBLE DIRECTION TO STAFF REGARDING RECOMMENDED 06-07 BUDGET EXPENDITURES FOR IMPLEMENTATION OF THE BOARD'S STRATEGIC PLAN:**

Review, discussion and possible direction to staff regarding **recommended 2006-07 fiscal year expenditures for implementation of the WICC Board's Strategic Plan** as outlined in draft 2006-07 budget summary (Staff)

8. **PRESENTATION, DISCUSSION AND POSSIBLE RECOMMENDATION TO THE BOARD OF SUPERVISORS ON THE REGIONAL WATER QUALITY CONTROL BOARD'S (RWQCB) NAPA RIVER SEDIMENT TMDL IMPLEMENTATION PLAN AND RELATED BASIN PLAN AMENDMENT:**

Presentation, discussion and possible recommendation to the Board of Supervisors on the San Francisco Bay Regional Water Quality Control Board's (RWQCB) proposed Napa River Sediment Total Maximum Daily Load (TMDL) Implementation Plan and related Basin Plan Amendment, intended to reduce sediment supply and enhance habitat conditions in Napa River and its tributaries to meet beneficial use requirements under the Clean Water Act (RWQCB/Staff)

9. **PRESENTATION AND DISCUSSION ON THE NAPA-SONOMA MARSH AND NAPA RIVER SALT MARSH RESTORATION PROJECT:**

Presentation and discussion of the **Napa-Sonoma Marshes State Wildlife Area and Napa River Marsh Restoration Project**; including historical background, marsh characteristics and Napa River marsh restoration goals, alternatives and where to find more information about the project (CA DFG/Staff)

10. **FUTURE AGENDA ITEMS** (Board/Staff)

11. **NEXT MEETING:**

Regular Board Meeting of August 24, 2006 – 4:00 PM
Hall of Justice Building, 2nd floor Conference Room, 1125 Third Street, Napa

12. **ADJOURNMENT** (Chairman)

Note: If requested, the agenda and documents in the agenda packet shall be made available in appropriate alternative formats to persons with a disability. Please contact Jeff Sharp at 707-259-5936, 1195 Third St., Suite 210, Napa CA 94559) to request alternative formats.



Watershed Information Center & Conservancy OF NAPA COUNTY

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- MINUTES / ACTION SUMMARY -

REGULAR BOARD MEETING

Thursday, January 26, 2006 at 4:00 p.m.
2nd Floor Conference Room, Hall of Justice Building,
1125 Third Street, Napa CA

1. CALL TO ORDER, INTRODUCTION OF NEW MEMBERS & ROLL CALL (Chairman/Staff)

Members Present: Diane Dillon, Mark Luce, David Graves, Phill Blake, Charles Slutzkin, Marc Pandone, Richard Camera, Steven Rosa, Karen Slusser

Members Absent Excused: Jeff Reichel, Don Gasser, Kate Dargan, Jeffrey Redding, Robert Steinhauer

Members Absent: Lori Luporini, Mark Van Gorder

Staff Present: Patrick Lowe, Jeff Sharp

Item 6c was heard first to facilitate late arrivals to the meeting. See minutes below relating to that item.

2. APPROVAL OF ACTION MINUTES

None at this time (Chairman)

3. PUBLIC COMMENT

In this time period, anyone may comment to the Board regarding any subject over which the Board has jurisdiction, or request consideration to place an item on a future Agenda. No comments will be allowed involving any subject matter that is scheduled for discussion as part of this Agenda. Individuals will be limited to a three-minute presentation. No action will be taken by the Board as a result of any item presented at this time. (Chairman)

Outcome: Kent Rupert from the Institute for Conservation Advocacy, Research and Education (ICARE) requested to be on the Board's March agenda. Charles Slutzkin reported WICC was mentioned as a multi-jurisdictional organization at NCLOG meeting. Diane Dillon informed the group that the NCLOG consult compiled a list of County organizations to assess possible efficiencies. If NCLOG wishes WICC involvement, the WICC Board will be notified.

4. DISCUSSION AND ACTION:

- a. **Election of new Chair and Vice-Chair** for year 2006 (per Bylaws § II.A.) (Board/Staff)

Outcome: Election. Board elected Charles Slutzkin as Chair and Don Gasser as Vice Chair.

- b. Discussion and **final adoption of 2006 Meeting Calendar** (per Bylaws§ III.A.) [continued from December 15, 2005 Special Meeting] (Staff)

Outcome: Adoption. Board adopted the 2006 Calendar as presented.

Item 7 heard at request of RCD staff (needing to leave meeting early). See minutes below relating to that item.

5. ANNOUNCEMENTS (Board/Staff)

- a. Available **flood damage assistance**: Natural Resource Conservation Service's **Emergency Watershed Protection Program** and **Environmental Quality Incentives Program**, USDA Farm Service Agency's **Emergency Conservation Program**, Napa County's **Streambank Repair Program** (NRCS/Staff)

Outcome: Informational. Phill Blake presented the Board with a summary of NRCS's Emergency Watershed Protection Program and summarized some of the Dec. 31st flood damage affecting many streams and agricultural lands in the county. Phill further outlined other programs (EQIP, USDA ECP and Napa County's Stream Bank Repair Program) that are in place to help those with stream bank failures, additionally, Phill invited those suspecting they may have stream/watershed damage on their property to contact the NRCS for assessment and possible assistance.

- b. Grant news: State Water Board adopts **2005-06 Consolidated Grants Program Guidelines**, deadline for application is Thursday, February 9, 2006 (Staff)

Outcome: Informational. Staff informed the Board that the 2005-06 Consolidated Grant Guidelines are available and that many local watershed groups are looking to that Program for funding. As a result, recommendations for support may come to the WICC Board's attention in the coming months.

- c. Others (Board/Staff)

Outcome: Informational. Sandy Elles, of the Napa County Farm Bureau, explained that the Farm Bureau would like to collaborate with the WICC and its partners on education and outreach programs to provide science-based watershed information to our community's farmers and land managers.

6. UPDATES/REPORTS/PRESENTATIONS:

- a. Update on current **County General Plan Update** process and General Plan Steering Committee activities (Board/Staff)

Outcome: Informational. Staff presented the Board with the Steering Committee's 2006 meeting schedule and outlined a number of recent activities underway (discussion of Angwin area, outreach of Hispanic population, and upcoming workshops).

- b. Report on Flood District's approval to **reassign the Napa Valley Watershed Management Feasibility Study** to Napa County and their recommendation that the **WICC be delegated an advisory role to oversee the study** (Staff)

Outcome: Informational. Staff informed the Board that the Flood District Board has agreed to reassign the Study to the Board of Supervisors for oversight by the WICC Board. Staff will continue to work with the Army Corps and Flood District staff to transfer the Study and its obligations, which supports various aspects relating to watershed planning and management as outlined in the WICC Board's Strategic Plan.

- c. **Presentation on recent flood event**, an overview of the New Years Eve event and a look at the extent and damage of some of the flooding (Flood District Consultant/Staff)

Outcome: Informational. Berry Martin, public relations consultant for the Napa County Flood and Water Conservation District presented the Board with an overview of the December 31st flood event. Mr. Martin discussed the expanse of the flood waters, the damage incurred and the community's emergency response efforts. He highlighted lessons learned from the flood and some future steps to be taken to help lessen the potential impacts of flooding in the county.

- d. Others (Board/Staff)

Outcome: Informational. Staff informed the Board that City of St. Helena has nominated a member of their council (Eric Sklar) to serve as their representative on the WICC Board, and that the Board of Supervisors will consider the nomination for appointment on February 7, 2006. Once the appointment is made, WICC Board will contain a representative from each city/town within the county.

7. **DISCUSSION AND POSSIBLE REQUEST AND RECOMMENDATION THAT THE BOARD OF SUPERVISORS SUPPORT AND DIRECT THE WICC TO PARTNER ON THE GRANT PROPOSAL DESCRIBED BELOW:**

Discussion and possible action by the WICC Board to **request and recommend that the Board of Supervisors support and direct the WICC to partner on a grant proposal**, entitled "Water for Fish and Farms," submitted by the RCD to the CALFED Watershed Program (RCD/Staff)

Outcome: Recommendation. The WICC Board recommended that the Board of Supervisors support the grant request and direct the WICC to partner with the RCD as a part of the grant work program. Leigh Sharp, RCD staff, explained the proposed work plan and how the WICC website will be utilized to provide the community with access to real-time stream flow data as a part of the proposed project.

8. **PRESENTATION AND DISCUSSION BY THE REGIONAL WATER QUALITY CONTROL BOARD ON NAPA RIVER TMDL IMPLEMENTATION PLAN:**

Presentation and discussion by the San Francisco Bay Regional Water Quality Control Board (RWQCB) on the proposed Napa River **Total Maximum Daily Load (TMDL) Implementation Plan**, designed to address listed pollutants, and meet beneficial use requirements under the Clean Water Act (RWQCB/Staff)

Outcome: Due to RWQCB staff's availability, the presentation was postponed and scheduled for the Board's February 23rd meeting.

9. **FUTURE AGENDA ITEMS** (Board/Staff)

- a. Napa Sanitation District **tour and presentation on Strategic Plan for Recycled Water**

- b. Others (Board/Staff)

Outcome: Sandy Elles, Napa County Farm Bureau, suggested the WICC Board provide, or lead, a forum for community dialog on the upcoming RWQCB Total Maximum Daily Load (TMDL) Implementation Plan and pending Basin Plan Amendment.

10. NEXT MEETING:

Special Board Meeting of February 23, 2006 – 4:00 PM

Napa Sanitation District Conference Room, Administration Office, 935 Hartle Court, Napa, California

Please be on time. A tour of the NSD water recycling facility will be provided under limited daylight (please dress appropriately).

11. ADJOURNMENT (Chairman)

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www.napawatersheds.org



CALFED Science Program 2006 Focused Proposal Solicitation Package (PSP) Now Open

PSP Synopsis

Through the California Bay-Delta Authority, the CALFED Science Program is seeking to invest grant funding in projects that will fundamentally advance the understanding of the complex environments/systems within the CALFED jurisdiction to aid policy-makers and resource managers. The geographic area of interest is the CALFED Bay-Delta System which includes California's Sacramento and San Joaquin River watersheds and the San Francisco Estuary with a focus on the Delta .

Specifically, the Science Program is soliciting research proposals focused on the following four topics:

Environmental Water

Aquatic Invasive (Exotic) Species

Trends and Patterns of Populations and System Response to a Changing Environment

Habitat Availability and Response to Change

Award Information

Anticipated Type of Award: Grant

Estimated Number of Awards: 5 - 10

Anticipated Total Funding: Approximately \$6 million

Potential Funding per Grant: Less than \$6 million

Length of Funding: Up to 3 years

Eligibility Information

Any public agency or nonprofit organization capable of entering into a grant agreement with the State or Federal government may apply. This includes, but is not limited to: **(1)** local agencies; **(2)** private nonprofit organizations **(3)** tribes; **(4)** universities; **(5)** State agencies; and **(6)** Federal agencies.

Deadline

Proposals will be accepted until 5 pm, Pacific Daylight Time, August 31, 2006.

Contacts Proposal Submittal Process Helpline: (877) 408-9310 or via email: help@solicitation.calwater.ca.gov

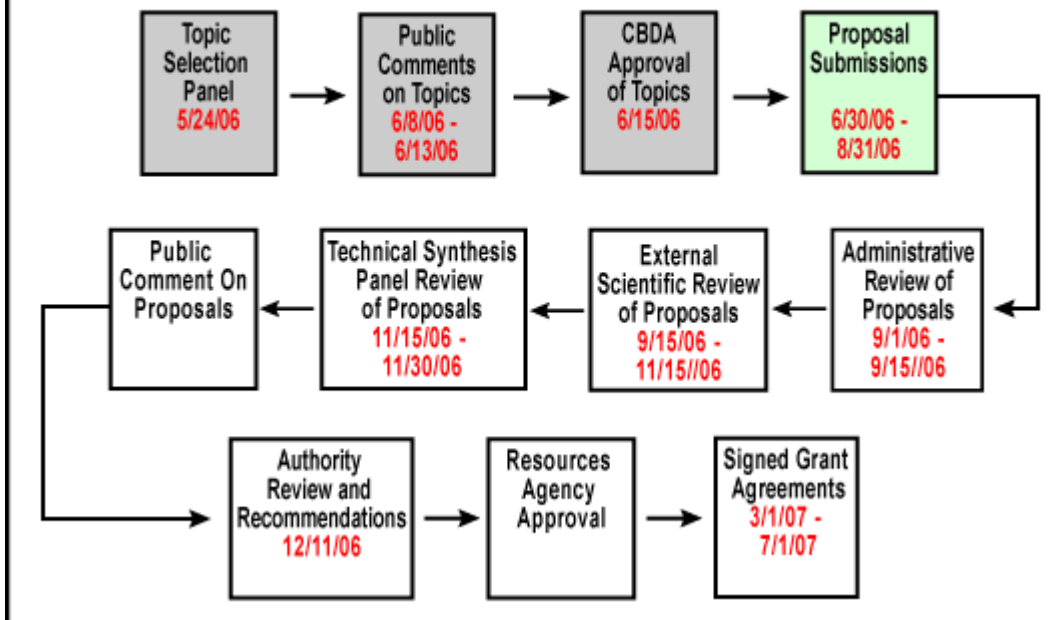
Goals of this PSP

The PSP is one of several tools the Science Program uses in accordance with its mission and goals to establish unbiased and authoritative knowledge directly relevant to CALFED actions. The goal of this PSP is not to create knowledge for its own sake nor is it to fund routine monitoring or mandated projects. The goal is to invest in knowledge that will fundamentally advance the understanding of the complex environments/systems within the CALFED jurisdiction to aid policy-makers and managers. This knowledge must be timely and highly relevant to CALFED decision-making.

This focused PSP will help to achieve this goal by:

1. identifying scientific unknowns of the highest priority to the CALFED community prior to the opening of the PSP;
2. soliciting for and supporting new scientific studies that closely investigate these scientific unknowns;
3. thoroughly analyzing what is learned through unbiased scientific review;
4. clearly articulating what is learned through publications, conferences, workshops, and web-sites.

2006 CALFED Science Program Focused PSP Schedule





COUNTY OF NAPA

General Plan Update

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Meetings

[Upcoming Public Meetings](#) | [Upcoming Steering Committee Meetings](#) | [Past Steering Committee Meetings](#)

Upcoming Public Meetings

July 20, 2006 & August 23, 2006

Pacific Union College
 Seventh-day Adventist Church
 Fireside Room
 10 Angwin Ave.
 Angwin, CA 94508
 6:30 p.m.

Upcoming Steering Committee Meetings

July 26, 2006

Topic: Circulation Element *

Napa County Office of Education
 Boardrooms A, B and C
 2121 Imola Ave., Napa, CA 94559
 2 p.m.

Past Steering Committee Meetings

June 28, 2006 - Meeting Agenda and Materials

May 31, 2006 - Meeting Agenda and Materials

May 10, 2006 - Meeting Agenda and Materials and Minutes

April 26, 2006 - Meeting Agenda and Materials, 2005 Napa County Visitor Profile Study, NCCI Report, Countywide Visitor-Serving Strategy Report, Final Draft, South County Economic Impact Report and Minutes

March 29, 2006 - Meeting Agenda and Materials and Minutes

February 22, 2006 - Meeting Agenda, Materials, Water Resources Study and Minutes

February 1, 2006 - Meeting Agenda, Materials, Staff Report Attachments and Minutes

January 11, 2006 - Meeting Agenda, Materials and Minutes

November 30, 2005 - Meeting Agenda, Materials and Minutes

October 26, 2005 - Meeting Agenda, Materials and Minutes

September 28, 2005 - Meeting Agenda, Materials and Minutes

* Note: The content of the meeting is tentative and subject to change.



Institute for Conservation Advocacy, Research and Education ICARE

2945 Atlas Peak Road, Napa, California 94558 * Phone (707) 255-7434 fax: 259-1097

www.icarenapa.org

June 15, 2006

Jeff Sharp
Napa County Watershed Information Center and Conservancy
1195 3rd Street
Napa Ca. 94558

Jeff,

In response to your June 14, 2006 email you requested information to further the **Institute for Conservation Advocacy, Research and Education's** request to get a letter of support from the WICC for our **'Napa River Monitoring Project'**.

Project Description

The Institute for Conservation Advocacy, Research and Education, ICARE, will collect benthic macro invertebrates (BMI) and adult macro invertebrates throughout 2006 and 2007 to determine the distribution and abundance of aquatic insects in the Napa River watershed. BMI are an important part of the food chain in streams and are excellent water quality indicators. ICARE will use community volunteers, including students, along with our trained biologists lead by Dr. Charley Dewberry, stream ecologist, to collect these biological samples necessary to determine the current health of the Napa River basin. The Napa River is an impaired watershed due to sediment, nutrients and pathogens and the River is listed on the 303d list of the Clean Water Act. ICARE seeks to improve the health of the Napa River watershed and biological monitoring is necessary to determine the status of water quality and stream flow. ICARE's 'Napa River Monitoring Project' provides biological data to help determine stream health. This project will help protect conserve and restore fish, plants and wildlife.

Project Activities include:

- the collection/sampling of aquatic insects known as benthic macro invertebrates (BMI) from 30 different random sites in the Napa River watershed
- collecting adult macro invertebrates weekly for one year
- adjusting all elements of our project as needed to accommodate new information (adaptive management).

Work Plan:

1. ICARE will collect/sample BMI from 30 different sites from April-May 2006.

- 2.** For one year weekly a trained biologist will collect adult macro invertebrates from Suscol Creek at three site locations. Dr. Dewberry will begin to develop a species list of macro invertebrates for the Napa River basin from June 2006-June 2007.
- 3.** A qualified laboratory will determine the BMI taxa from the 30 sampling sites and produce a detailed analysis of the abundance, distribution and richness of the BMI samples. June- September 2006
- 4.** A final draft report will be peer reviewed by the Scientific Oversight Panel- September-November.
- 5.** BMI final results and a final report will be made available at a public presentation- December 2006.
- 6.** BMI and macro invertebrate data results will be distributed broadly to the public at the end of the project.

Thank You,

Chris Malan
Executive Director



NAPA COUNTY, CALIFORNIA
MEDIA RELEASE

Contact: Carly Aubrey
Conservation Development &
Planning Department
Tel: 707-253-4417

Date: June 16, 2006

SUBJECT: Wildlife Conservation Grant Funds Available

The Napa County Conservation, Development and Planning Department announce that the Wildlife Conservation Commission is now receiving grant applications. The grant funds are raised from fines through the Department of Fish and Game for the preservation, propagation, and protection of birds, mammals, fish and amphibians. The Wildlife Conservation Commission will meet in August to review the applications and make recommendations to the Napa County Board of Supervisors on the expenditure of funds.

The total amount of grant funds available for project proposals is approximately \$12,000. Past project proposals have included wildlife rehabilitation, native habitat enhancement, environmental education programs and species monitoring studies. The average grant amount disbursed by the Commission in the past few grant cycles has been \$3,500. The total amount available for land acquisition items is approximately \$36,000.

The Wildlife Conservation Commission consists of eight (8) members: Four (4) At-Large/Citizen Representatives, One (1) Sportsperson or Angler, One (1) Youth, One (1) Wildlife Conservation Representative and One (1) Member of the Conservation, Development and Planning Commission.

Grant application materials are available at the Conservation, Development and Planning Department, 1195 Third Street, Suite 210, Napa, California 94559. Telephone (707) 253-4417.

Proposals must be received by Monday, July 31, 2006 at 4:45 p.m.

-END-

WICC Board of Directors

Chair
Charles Slutzkin
Public at Large

Vice Chair
Don Gasser
Napa County Resource Conservation District

Phill Blake
Natural Resource Conservation Service

Richard Camera
Public at Large

Diane Dillon
Napa County Board of Supervisors

Leon Garcia
American Canyon City Council

David Graves
Napa County Planning Commission

Mark Luce
Napa County Board of Supervisors

Marc Pandone
Public at Large

Jeffrey Redding
Public at Large

Jeff Reichel
Land Trust of Napa County

Steven Rosa
Yountville Town Council

Eric Sklar
St. Helena City Council

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Patrick Lowe
Secretary to the Board Deputy Director, CDPD

Jeff Sharp
Watershed Coordinator Planner III, CDPD

July 27, 2006

Steven Rae, Chairman
Napa County Wildlife Conservation Commission
1195 Third St., Suite 210

RE: The Institute for Conservation Advocacy, Research and Education (ICARE) request for funding to support aquatic insect monitoring in Napa River watershed

Dear Mr. Rae,

It is our understanding that ICARE will be considered for Napa County Wildlife Conservation Commission funding. ICARE is requesting funds to support their Napa River benthic macro invertebrate study. The work plan includes the collection, analysis and long-term monitoring of aquatic insects to assess and determine the water quality and stream-flow of the Napa River.

The Watershed Information Center and Conservancy (WICC) Board of Napa County serves as an advisory committee to the Napa County Board of Supervisors. The WICC is governed by a 17-member Board of Directors representing a broad range of stakeholder interests. The mission of the WICC is to guide and support community efforts to maintain and improve the health of Napa County's watershed lands by: coordinating and facilitating partnerships among the individuals, agencies, and organizations involved in improving watershed health; supporting watershed research activities; and providing watershed information and education. The WICC supports and promotes the activities of watershed restoration organizations and facilitates cooperation among them.

ICARE's aquatic insect monitoring project supports the WICC's mission to educate and support the community's efforts to maintain and improve the health of the County's watershed lands. ICARE's report of the distribution and abundance of aquatic insects in the Napa River will provide important information on the health of the river system and supports the WICC's efforts in watershed assessment and management, as well as restoration planning and project prioritization.

Thank you for considering ICARE as a potential funding recipient.

Sincerely,

Charles Slutzkin, Chair
Watershed Information Center and Conservancy Board of Napa County

watershed information center & conservancy of napa county **wicc**

DRAFT

Budget Summary
2006-07

(FY: July 1, 2006 - June 30, 2007)

July 2006

Item 7

Role and Responsibility

The WICC Board serves as an advisory committee to Napa County Board of Supervisors. The role of the WICC is to assist the Board of Supervisors in their decision-making process and serve as a conduit for citizen input by gathering, analyzing and recommending options related to the management of watershed resources. In that capacity, the WICC has a responsibility to publicly evaluate and discuss matters they have been requested to review and comment upon by the Board of Supervisors. The WICC is not authorized to sign contracts, disburse funds, implement programs, employ or consider any personnel matter or act in any other capacity that involves the direct management or operation of a County program. The Board of Supervisors has charged the WICC (under Resolution 02-103 and through verbal direction) with making recommendations to the Board of Supervisors on matters relating to watershed restoration projects and resource protection activities, coordination of land acquisition, and development of a long-term watershed resource management program providing public outreach and education, monitoring coordination, inventory and assessment, and data management.

WICC Mission Statement

"The Watershed Information Center and Conservancy (WICC) of Napa County educates and supports the community in its efforts to maintain and improve the health of Napa County's watershed lands." (2005 Strategic Plan)

Vision 2025

"Napa County's watersheds will maintain a balance of natural processes to support healthy native fisheries, an abundance of native plants and wildlife, and water quality that meets state standards. The Napa River and its tributaries, no longer listed as impaired, will be a nation-wide example of what a community, working together, can do to improve the health of its watersheds."

The Watershed Information Center and Conservancy of Napa County will be a guiding force in creating a shared, community-wide understanding of Napa County's watershed lands. Having educated a generation of community members about the county's watersheds, all of Napa County's residents will be conscious of the critical balance between agriculture and development, and ecological and natural processes that must be maintained in order to assure continued watershed health.

A network of active creek and land stewardship groups and watershed organizations will carry out watershed monitoring, enhancement projects and management activities. The majority of the County's watershed lands will be certified as "Watershed-Friendly" and those landowners will be among the most conscious of watershed stewards, consistently monitoring and managing their lands for watershed health.

The state-of-the-art WICC WebCenter will be accessible, understandable and user friendly, allowing everyone from school children to scientists access to the most current, valid and vivid information about Napa County's. This accurate and straightforward information will allow users to weigh scientific facts and recognize community values to make well-informed management decisions."

Guiding Principles

- The WICC is part of the solution to watershed issues and concerns.
- The WICC is politically neutral.
- The WICC collects and disseminates the best possible information to aid decision-making.
- The WICC provides tools, information and education so that all members of the community can discover and understand their watershed.
- Collaboration is the most effective way to accomplish the mission of the WICC and all organizations and individuals working in Napa County's watersheds are encouraged to participate in the WICC.
- The WICC supports and promotes the activities of other watershed restoration organizations and facilitates cooperation among them.
- Participation in the WICC and provision of information to the WICC WebCenter is done voluntarily by agencies, organizations, and individuals.
- The WICC seeks and accepts funding from foundations, private individuals, organizations, and local, state, and federal government to address its financial needs and to further its mission and goals.

Annual WICC Allocation

Since its creation in May 2002, the Board of Supervisors has supported the WICC Board in carrying out its mission and charge. In addition the Board of Supervisors also provides the WICC with staff support through the Conservation Division of the Conservation, Development and Planning Department. A limited amount of additional funding is received from grants to support staffing needs and actions identified in the WICC Board's Strategic Plan.

Fiscal Year:	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Budgeted	(Program Initiated) \$100,000.00	\$100,000.00	\$100,000.00	\$90,000.00	\$100,000.00	[\$100,000]	[tbd]	[tbd]
Expended:		\$16,054.00	\$97,670.00	\$88,526.00	-	-	-	-
Grant(s):		\$5,322.22	\$31,933.32	\$31,933.32	\$36,000.00	\$10,000.00		
Staffing (FTE):		1.0	1.1	1.0	1.0			

Recommended FY2006-07 Expenditure

Strategic Area/Goal

2006-07 Allocation

% of Total

Watershed Conservation & Management (WCM)

Improve watershed health throughout Napa County by supporting community efforts to protect and enhance watershed lands and natural processes with an emphasis on riparian corridors and native species and their habitats.

\$12,000.00

12.0%

WICC Website (WEB)

Maintain an understandable, interesting, and user friendly website that provides high-quality environmental data and information allowing the community to better understand and manage the County's watersheds.

\$30,000.00

30.0%

Communication, Coordination & Partnerships (CCP)

Forge strong partnerships that foster cooperation, coordination and consistency among all those working to improve the health of Napa County's watersheds.

\$10,000.00

10.0%

Education (EDU)

The Community - those who live, work, and visit the County's watersheds – understands the importance of watershed stewardship and watershed health and is actively involved in improving the health of the County's watersheds.

\$25,000.00

25.0%

Organizational Structure and Funding (OSF)

Obtain adequate resources and establish the appropriate organizational structure to ensure the WICC's long-term success.

\$20,500.00

20.5%

Meeting and Administration Materials

Provide meeting notification, mailings, agenda materials, displays, maps, equipment and refreshments.

\$2,500.00

2.5%

Total: \$100,000.00 100.0%

Watershed Information Center
& Conservancy of Napa County
1195 Third Street, Suite 210
Napa, California 94559

www.napawatersheds.org
(707) 253-4417
mailto: info@napawatersheds.org

WICC Board of Directors

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Public at Large

Vice Chair
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*Napa County Resource
Conservation District*

Phill Blake
*Natural Resource
Conservation Service*

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Council*

David Graves
*Napa County Planning
Commission*

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Public at Large

Jeffrey Redding
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*Land Trust of Napa
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*Watershed Coordinator
Planner III, CDPD*

Memorandum

Date: July 19, 2006

To: WICC Board of Directors

From: Jeff Sharp, Napa County Conservation, Development & Planning Dept.

RE: Regional Water Quality Control Board Presentation on Napa River Sediment Total Maximum Daily Load and related Basin Plan Amendment

- VIA E-MAIL FROM RWQCB STAFF -

To the Board of the Napa County Watershed Information Center and Conservancy,

Thank you for giving us the opportunity to present our proposed plan - to reduce sediment supply and enhance habitat conditions in Napa River and its tributaries - at your meeting on July 27. Attached find 1) a copy of a letter we recently mailed to all Napa Valley elected officials and municipal managers; and b) our proposed plan to reduce sediment supply and enhance habitat conditions.

The letter provides a summary of dates for upcoming public meetings and hearings to discuss the plan, states our interest in addressing questions and concerns, and in developing a plan that is fair and effective in enhancing water quality and habitat conditions.

The proposed Basin Plan amendment includes an action (implementation) plan to achieve water quality standards. In this, we state our interest in adopting conditional waivers of state permit requirements to achieve necessary sediment load reductions, and our endorsement of landowner initiated cooperative programs to enhance habitat conditions. Findings and actions called for in the proposed Basin Plan amendment are discussed in greater detail in a supporting staff report which can be downloaded for our website (see attached letter for the URL address).

We look forward to the opportunity to address your questions and concerns, and to work together with you to protect and enhance the Napa River and its tributaries. Please feel free to contact me in advance of the meeting, if I can help in clarifying anything in the plan.

Sincerely,

Mike Napolitano
California Regional Water Quality Control Board San Francisco Bay Region
1515 Clay Street, 14th Floor
Oakland, CA 94612
(510) 622-2397
mnapolitano@waterboards.ca.gov



California Regional Water Quality Control Board

San Francisco Bay Region



Linda Adams
Agency Secretary

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
<http://www.waterboards.ca.gov/sanfranciscobay>

Arnold Schwarzenegger
Governor

July 17, 2006

<<mail merge address block>>

Dear (Elected Official, Municipal Manager, WICC Board Member)

As our agency moves forward with a proposed plan to reduce sediment supply and enhance habitat conditions in Napa River and its tributaries, we want to be sure that you have the opportunity to learn about the plan, discuss issues of concern, and provide comments to our Board.

This is a very significant project for the Water Board, as the Napa River and its tributaries are an important part of the natural heritage of the Bay Area and northern California. We are confident that once implemented, the actions we are proposing will facilitate significant increases in the sizes of the steelhead and salmon runs in the Napa River watershed, and enhance the overall health of the native fish community and the aesthetic and recreational values of the river and its tributaries.

Sediment reduction programs for streams are complicated and challenging for both regulatory agencies and local stakeholders. Over the six years that this project has been in development, we have been fortunate to have a number of committed local partners reviewing our work, giving us the benefit of their experience and expertise, and commenting on successive studies and the proposed plan. On June 30 we public-noticed a draft amendment to the Water Quality Control Plan for San Francisco Bay Basin and staff report supporting the Napa River sediment reduction and habitat enhancement plan. These documents can be downloaded at <http://www.waterboards.ca.gov/sanfranciscobay/napariversedimenttmdl.htm>.

The public comment period on the documents continues through Tuesday, August 15 (close of business). Board hearings are scheduled for September 13 (testimony) and November 8 (proposed adoption) at the office of the San Francisco Bay Regional Water Quality Control Board in Oakland. Later this month, we will discuss our proposed plan and respond to questions from the public at two meetings in Napa Valley:

- A Town Hall Meeting in Yountville, on Wednesday, July 26, from 10:00 a.m. until noon at the Yountville Community Hall. This event is sponsored by the Resource Conservation District, Friends of Napa River, Napa County Farm Bureau, and the Napa County Watershed Information Center and Conservancy (WICC).
- The meeting of the WICC board on the following day, Thursday, July 27, at 4 p.m. in downtown Napa, at the Napa County Hall of Justice, 1195 Third Street, 2nd floor.

I hope to see you at one of these events. In any case, please feel free to give me or Mike Napolitano of my staff a call at any time. We'll be happy to discuss the TMDL with you. I can be reached at 510-622-2441 or via email at dwhyte@waterboards.ca.gov. Mike can be reached at 510-622-2397 or via email at mnapolitano@waterboards.ca.gov.

Sincerely,

Dyan Whyte
Basin Planning and TMDL Program Manager

Preserving, enhancing, and restoring the San Francisco Bay Area's waters for over 50 years

Proposed Basin Plan Amendment: Napa River Sediment Reduction and Habitat Enhancement Plan

The goals of the Napa River Sediment Reduction and Habitat Enhancement Plan (Plan) are to:

- Conserve the steelhead trout population
- Establish a self-sustaining Chinook salmon population
- Enhance the overall health of the native fish community
- Enhance the aesthetic and recreational values of the river and its tributaries

To achieve these goals, specific actions are needed to:

- Attain and maintain suitable gravel quality and diverse streambed topography in freshwater reaches of Napa River and its tributaries
- Protect and/or enhance base flows in tributaries and the mainstem of the Napa River
- Reduce the number and significance of human-made structures in channels that block or impede fish passage
- Maintain and/or decrease summer water temperatures in tributaries to the Napa River

The following sections establish:

1. A sediment total maximum daily load (TMDL) defining the allowable amount of sediment that can be discharged into the Napa River, expressed as a percentage of the natural background sediment delivery rate to channels
2. An implementation plan to achieve the TMDL and related habitat enhancement goals

Problem Statement

Steelhead and salmon populations in the Napa River and its tributaries have declined substantially since the late 1940s. Results of recent analyses of fisheries and sediment sources indicate that:

1. **Spawning and juvenile rearing habitat for salmon and steelhead are adversely affected by high concentrations of fine sediment (primarily sand) deposited in the bed of the Napa River and its tributaries.**

Successful reproduction by salmon and steelhead depends on adequate flow through streambed gravels (permeability) in order for eggs to hatch and larvae to grow. As the concentration of fine sediment (primarily sand) in the streambed increases, permeability decreases, which in turn increases egg and larval mortality, and ultimately causes a decrease in the number of young fish that emerge from the streambed. Similarly, as the concentration of sand in the streambed increases, the frequency and extent of streambed scour is intensified, further increasing mortality between spawning and emergence by washing eggs and/or larvae out of the bed during common high flow events.

Even small increases in the concentration of fine sediment in the streambed may degrade the quality of rearing habitat for juvenile steelhead and salmon. Young steelhead need open spaces between clusters of large cobbles and boulders in order to escape high flows and predation during the winter. Similarly, as the concentration of fine sediment in the streambed increases, growth and survival of juvenile steelhead and salmon decreases as a consequence of lower biomass of aquatic insect prey species, and increasing activity level, aggressive behavior, and attacks between juvenile salmon and steelhead as they compete for food.

- 2. Channel incision has greatly reduced the quantity and quality of spawning and rearing habitat for Chinook salmon in Napa River watershed. Habitat losses as a result of incision exert a significant negative influence on freshwater growth and survival of juvenile salmon, and therefore, on the number of Chinook salmon that ultimately return to spawn.**

Channel incision, the progressive lowering over time of streambed elevation as a result of net erosion, has lowered the streambed of the mainstem of the Napa River by more than two meters since the start of the current episode of incision, which began sometime after 1965. As a result, habitat is being degraded. The channel has become isolated from its flood plain and there has been a large reduction in the size and frequency of riffles, gravel bars, side channels, and sloughs. These habitats provide essential spawning and juvenile rearing habitat for Chinook salmon. Human activities that have contributed to channel incision in the River, including (but not necessarily limited to) levee building, construction of large tributary dams, straightening of some mainstem channel reaches, filling of side channels, historical gravel mining, dredging to reduce flood risk, and intensive removal of large woody debris.

- 3. Low flows and stressful water temperatures during the dry season, and fish migration barriers exert a significant negative influence on the number (and fitness) of juvenile steelhead that migrate to the ocean from the watershed, and as such, on the number of adults that successfully return to spawn.**

Drifting aquatic insects produced in riffles often are the primary source of food for juvenile steelhead. Low or no flow over riffles during the dry season greatly reduces this food source. An association between low and/or negative growth rates in juvenile steelhead and poor baseflow persistence was documented in the summer and fall of 2001 in Napa River watershed. Summer water temperatures in tributaries also are often stressful to juvenile steelhead, likely contributing to poor growth rates that were documented. If low growth rates in summer are not mitigated by high rates of growth during other times of the year, significant reductions in survival rates during all subsequent life stages may result.

Poor access to and from potential spawning and rearing habitat due to man-made structures built in channels (e.g., dams, road crossings, weirs, etc.) and human water uses have reduced the size of the steelhead run in the Napa River watershed. For example, approximately 30 percent of the land area in Napa River watershed drains into over 400 reservoirs constructed on stream channels.

Due to excess erosion and sedimentation in the Napa River Watershed, the narrative water quality objectives for sediment and settleable material are not being met and cold freshwater habitat, wildlife habitat, fish spawning, recreation, and preservation of rare and endangered species beneficial uses are impaired. In addition, channel incision has reduced the quantity of gravel bars, riffles, side channels, and sloughs, which threatens Chinook salmon and other fish and aquatic wildlife species. Channel incision is a controllable water quality factor that is contributing to a violation of the narrative water quality objective for population and community ecology.

Numeric Targets

Meeting the numeric targets listed in Table 1 will allow water quality in the Napa River and its tributaries to achieve the Basin Plan’s narrative water quality objectives for sediment, settleable material, and population and community ecology.

Table 1. TMDL sediment targets for the Napa River and its Tributaries

Spawning gravel permeability	Median value ≥ 7000 cm/hr ^a
Streambed scour	Mean depth of scour ≤ 15 cm ^b
<p>^a Target applies to all potential spawning sites for steelhead and salmon in the Napa River and its tributaries, excluding those upstream of municipal water supply reservoirs.</p> <p>^b Target applies to the response of the streambed to peak flows less than the annual (one-year) flood at all potential spawning sites for salmon in gravel-bedded reaches of: 1) mainstem Napa River; and 2) alluvial reaches of tributaries where streambed slope is between 0.001 and 0.02. Potential spawning sites can be identified based on the following: 1) dominant substrate size in the streambed surface layer is between 8 and 128 mm; 2) minimum surface area of gravel deposit is 0.2 square meters in tributaries and 1.0 square meter in mainstem Napa River; and 3) located within mainstem Napa River at a riffle head, pool tail, and/or pool margin or in tributary reaches where streambed slope < 0.03, or in tributary reaches where streambed slope > 0.03 in pool tails, backwater pools, and/or in gravel deposits associated with flow obstructions (e.g., woody debris, boulders, banks, etc.).</p>	

Sources

Field inventories conducted throughout the watershed between 1994 and 2004 provide credible estimates of the rates and sizes of sediment delivered to Napa River watershed channels during the decade. Based on this work, and application of channel and reservoir mapping, the Water Board concludes that:

1. More than half of fine sediment delivered to Napa River during the 1994–2004 period is associated with land use activities including roads, human-caused channel incision, vineyards, intensive historical livestock grazing, and urban stormwater runoff.
2. In addition to its prominence in the sediment budget, channel incision is the primary agent for isolation of the channel from its flood plain and a reduction in the quantity and frequency of spawning and rearing habitat for salmon and steelhead in Napa River and the lower reaches of its tributaries.
3. Channel sediment loads vary greatly depending upon nature of underlying bedrock or sediment deposits, land use activities, and the location of dams.
4. Thirty percent of the watershed drains into reservoirs constructed on tributary channels. These reservoirs capture all of the gravel and sand, and most of the finer sediment input to upstream channels. Nonetheless, anthropogenic activities, downstream of dams, are contributing enough sediment such that the fine sediment load is substantially elevated in the Napa River downstream of the reservoirs.

Mean annual sediment delivery rate to channels is estimated to have been 271,000 metric tons per year during 1994-2004, which equals 464 metric tons per km² land area per year (Table 2). Natural background rate of sediment delivery during this period, absent dams and human-caused erosion is estimated to have been 253 metric tons per km² per year. Therefore total sediment load in Napa River at Soda Creek is estimated to have been 183 percent of natural background (e.g., $464/253 = 183\%$) during 1994-2004. Table 1 breaks down the sediment sources to the Napa River, with annual average rate calculated at Soda Creek over the 10-year study period.

Table 2. Mean Annual Sediment Delivery to Napa River at Soda Creek (1994-2004)

Source	Estimated Mean Annual Delivery Rate (metric tons/yr)
Land areas upstream of dams (e.g., fine sediment discharge from reservoirs)	
▪ Natural Processes	7,000
▪ Human Actions	11,000
Land areas downstream of dams	
▪ Natural Processes:	92,000
▪ Human actions:	
○ Channel incision and associated bank erosion	37,300
○ Road-related sediment delivery (all processes)	55,400
○ Surface erosion associated with vineyards and/or livestock grazing	36,700
○ Gullies and shallow landslides associated with vineyards, and/or intensive historical grazing	29,600
○ Urban Stormwater Runoff	4,000
TOTAL	271,000
Notes: Drainage area for Napa River at Soda Creek = 584 km ² . Estimates do not include sediment deposited in tributary reservoirs.	

Total Maximum Daily Load and Allocations

The Napa River sediment TMDL is established at 125 percent of natural background load. In order to achieve the TMDL, controllable sediment delivery resulting from human actions needs to be reduced by 50 percent from current proportion of the total load (Table 3). TMDL attainment will be evaluated at the confluence of Napa River with Soda Creek, which approximates the downstream boundary of freshwater habitat for salmon and steelhead.

Because dams trap almost all upstream sediment inputs to channels, natural sediment input to channels downstream of dams equals only 62 percent of the total natural background load (e.g. amount that would have been input to Napa River absent dams and human caused erosion). Almost 50 percent of the TMDL can be allocated to human-caused sources, and the TMDL equal to 125 percent of natural background load, can be achieved if human-related sources are reduced to the level of the allocations shown in Table 3.

Table 3. Total Maximum Daily Load and Load and Wasteload Allocations

Source category	Load during 1994-2004 (percentage of natural load)	Estimated reductions needed (percentage)	Load allocations (percentage of natural load)
Land areas upstream of dams			
▪ Natural processes	5	0	5
▪ Human actions	8	50	4
Land areas downstream of dams			
▪ Natural processes	62	0	62
▪ Human actions:			
○ Channel incision and associated bank erosion	26	50	13
○ Roads	36	50	18
○ Surface erosion associated with vineyards and grazing	24	50	12
○ Gullies and shallow landslides associated with vineyards, and/or intensive historical grazing	20	50	10
			Wasteload allocation (Percentage of natural load)
○ Urban stormwater runoff	2	50	1
TMDL			125

IMPLEMENTATION PLAN

The Implementation actions described below are to achieve TMDL targets and allocations and habitat enhancement goals. In addition, actions specified in this plan are expected to enhance steelhead run size and facilitate establishment of a self-sustaining Chinook salmon run.

Regulatory Tools

The only point sources of sediment identified in Tables 2 and 3 are those associated with urban stormwater runoff (e.g., municipal stormwater, runoff from State highways, and industrial and construction discharges), which are regulated by NPDES permits.

The state’s Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program requires regulation of nonpoint source discharges using the Water Board’s administrative permitting authorities, including waste discharge requirements (WDRs), waiver of WDRs, Basin Plan Discharge Prohibitions, or some combination of these. Consistent with this policy, Table 4 Implementation Measures for Nonpoint Sources specifies actions and performance standards by source category, as needed to achieve TMDL sediment targets and allocations in Napa River watershed. The Water Board will consider adopting conditions for waiving WDRs that apply to nonpoint sources (vineyards, grazing, roads, etc.) listed in Table 4.

Table 4.0 TMDL Implementation measures for Sediment Discharges Associated with Urban Stormwater Runoff

Source Category	Actions	Implementing Parties
Urban Stormwater Runoff	Comply with applicable NPDES permits	Napa County, City of Napa, Town of Yountville , City of St. Helena, City of Calistoga, City of American Canyon, State of California, Department of Transportation, Owners or Operators of Industrial facilities and construction projects > 1 acre

Problems associated with channel incision, related rapid bank erosion, and loss of essential habitat features, reflect and integrate multiple historical and ongoing disturbances, some of which are local and direct, and others that are indirect and distal. Effectively addressing these issues will require cooperative and coordinated actions by multiple landowners, working with public agencies, over significant distances along the river. The most effective means of controlling channel incision and reducing related fine sediment delivery to the river is a channel restoration program that re-establishes width-to-depth ratios and sinuosity values conducive to formation of alternate bars and a modest flood plain. The Water Board will work with stakeholders along Napa River, through local stewardship groups, to implement such channel restoration/habitat enhancement projects. Tables 5.1 to 5.4 (Implementation Measures to Protect or Enhance Habitat), specify actions to address adverse impacts of channel incision on salmon habitat quantity and quality, and to accomplish habitat enhancement goals for flow, temperature, and fish passage for steelhead and salmon.

Individual landowners or coalitions may work with “third parties” to develop and implement sediment pollutant control programs. With regard to achievement of actions to protect or enhance baseflow, fish passage, habitat complexity, and stream temperature, as specified in Tables 5.1 through 5.4 the Water Board will initially rely on cooperative programs. Reliance on

this approach is dependent on regular and substantive progress in achieving the performance milestones for sediment reduction and habitat enhancement specified in Table 6. Alternatively, the Water Board has the discretion to use WDRs and/or waste discharge prohibitions (for sediment) as primary regulatory tools for control of sediment discharges. Similarly, the Water Board may consider adopting specific water quality objectives for flow or other habitat attributes, or using alternative authorities to achieve habitat, fish passage, temperature, and flow enhancement objectives.

Table 4.1 Required and Trackable TMDL Implementation Measures for Sediment Discharges Associated with Vineyards¹

Land Use Category	Source(s) and Performance Standard(s)	Actions	Implementing Parties	Completion Dates
Vineyards	<p>Surface Erosion associated with Vineyards: Comply with Conservation Regulations (County Code, Chapter 18.108); and</p> <p>Roads: Road-related sediment delivery to channels \leq 500 cubic yards per mile per 20-year period²; and</p> <p>Gullies and/or shallow landslides: Accelerate natural recovery and minimize human-caused increases in sediment delivery from unstable areas; or</p> <p>Implement farm plan certified under Napa Green Certification Program</p>	<p>Submit a Report of Waste Discharge³ to the Water Board that provides, at a minimum, the following: a description of the vineyard; identification of site-specific erosion control measures needed to achieve performance standard(s) specified in this table; and a schedule for implementation of identified management measures as needed to achieve performance milestones listed below in Table 6.</p>	<p>Vineyard owner and/or operator</p>	<p>October 2012</p>
		<p>Comply with applicable Waste Discharge Requirements (WDRs) or waiver of WDRs.</p>	<p>Vineyard owner and/or operator</p>	<p>As specified in applicable WDRs or waiver of WDRs</p>
		<p>Report progress on implementation of measures to reduce fine sediment discharge, and enhance stream habitat conditions.⁴</p>	<p>Vineyard owner and/or operator</p>	<p>As specified in applicable WDRs or waiver of WDRs</p>
<p>¹ Does not apply to parcels upstream of municipal reservoirs, where measures required per Napa County Code (Chapter 18.108), are sufficient to achieve sediment load allocations, and/or parcels classified by Napa County as “rural residential” (2% of unincorporated area in Napa County), where Water Board will rely on education and outreach and participation in voluntary programs.</p> <p>² To achieve 50% reduction in road-related erosion, which we estimate averaged 500 yd³ per mile between 1994 and 2004.</p> <p>³ Or compliance with applicable conditional waivers of WDRs that may be adopted by the Water Board.</p> <p>⁴ Reports may be submitted individually or jointly through a recognized third party.</p>				

Table 4.2 Required and Trackable TMDL Implementation Measures for Sediment Discharges Associated with Grazing¹

Land Use Category	Source(s) and Performance Standard(s)	Actions	Implementing Parties	Completion Dates
Grazing	<p>Surface erosion associated with livestock grazing: Attain or exceed minimal residual dry matter values consistent with University of California Division of Agriculture and Natural Resources guidelines and</p> <p>Roads: Road-related sediment delivery to channels \leq 500 cubic yards per mile per 20-year period² and</p> <p>Gullies and/or shallow landslides: Accelerate natural recovery and minimize human-caused increases in sediment delivery from unstable areas</p>	<p>1. Submit a Report of Waste Discharge³ to the Water Board that provides, at a minimum, the following: description of the ranch; identification of site-specific erosion control measures to achieve performance standard(s) specified in this table; and a schedule for implementation of identified management measures.</p>	<p>Ranch owner and/or lessee</p>	<p>October 2012</p>
		<p>Comply with applicable Waste Discharge Requirements (WDRs) or waiver of WDRs.</p>	<p>Ranch owner and/or lessee</p>	<p>As specified in applicable WDRs or waiver of WDRs</p>
		<p>Report progress on implementation of measures to reduce fine sediment discharge, and enhance stream habitat conditions.⁴</p>	<p>Ranch owner and/or lessee</p>	<p>As specified in applicable WDRs or waiver of WDRs</p>
<p>¹ Does not apply to parcels upstream of municipal reservoirs, where measures required per Napa County Code (Chapter 18.108), are sufficient to achieve sediment load allocations, and/or parcels classified by Napa County as "rural residential" (2% of unincorporated area in Napa County), where Water Board will rely on education and outreach and participation in voluntary programs.</p> <p>² To achieve 50% reduction in road-related erosion, which we estimate averaged 500 yd³ per mile between 1994 and 2004.</p> <p>³ Or compliance with applicable conditional waivers of WDRs that may be adopted by the Water Board.</p> <p>⁴ These reports may be prepared individually or jointly or through a recognized third party.</p>				

Table 4.3 Required and Trackable TMDL Implementation Measures for Sediment Discharges Associated with Rural Lands^{1, 4}

Land Use Category	Source(s) and Performance Standard(s)	Actions	Implementing Parties	Completion Dates
Rural Lands	<p>Roads: Road-related sediment delivery to channels \leq 500 cubic yards per mile per 20-year period²; and</p> <p>Gullies and/or shallow landslides: Accelerate natural recovery, and minimize human caused increases in sediment delivery from unstable areas.</p>	<p>1. Submit a Report of Waste Discharge³ to the Water Board that provides, at a minimum, the following: description of the property; identification of site-specific erosion control measures to achieve performance standard(s) specified in this table; and a schedule for implementation of identified management measures.</p>	<p>Landowners and/or designated managers</p>	<p>October 2012</p>
		<p>Comply with applicable Waste Discharge Requirements (WDRs) or waiver of WDRs.</p>	<p>Landowners and/or designated managers</p>	<p>As specified in applicable WDRs or waiver of WDRs</p>
		<p>Report progress on implementation of measures to reduce fine sediment-discharge, and enhance stream habitat conditions.⁵</p>	<p>Landowners and/or designated managers.</p>	<p>As specified in applicable WDRs or waiver of WDRs</p>
<p>¹ Does not apply to parcels upstream of municipal reservoirs, where measures required per Napa County Code (Chapter 18.108), are sufficient to achieve sediment load allocations, and/or parcels classified by Napa County as "rural residential" (2% of unincorporated area in Napa County), where Water Board will rely on education and outreach and participation in voluntary programs.</p> <p>² To achieve 50% reduction in road-related erosion, which we estimate averaged 500 yd³ per mile between 1994 and 2004.</p> <p>³ Or compliance with applicable conditional waivers of WDRs that may be adopted by the Water Board</p> <p>⁴ Rural lands, per Napa County definition include: non-farmed and non-grazing portions of parcels >10-ac that contain one or more residences, and/or a winery; vacant residential parcels >10-acres; and/or portions of 10-acre or larger parcels with secondary vineyard, orchard, and/or grazing</p> <p>⁵ These reports may be prepared individually or jointly or through a recognized third party.</p>				

Table 4.4 Required and Trackable TMDL Implementation Measures for Sediment Discharges associated with Parks and Open Space, and/or Municipal Public Works¹.

Landowner Type	Source(s) and Performance Standard(s)	Actions	Implementing Parties	Completion Dates
Parks and Open Space and Public Works	<p>Roads: Road-related sediment delivery to channels \leq 500 cubic yards per mile per 20-year period²; and</p> <p>Gullies and/or shallow landslides: Accelerate natural recovery, and minimize human caused increases in sediment delivery from unstable areas.</p>	<p>1. Submit a Report of Waste Discharge³ to Water Board that provides, at a minimum, the following: description of the property; identification of site-specific erosion control measures to achieve performance standard(s) specified in this table; and a schedule for implementation of identified management measures.</p> <p>2. Adopt and implement best management practices for maintenance of roads to reduce road-related erosion and protect stream-riparian habitat conditions.</p>	<p>Napa County Municipal Stormwater Program</p> <p>State of California, Department of Parks and Recreation</p> <p>State of California, Department of Transportation</p>	<p>October 2012</p>
		<p>Comply with applicable Waste Discharge Requirements (WDRs) or waiver of WDRs.</p>	<p>Landowners and/or designated managers</p>	<p>As specified in applicable WDRs or waiver of WDRs, and/or the SWMP</p>
		<p>Report progress on implementation of measures to reduce fine sediment-discharge, and enhance stream habitat conditions.⁴</p>	<p>Landowners and/or designated managers</p>	<p>As specified in applicable WDRs or waiver of WDRs, and/or SWMP</p>
<p>¹ Does not apply to parcels upstream of municipal reservoirs, where measures required per Napa County Code (Chapter 18.108), are sufficient to achieve sediment load allocations, and/or parcels classified by Napa County as “rural residential” (2% of unincorporated area in Napa County), where Water Board will rely on education and outreach and participation in voluntary programs.</p> <p>² To achieve 50% reduction in road-related erosion, which we estimate averaged 500 yd³ per mile between 1994 and 2004.</p> <p>³ Or compliance with applicable conditional waivers of WDRs that may be adopted by the Water Board.</p> <p>⁴ These reports may be prepared individually or jointly or through a recognized third party.</p>				

Table 5.1 Actions to Reduce Sediment Load and Enhance Habitat Complexity in Napa River and its Tributaries.

Stressor	Management Objective(s)	Actions	Implementing Parties	Completion Dates and Notes
<p>Habitat degradation as a result of mainstem Napa River and lower reaches of its larger tributaries incising.</p>	<p>Reduce rates of sediment delivery (associated with incision and accelerated bank erosion) to channels, by 50 percent</p> <p>Enhance channel habitat as needed to support self-sustaining run of Chinook salmon and enhance the overall health of the native fish community.</p>	<p>1.1 Develop and implement plans to enhance stream-riparian habitat conditions, and reduce fine sediment supply in mainstem Napa River and lower tributary reaches</p>	<p>Landowners and/or designated agents, and reach-based stewardships</p>	<p>Comply with conditions of Clean Water Act Section 401 certifications (implementation of Rutherford Project completed by fall 2015, other projects by 2025)</p>
<p>Habitat degradation as a result of reduction in large woody debris in stream channels.</p>	<p>Enhance quality of rearing habitat for juvenile salmonids</p>	<p>1.2 Develop and implement performance standards for protection of ecologically significant large woody debris in stream channels.</p>	<p>Napa County Municipal Stormwater Program and State Department of Parks and Recreation</p>	<p>Fall 2008</p>

Table 5.2 Actions to Protect or Enhance Baseflow

Stressor	Management Objective	Action(s)	Implementing Parties	Schedule/Notes
Low flows during dry season	Maintain suitable conditions for juvenile rearing, and smolt migration to Napa River estuary	2.1. Establish guidelines to maintain in-stream flow to protect salmonids	State Water Board (Division of Water Rights)	January 1, 2008
		2.2. Adopt plan for joint resolution of water supply reliability and fisheries conservation concerns	Local municipalities working with Water Board, State Water Board (Division of Water Rights), National Oceanic and Atmospheric Administration Fisheries Service (NOAA), and California Department Fish and Game (DFG)	Plan adopted by fall 2010.
		2.3. Adopt reservoir bypass flows as needed to protect salmonids downstream of municipal water supply reservoirs	State Water Board (Division of Water Rights)	Conduct in-stream flow analysis; schedule based on consultation with NOAA, DFG, and Water Board
		2.4. Install and maintain dial-up water-level gage programs and implement public education program in 10 key tributaries for steelhead		Accomplished by Spring of 2010
		2.5. Develop water-level guidelines to support juvenile salmonid rearing and migration	Local public agencies	Guidelines adopted by spring of 2010
		2.6. Conduct water rights compliance survey to protect fish and water rights	County of Napa State Water Board(Division of Water Rights)	Schedule per consultation with NOAA, DFG, and Water Board

Table 5.3 Actions Restore to Fish Passage

Stressor	Management Objective(s)	Action(s)	Implementing Parties	Schedule/Notes
Structures in channels that block or impede fish migration (note: flow-related barriers are addressed above)	No significant structural impediments to salmonid migration in mainstem or in 10 key tributaries for steelhead (including but not limited to the following): Dry, Milliken, Redwood, Sulphur, and York	3.1. Enhance conditions for adult and juvenile salmon and juvenile steelhead passage at Zinfandel Lane	Local public agencies and landowners	Project completed by fall of 2010
	Designation of remaining tributaries will be determined in consultation with Napa County RCD, CDFG, NOAA Fisheries, and USEPA	3.2. Restore passage for adult and juvenile steelhead to-and-from York Creek upstream of Upper Dam	City of St. Helena	Schedule to be determined based on consultation with National Oceanic and Atmospheric Administration Fisheries Service (NOAA), and California Department Fish and Game (DFG)
		3.3. Identify and remedy all significant structural impediments to salmonid migration in ten key steelhead tributaries (including York)	Local public agencies and landowners	Complete comprehensive fish passage surveys in 10 key tributaries by Fall 2010. Schedule for barrier remediation to be determined based on consultation with NOAA and DFG.

Table 5.4 Actions to Protect and/or Enhance Stream Temperature

Stressor	Management Objective(s)	Action(s)	Implementing Parties	Schedule/Notes
Stressful summer water temperatures in tributaries	Protect and/or enhance baseflow	4.1. As described earlier in Table 5.2	As described in Table 5.2	As described in Table 5.2
	Enhance amount of ecologically significant large woody debris in channels	4.2. As described earlier in Table 5.1	As described in Table 5.1	As described in Table 5.1
	Enhance potential shade along riparian corridors	4.3. Via Napa Green Certification Program, voluntarily establish riparian buffers, and implement management actions to accelerate recovery of native riparian tree species	Vineyard owners and managers in partnership with Napa County Resource Conservation District and the California Land Stewardship Institute	As described in Table 4.1, Trackable TMDL Implementation Measures for Sediment Discharges from Vineyards

Table 6. Performance Milestones and Decision Points

Milestones	Date
Water Board Decisions: adopt waste discharge requirements or waiver(s) of waste discharge requirements, as applicable, for source categories presented in Tables 4.1 through 4.4.	Fall 2010
Performance Milestones <ul style="list-style-type: none"> • Performance standards for protection of ecologically important large woody debris implemented as part of Countywide Stormwater Program. • Grazing surface erosion management practices implemented at all commercial livestock ranches • Baseflow monitoring program and guidelines implemented • Tributary fish passage surveys completed • Water supply reliability and fisheries conservation plan adopted by municipalities • Zinfandel Lane fish passage project implemented 	Fall 2010
Water Board Decisions: renew/revise/rescind waiver(s); adaptive update TMDL and Implementation Plan.	Fall 2013
Performance Milestones <ul style="list-style-type: none"> • 25% reduction in sediment delivery from roads • 15% reduction in sediment delivery from land use related gullies and slides • Rutherford (or similar) channel enhancement project fully implemented 	Fall 2015
Water Board Decisions: renew/revise/rescind waiver(s); adaptive update of TMDL and Implementation Plan.	Fall 2016 & Fall 2019
Performance Milestones <ul style="list-style-type: none"> • 50% reduction in sediment delivery from roads • 30% reduction in sediment delivery from land use related gullies and slides • All hillside vineyards have approved/implemented erosion control plans per Napa County Conservation Regulations 	Fall 2020
Water Board Decisions: renew/revise/rescind waiver(s); adaptive update of Plan.	Fall 2022
Performance Milestones <ul style="list-style-type: none"> • 50% reduction in sediment delivery from land use related gullies and slides 	Fall 2025

Notes: Milestones and/or decision points may be revised per adaptive updates to this plan.

Agricultural Water Quality Control Program Costs

Implementation measures for grazing lands and vineyards constitute an agricultural water quality control program and therefore, consistent with California Water Code requirements (Section 13141), the cost of this program is estimated herein. This cost estimate includes the cost of implementing all actions to reduce sediment discharges and enhance habitat complexity as specified in the implementation plan, and is based on costs associated with technical assistance

and evaluation, project design, and implementation of actions needed to achieve the TMDL. In estimating costs, the Water Board has assumed that owners of agricultural businesses (e.g., grape growers and ranchers), within the unincorporated area, own 75 percent of total land area on hillside parcels, and 95 percent of the land along Napa River and lower reaches of its tributaries. Based on these assumptions, we estimate total cost for program implementation for agricultural sources could be \$1.9-to-3.4 million per year throughout the 20-year implementation period. More than two-thirds of these potential costs are associated with reducing sediment discharges and enhancing habitat conditions (to address channel incision) in Napa River. Considering potential benefits to the public in terms of ecosystem functions, aesthetics, recreation, and water quality. It is anticipated that at least 75 percent of the cost of these actions will be paid for with public funds, and therefore, the total cost to agricultural businesses associated with efforts to reduce sediment supply and enhance habitat in Napa River is \$800,000 to \$1.7 million per year.

Evaluation and Monitoring

Three types of monitoring are specified to assess progress toward achievement of numeric targets and load allocations for sediment:

- 1) Implementation monitoring to document that required sediment control and habitat enhancement actions are implemented
- 2) Upslope effectiveness monitoring to evaluate effectiveness of sediment control actions in reducing rates of sediment delivery to channels
- 3) In-channel effectiveness monitoring (e.g., spawning gravel permeability and redd scour) to evaluate channel response to management actions and natural processes

Implementation monitoring will be conducted by landowners or designated agents. The purpose of this type of monitoring is to document that sediment control and/or habitat enhancement actions specified herein actually occur.

The Water Board will conduct upslope effectiveness monitoring, which will involve regular updates of the sediment source analysis (e.g., estimation of rates of sediment delivery to channels), at a frequency that tracks with the projected schedule for evaluation of the performance milestones listed in Table 6. The first update will occur on or before the fall of 2017, when sediment delivery associated with land use activities should be reduced by 25 percent or more. A subsequent update may occur, assuming the numeric targets for sediment are not already achieved, on or before the fall of 2022, when sediment supply associated with land use activities should be reduced by 37 percent or more.

In-channel effectiveness monitoring should be conducted by local government agencies with scientific expertise and demonstrated capability in working effectively with private property owners (to gain permissions for access), as needed to develop a representative sample of stream habitat conditions, in relation to sediment supply and transport within the watershed. In addition, the Water Board will conduct in-channel effectiveness monitoring as part of the Surface Water Ambient Monitoring Program. In-channel effectiveness monitoring needs to

include measurements of redd scour and spawning gravel permeability to evaluate attainment of water quality objectives for sediment, settleable material, and population and community ecology. To establish a high level of statistical confidence in estimated values, spawning gravel permeability will need to be measured at 150 or more potential spawning sites located in ten-or-more tributaries, and 50 or more potential spawning sites in the mainstem of the Napa River. Redd scour will need to be measured in the mainstem Napa River at approximately 30 or more potential spawning sites, with 4 or more scour measurements per spawning site. Desired frequency for measurement of permeability and redd scour is once every two to three years. At a minimum, repeat surveys will be conducted once every five years.

Adaptive Implementation

In concert with the monitoring program, described above, the Napa River Sediment Reduction and Habitat Enhancement Plan and TMDL will be regularly updated. Results of in-progress or anticipated studies that enhance understanding of the population status of steelhead trout and Chinook salmon in Napa River watershed, and/or factors controlling those populations, may also trigger changes to the plan and TMDL. At a minimum, data in response to the following questions will be considered to guide research and monitoring efforts and focus each subsequent update of the TMDL.

Key Questions to be considered in the course of Adaptive Implementation:

1. What is the population status of steelhead and salmon in the watershed?

An improved understanding of the current status of steelhead and salmon populations in the Napa River watershed is essential for guiding adaptive updates to the management actions recognized in this plan.

Two types of monitoring data may be needed to evaluate the current population status of steelhead in the Napa River watershed: 1) "smolt" production and sizes, and 2) adult spawning run-size. Smolt refers to the life stage when juvenile salmon and trout migrate from freshwater to the ocean. Estimates of smolt production and sizes, and inter-annual variation in these parameters, can provide a strong basis for evaluating population status of ocean migrating species of trout and salmon, and influence of freshwater rearing habitat conditions on number of adults that successfully return to spawn. At least five years of monitoring (trapping) of ocean migrating smolts are needed to evaluate current steelhead population status. In addition to smolt trapping, three or more years of monitoring data are needed to estimate the number of adult steelhead returning to spawn. This information, when combined with estimates of smolt production and sizes, would provide a basis for assessing the influences of ocean and freshwater habitat on steelhead run-size, for validating smolt production estimates and predictions regarding ocean survival, and ultimately for evaluating the status of the steelhead population in the watershed.

A similar monitoring program is needed to evaluate the current population status of Chinook salmon in Napa River watershed. Such a program might include the following elements: 1)

adult spawning run-size and genetic structure; 2) smolt production; and 3) egg survival from spawning to emergence (emergence trapping). During the past two years, the Napa County Resource Conservation District has conducted surveys to estimate the number of adult salmon returning to spawn. These surveys should continue for at least three more years, both to estimate the number of spawners and inter-annual variations, and to collect fin clips, as needed to evaluate origins of the spawning adults (e.g., returning adults or strays from hatcheries or other streams). The hypothesis that Chinook salmon experience very high rates of mortality during all freshwater life stages in the Napa River watershed, could be confirmed or rejected through direct monitoring of egg survival to emergence (emergence trapping), fry survival and growth, and smolt trapping.

2. What are expected benefits of various actions to enhance habitat for steelhead and salmon?

For steelhead, the results of in-progress studies of juvenile growth and survival will enhance understanding of the significance of dry season base flow and temperature as potential limiters on steelhead run-size. Other information needed to refine understanding of primary constraints on steelhead population size includes the following: a) comprehensive fish passage evaluations in all key tributaries that provide potential habitat for steelhead; b) dry season water-level monitoring in the same tributaries conducted over two-or-more consecutive years; and c) field surveys to evaluate winter rearing habitat quantity and quality. Given the above sources of information, it may be possible to accurately predict relative increases (high, medium, low) in smolt production associated with various management actions (e.g., baseflow enhancement, fish passage enhancement, reduction in fine sediment supply, etc.) in various locations throughout the watershed.

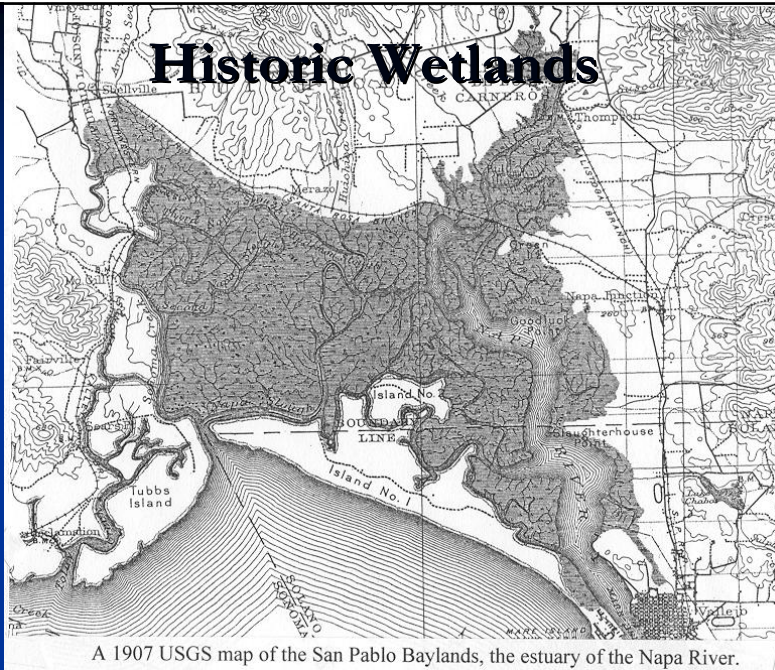
Key information sources needed to refine understanding of primary controls on Chinook salmon population size include egg survival-to-emergence and controls (e.g., redd scour, gravel permeability), fry survival and growth, and number and sizes of juvenile salmon migrating to the ocean. To this end, pre-and-post project monitoring associated with the proposed Rutherford channel enhancement project may provide an opportunity to determine the amount and types of habitat enhancement actions needed to support a self-sustaining run of Chinook salmon, and to enhance the overall health of the native fish community within the watershed. Key parameters that might be monitored to evaluate fisheries' response to channel enhancement could include: a) changes in quantity, quality, and frequency of key habitat types (e.g., riffles, pools, side channels, gravel bars); b) spawning gravel permeability and scour; c) base flow persistence and temperature; and d) relative abundance of native and introduced fish species.



Napa-Sonoma Marshes State Wildlife Area

California Dept. of Fish and Game

Historic Wetlands



A 1907 USGS map of the San Pablo Baylands, the estuary of the Napa River.

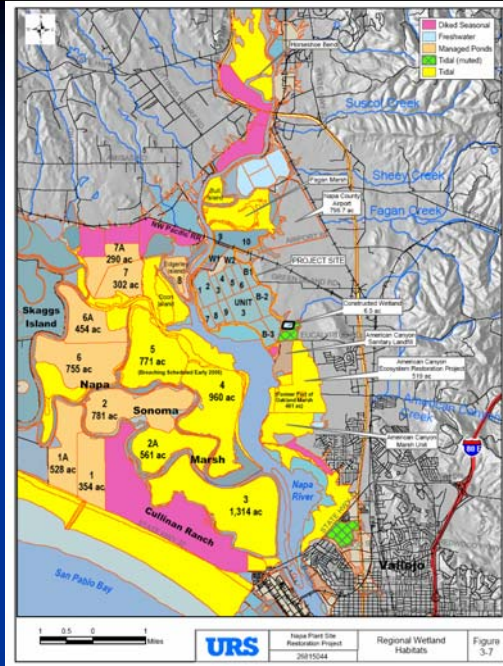
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Napa-Sonoma Marsh Chronology

- Much of the Area was “reclaimed” around the turn of the century for agricultural purposes
- In 1950’s, additional area was diked and used for solar salt production
- 1999’s through 2000’s : Current trends include restoring wetlands by CA Department of Fish and Game, U.S Fish and Wildlife Service and some private individuals

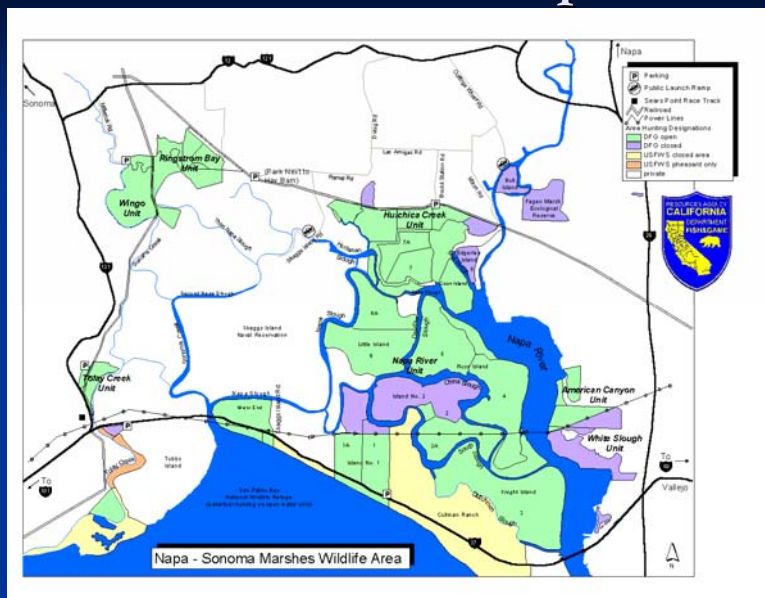
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Regional Wetland Habitats



California Dept. of Fish and Game

Wildlife Area Map



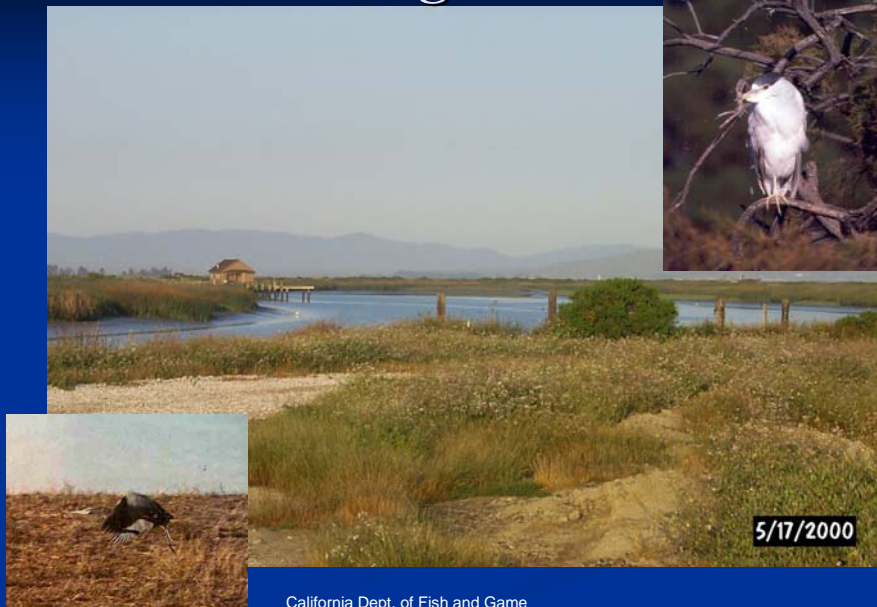
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■ Tidal Brackish Marsh



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Main Slough Channels



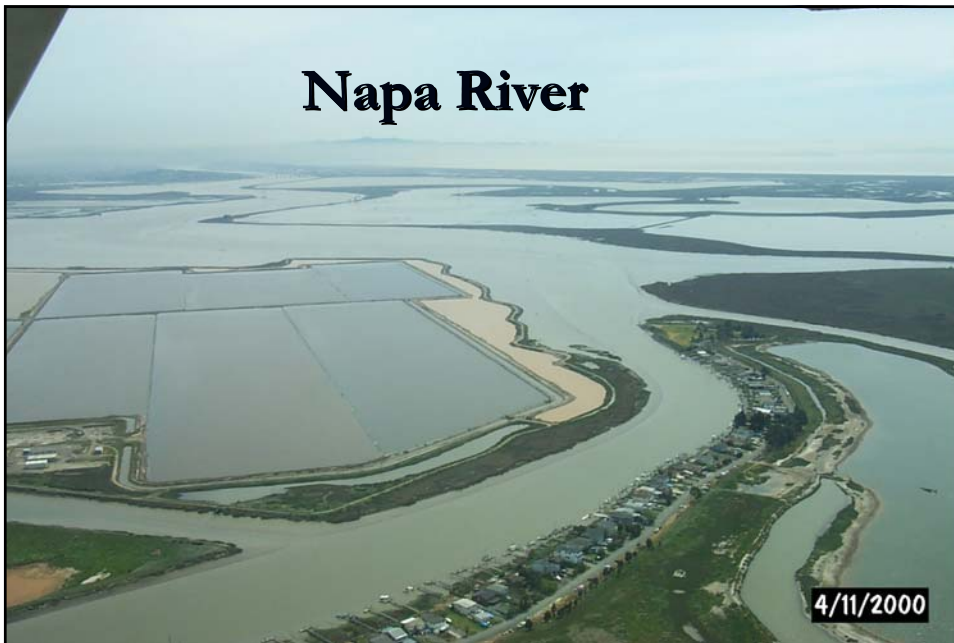
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Small Slough Channels



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Napa River



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Napa River Unit

- Salt Ponds
- Napa River
- Tidal Sloughs



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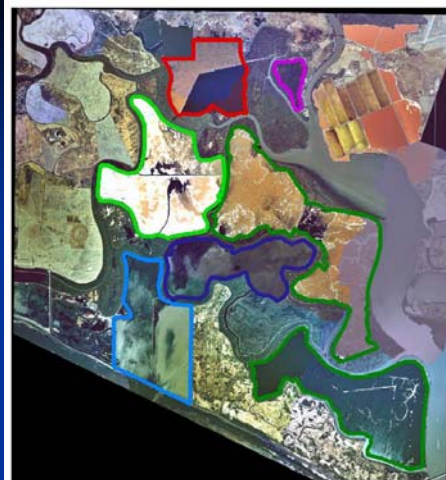
Napa River Salt Marsh Restoration Project



California Dept. of Fish and Game

Habitat Objectives

- ◆ Restore Ponds 3, 4, and 5 to tidal action through levee breaches in the vicinity of historic major slough channels (3,045 acres).
- ◆ Restore 6 and 6A to either tidal marsh or to muted tidal ponds which may receive water discharged from Ponds 7 and 7A (1,209 acres).
- ◆ Manage Ponds 7 and 7A as salt ponds (592 acres).
- ◆ Manage Pond 8 as an intake pond throughout the salinity reduction process, and when no longer needed for salinity reduction, restore to muted tidal pond (102 acres).
- ◆ Continue to manage Ponds 1 and 1A as muted tidal, shallow-water pond habitat (882 acres).
- ◆ Continue to manage Pond 2 as deep-water pond habitat (781 acres).



Habitat Alternative 1
Intake/Muted Tidal Pond
Muted Tidal Ponds
Muted, Deep-Water Pond
Muted, Shallow-Water Ponds
Tidal Marsh
Salt Ponds

California Dept. of Fish and Game

Napa River Salt Marsh Restoration Project Goals

- ◆ Restore a mosaic of diverse habitats that will benefit a broad range of fish, wildlife, and plant species, including endangered and threatened species, fish and other aquatic species, and migratory shorebirds and waterfowl.
- ◆ Restore natural, self-sustaining systems that can adjust to naturally occurring changes in physical processes, with minimum ongoing intervention.
- ◆ Protect special status species, to the extent possible, during the restoration process.

California Dept. of Fish and Game

Goals, continued

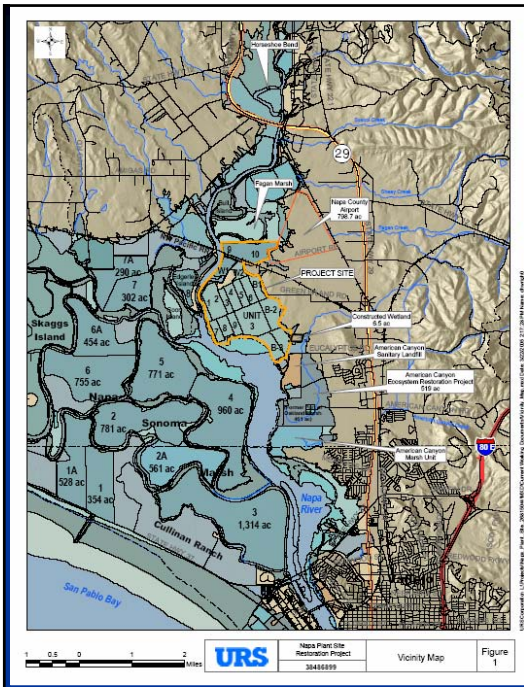
- ◆ Evaluate the restoration from a regional perspective, as not all regional objectives can be addressed within the project boundaries.
- ◆ Restore habitats within the Napa-Sonoma Marshes that will change over time due to inherent dynamic characteristics of the estuarine system (in terms of seasonal as well as longer-term changes).

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Napa Plant Site Restoration Project



Regional Setting



- 1,400-acre site
- Situated on former Napa River floodplain
- DFG purchased the land from Cargill Salt Co. March 14, 2003
- Fits into DFG lands extending on both sides of river

California Dept. of Fish and Game

Develop Vegetated Tidal Marsh



California Dept. of Fish and Game

Napa Plant Site Restoration Project Goals

- Restore tidal habitat
- Maintain flood protection
- Maintain current level of vector management
- Promote environmental benefit and reduce impacts
- Provide recreational opportunities
- Minimize conflicts with Napa County Airport
- Minimize ecological risks
- Self-sustaining and cost efficient

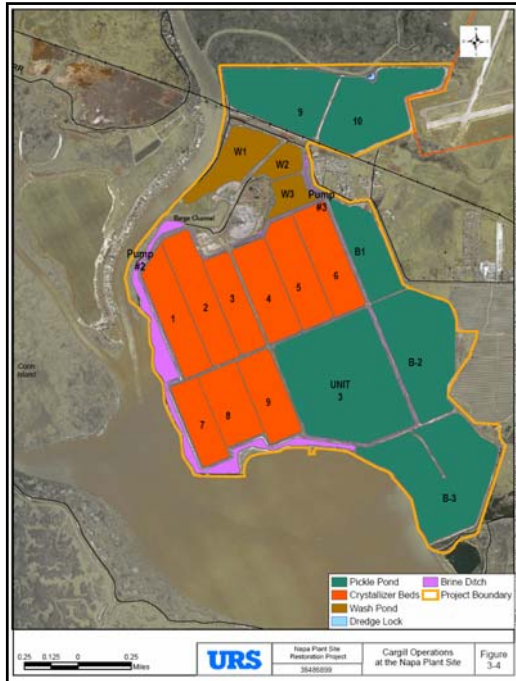
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1856 Survey

- Sloughs still visible except in crystallizer beds
- Diked in 1850s for hay production & cattle grazing
- Fagan Slough width has decreased
 - Ponds 9 & 10 removed from drainage area
- Restoration objective to use historic slough pattern



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Phase-out Operation

- Began 2003
- 8 year desalination period
- Reducing plant operations footprint
- Ponds 9 & 10 available for restoration by 2007



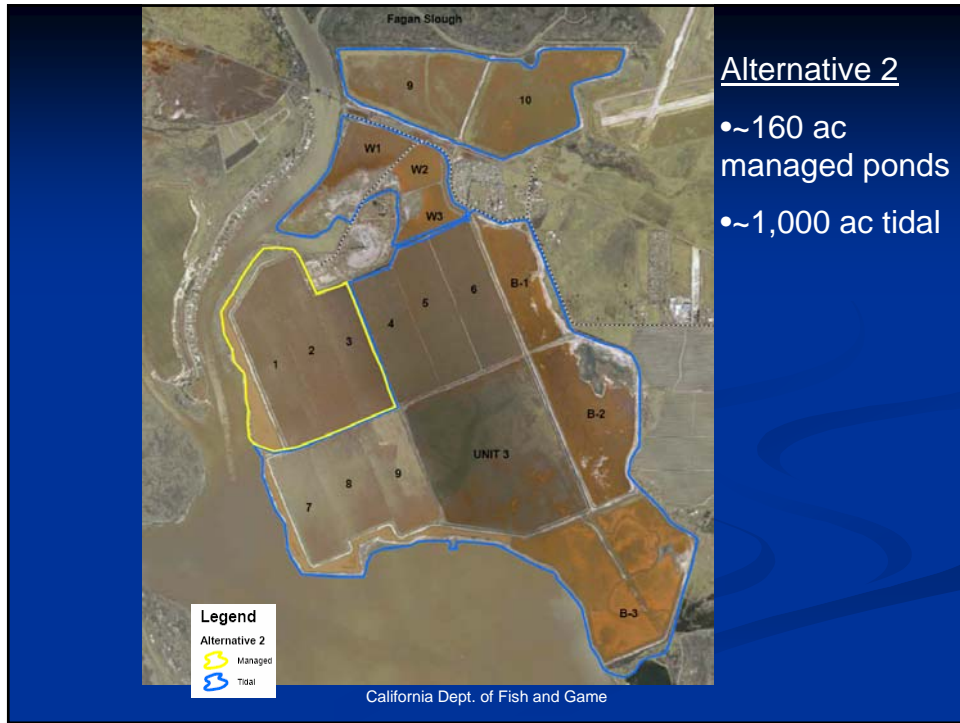
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Alternative 1

- All tidal
- ~ 1,160 acres

California Dept. of Fish and Game



Websites

- www.napa-sonoma-marsh.org
- www.southbayrestoration.org/Napa%20Plant

Questions & Comments



California Dept. of Fish and Game