

Members

Diane Dillon
Mark Luce
Eric Sklar
Steven Rosa
Mark Van Gorder
Karen Slusser
Leon Garcia
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, September 28, 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 June 22, 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. **2006 "Creek to Bay Clean-Up" a big success** - 550 volunteers remove 6.2 tons of trash and 1.2 tons of recyclables from Napa County waterways and lakes (Staff)
 - b. **Funding awarded for Road Improvement and Demonstration Projects in Sulphur and Carneros Creek watersheds** from State Water Resources Control Board (Staff/RCD)
 - c. Others (Board/Staff)
5. **UPDATES/REPORTS:**
 - a. Update on County **General Plan Update** process, community workshops and General Plan **Steering Committee activities** (Board/Staff)
 - b. Update on Planning Commission and Resource Conservation District **nominations to serve on WICC Board** (Board/Staff)

- c. Update on the **long-term funding requirements and infrastructure to support** and implement the WICC's **Watershed Monitoring Program** (Staff/SFEI)
- d. Others (Board/Staff)

6. **UPDATE, DISCUSSION AND POSSIBLE DIRECTION TO STAFF REGARDING REGIONAL AND STATE WATER BOARDS POLICY DEVELOPMENTS AND TMDL PLANNING PROCESSES:**

Update, discussion and possible direction to staff regarding Regional Water Quality Control Board and State Water Resources Control Board policy developments and TMDL/Basin Planning processes (Staff)

7. **DISCUSSION AND POSSIBLE RECOMMENDATION TO THE BOARD OF SUPERVISORS REGARDING PROPOSED CREEK AND RIVER RESTORATION PROJECTS AND ALLOCATION OF NAPA COUNTY FLOOD AND WATER PROTECTION IMPROVEMENT TAX (MEASURE A) REVENUES:**

- a. Napa River Sediment Reduction and Habitat Enhancement Plan - This proposal aims to address water quality, flooding, bank erosion problems and natural resources along the Oakville Cross Rd. to Oak Knoll Ave. reach of the Napa River. The proposed project was recently awarded \$500,000 from the State Water Resources Control Board (SWRCB) and is now looking to secure additional funding for the local cost-share/match (Staff/Flood Control Staff)
- b. Milliken Creek Flood Reduction and Creek Stabilization Plan – This proposal is to conduct a flood control and erosion mitigation study of approximately 7,000 feet of Milliken Creek through the Silverado Estates Development (Staff/Flood Control Staff)

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

9. **NEXT MEETING:**

Regular Board Meeting of October 26, 2006 – 4:00 PM

Hall of Justice Building, 2nd floor Conference Room, 1125 Third Street, Napa

10. **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.



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- MINUTES / ACTION SUMMARY -

REGULAR BOARD MEETING

Thursday, June 22, 2006 at 4:00 p.m.

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

1. **CALL TO ORDER & ROLL CALL** (Chairman)

Members Present: Diane Dillon, Mark Luce, Eric Sklar, Steven Rosa, Leon Garcia, Jeff Reichel, Phill Blake, Don Gasser, Robert Steinhauer, Charles Slutzkin, Marc Pandone, Richard Camera

Members Absent/Excused: Mark Van Gorder, Karen Slusser, David Graves, Kate Dargan, Jeffrey Redding

Members Absent: None

Staff Present: Patrick Lowe, Jeff Sharp

2. **APPROVAL OF ACTION MINUTES**

Regular meeting of October 27, 2005, November 24, 2005 and special meeting of December 15, 2005 (Chairman)

Outcome: Approved as presented.

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: None presented.

4. **ANNOUNCEMENTS** (Board/Staff)

- a. California Department of Water Resources, Division of Planning and Local Assistance awards **grants to Napa RCD and Sonoma Ecology Center for work in Napa River** (RCD/SEC/Staff)

Outcome: Caitlin Cornwall of the Sonoma Ecology Center (SEC) gave an overview of the Center and its activities and distributed an SEC brochure. Ms. Cornwall also outlined a funded project to conduct watershed assessment score cards in the Napa and Sonoma basins. The project is modeled from the Bay Institute "Bay Score Card" to track and "grade" progress towards obtaining watershed goals. The score cards will focus on water specifically and attempt to assess the Napa River and Sonoma Creek watersheds in a consistent manner with other measures used in the Bay Area. The grant/project was developed in partnership with the Napa County Resource Conservation District, the Bay Institute and the San Francisco Estuary Institute. Leigh Sharp of the

Napa County Resource Conservation District also announced the award of \$364,000 (Water for Fish and Farms) from CalFed Watershed Program to work with land and water managers to better understand the multiple uses of water and improve the timing of water withdrawals in select tributaries in the Napa River watershed. Work under that project includes expanded stream gauging, online stream information via the WICC WebCenter and hydraulic modeling enhancements and training.

- b. Others (Board/Staff)

Outcome: None presented.

5. UPDATES/REPORTS:

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

Outcome: Staff informed the Board that the Committee will look at the Safety Element at its next meeting. The Committee will discuss the Circulation at its July meeting and Agriculture Resources at its August meeting. Public workshops are planned for July and August with a focus on the Angwin area; other public workshops focused on economic development are planned for early Fall. The environmental document (EIR) to support the update effort appears to be on track for public release in January.

- b. Update on **Regional Water Quality Control Board's approval of Pathogen TMDL** and Basin Plan Amendment, June 30, 2006 **notice and release of final proposed Sediment TMDL**, and announcement of **"Town Hall Meeting" on the Sediment TMDL** in late July (Staff)

Outcome: Staff informed the Board that the RWQCB approved Pathogen TMDL for the Napa River on June 14, 2006 with some minor changes (margin of error and indicator selection) at the request of EPA. Next step in the Pathogen TMDL process is State Water Resources Control Board (SWRCB) approval; no date for that level of action was provided. Some, but not all, of the comments submitted by the County were addressed (i.e., how monitoring is to be conducted at a local level and the true location of hypothesized failing septic systems) in the final version approved by the Regional Board.

Phill Blake announced a meeting of ranching community on the Pathogen TMDL and the establishment of a work group to introduce a group waiver option to comply with future waste discharge requirements. Phill also noted that the ranching industry in the County is on thin operating margin and any additional regulation would harm the industry's presence in the Napa River watershed. The same group will likely also work on industry actions to address upcoming Sediment TMDL implementation requirements.

Staff also informed the Board of the Sediment TMDL release on June 30th and notice for comment. A Town-Hall meeting on the Sediment TMDL will be held in Yountville on July 26th. RWQCB staff will also be presenting the proposed Sediment TMDL to the WICC Board at their July meeting.

- c. Update and report on Countywide **Watershed Monitoring Program** development, including **draft management goals and monitoring objectives** now under TAC review (RCD/SFEI/Staff)

Outcome: Leigh Sharp, staff from the Resource Conservation District (RCD), provided the Board with an overview of the program's draft goals and objectives and the "next steps" in the program's development process. The program's development process will eventually make available to a set of watershed indicators that will help determine the breadth of the monitoring program. This step-by-step process will also lead to a "gaps analysis" that will point to areas where more information may be needed to address the program's goals and other areas that may not be appropriate to monitor/consider on a county-wide scale. The next step will be to obtain feedback from the Board's TAC on possible monitoring indicators and incorporate those indicators into draft program.

- d. Update on **WICC budget for fiscal year July 2006 – June 2007** (Staff)

Outcome: Board of Supervisors approved a WICC budget of \$100,000 for FY 06-07. Staff will present the Board with a proposed allocation of the finds based upon action priorities identified in the Strategic Plan at the July meeting.

- e. Update on **Lake Berryessa/BRBNA actives** and Bureau of Reclamation Record of Decision (ROD) for the Lake Berryessa Visitor Services Plan (Staff)

Outcome: BOR issued a ROD which will involve the termination (and possible renewal) of concession contracts around the Lake and the removal of long-term trailer use. An RFP for new concessions will be released in the Fall. Marc Pandone recommended that the WICC Board be made aware of new development/proposals planned in the BOR/Lake area.

- f. Update on formation of **Park and Open Space District** (Staff)

Outcome: John Woodbury gave the Board and update on the Parks and Open Space Committee activities and the Board of Supervisors placement of a measure on the November ballot asking the voters if a Park and Open Space District should be created. The Parks and Open Space Committee identified and recommend the creation of an independent and unique district as the most effective and efficient way to manage parks and open space for the community. Only the creation of the district is on the ballot. Long-term funding, should the district be created, will be the district's first charge of business.

- g. Others (Board/Staff)

Outcome: None presented.

6. **DISCUSSION AND POSSIBLE ACTION AUTHORIZING THE CHAIR TO SIGN A LETTER OF APPRECIATION TO STAG'S LEAP WINE CELLARS:**

Discussion and possible action authorizing the Chair sign a **letter of appreciation to Stag's Leap Wine Cellars** for their assistance in hosting the WICC Board's "Celebration of Watershed Stewardship" event on May 25, 2006 (Staff)

Outcome: Approved as presented. The Chair requested if such letters can be prepared and sent without full Board approval to expedite the WICC's recognition and appreciation of those who offer WICC support.

7. **PRESENTATION, DEMONSTRATION AND DISCUSSION OF WEBCENTER ENHANCEMENTS, UPDATES AND NEW LOOK:**

- a. Presentation and discussion of **WICC WebCenter enhancements, updates and new look** (www.napawaterseds.org); **including online demonstration** of new functionality, opportunities for watershed groups to profile themselves on the WICC, availability of additional group services, new web-based GIS mapping using data from the County's Baseline Data Report and a discussion of future next steps and possible outreach opportunities (MIG/Staff)

Outcome: Staff presented a quick overview of the new WICC WebCenter and demonstrated some of the recent improvements and enhancements aimed to improve watershed/stewardship group participation and use of the services offered.

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

- a. Presentation and discussion on draft WICC Budget allocations based upon Strategic Plan action items and identified Board priorities (Staff)

- b. Tentative presentation and discussion by RWQCB staff on Sediment TMDL process and associated Basin Plan Amendment recommended for RWQCB adoption (Staff)
- c. Others (Board/Staff)

Outcome: Information on use of copper sulfate in the county's water supply reservoirs, Continued updates on the General Planning process

9. **NEXT MEETING:**

Regular Board Meeting of July 27, 2006 – 4:00 PM

Hall of Justice Building, 2nd floor Conference Room, 1125 Third Street, Napa

10. **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.





Creek to Bay Cleanup Day-Coastal Cleanup Results

This year's Creek to Bay Cleanup Day was a great success!

Final tallies show that over 550 volunteers turned out on Saturday, September 16 and removed approximately 6.2 tons of trash and 1.3 tons of recyclables from the Napa River, Lake Berryessa, American Canyon, and Napa, Salvador, and Redwood Creeks. This was the highest volunteer turnout since Napa County first began participating in the annual California Coastal Cleanup Day effort over ten years ago.

Countywide

553 volunteers (153 more than last year!)
12,470 pounds of trash (6.2 tons)
2,538 pounds of recyclables (1.3 tons)
Approx. 13 miles of waterways cleaned

Site Totals

Lake Berryessa

135 volunteers (includes 70 divers)
450 pounds of trash
1,080 pounds of recyclables
approx. 1/2 mile of Lake Berryessa, varying depths

Kennedy Park, Napa

119 volunteers
1050 pounds of trash
350 pounds of recyclables
approx. 1 mile along the Napa River
Unusual items: huge axle, garbage can

Napa Creek/Redwood Creek

74 volunteers
6600 pounds of garbage

100 pounds of recyclables
approx. 1.5 miles of Napa Creek and 1/2 mile of Redwood Creek
Unusual items: Exercise bike, credit card machine, water heater

Salvador Creek, Napa

73 volunteers
200 pounds of trash
100 pounds of recyclables
approx. 1 mile of Salvador Creek
Unusual items: traffic cones, large wooden spools

American Canyon

50 volunteers
1250 pounds of trash
175 pounds of recyclables
approx. 3 miles
Unusual items: dead chicken in plastic bag, picture of "The Last Supper"

Napa River Ecological Preserve, Yountville

35 volunteers
600 pounds of garbage
360 pounds of recyclables
Cleaned the entire 73 acre preserve/approx. 1/2 mile of the Napa River
Unusual items: 100 feet of drip irrigation tubing, hand air pump

South Wetland Opportunity Area

35 volunteers
400 pounds of trash
125 pounds of recyclables
approx. 2 miles along the Napa River
Unusual item: Large 95 gallon recycling toter

Napa River along Riverside Dr., Napa

20 volunteers
1650 pounds of trash
200 pounds of recyclables
approx. 1 mile of the Napa River
Unusual item: Sofa frame

Southern Crossing/Butler Bridge

12 volunteers
270 pounds of trash
48 pounds of recyclables
approx. 2 miles along the Napa River
Unusual item: plastic bag full of fish heads

Napa County Resource Conservation District
Sulphur Creek Watershed Task Force
Carneros Creek Watershed Stewardship

1303 Jefferson Street, Suite 500B Napa, CA 94559
Phone: 707.252.4188 Fax: 707.252.4219 Email: staff@naparcd.org

Demonstrating Road Improvements
Summary of a Proposal to the SWRCB

Granting Agency: State Water Resources Control Board

Project Title: Demonstrating Road Improvements

Project Applicant: Napa County Resource Conservation District

Project Partners: Pacific Watershed Associates, Sulphur Creek Watershed Task Force, Carneros Creek Watershed Stewardship

Estimated Project Term: January, 2007 – December, 2010

Project Background and Description:

The proposed project will address high and high-moderate priority road erosion sites in the Sulphur and Carneros Creek watersheds. Priority sites were identified through sediment source assessment and watershed management planning conducted by Pacific Watershed Associates in coordination with the Sulphur Creek Watershed Task Force and Carneros Creek Watershed Stewardship in 2003. The road improvement projects proposed are a direct result of the cooperative efforts of Task Force and Stewardship participants and the grant will provide financial, technical, and permitting assistance in implementing the identified priority projects. A high/high-moderate priority implies that road-related erosion at the site may change dramatically in response to winter storms within the next 1 to 5 years. Erosion from these higher priority sites may result in serious impacts to water quality and fisheries.

Twenty-eight high/high-moderate sites have been identified for treatment (10 in the Sulphur Creek watershed and 18 in the Carneros Creek watershed). Treatments proposed at these sites include primarily stream crossing culvert upgrades and road stabilization. To attain greater sediment delivery benefit, the project also proposes to treat all road reaches that are connected to the stream system by improving culverts, road surfaces, and ditch drainage. Implementation of the proposed project will prevent approximately 21,944 cubic yards of sediment from being delivered to the creeks; thus improving water quality and fish habitat and making the creeks clearer (i.e., reducing turbidity). From a community perspective the project will also show the success of collaborative approaches to protecting and restoring watersheds and waterways.

Project Team Description:

The Napa County Resource Conservation District will administer the grant, be lead agency for permitting and environmental compliance, and work with the Task Force and Stewardship to coordinate landowner involvement. The RCD has a long history of community involvement and has been actively involved with the Task Force and Stewardship since 1998 and 2001, respectively.

Pacific Watershed Associates will coordinate and oversee the road improvement projects. PWA conducted the road assessments in both watersheds and developed the treatment designs for road-related erosion sites and chronic road surface erosion for the watershed management plans. PWA has extensive experience in the field. They developed a statewide accepted methodology for the assessment and treatment of upslope and road-related erosion and authored Chapter 10 Upslope Assessment and Restoration Practices for the Department of Fish and Game's California Salmonid Stream Habitat Restoration Manual (2003). PWA has designed and overseen more than 100 road implementation projects in central and northern California.



California Regional Water Quality Control Board

San Francisco Bay Region



Linda S. Adams
Secretary for
Environmental Protection

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

Arnold Schwarzenegger
Governor

August 31, 2006

NOTICE OF PUBLIC HEARING NOTICE OF FILING A DRAFT ENVIRONMENTAL DOCUMENT To Amend the Water Quality Control Plan for the San Francisco Bay Basin

NOTICE IS HEREBY GIVEN that the San Francisco Bay Regional Water Quality Control Board (Water Board) will consider re-adoption of a proposed amendment to the Water Quality Control Plan for San Francisco Bay Basin (Basin Plan) to:

- Establish a total maximum daily load (TMDL) and numeric targets for pathogens in the Napa River watershed and
- Incorporate an implementation plan to achieve and support the TMDL.

On June 14, 2006, the Water Board took action to adopt the proposed Basin Plan amendment after two public hearings and a public comment period. On November 14, 2006, the Water Board will consider re-adopting the proposed amendment after providing a new 45-day public comment period due to incomplete public notice of the Water Board's previous consideration of the proposed amendment. The public hearing will be held as follows:

DATE: November 14, 2006

TIME: 9:00 a.m. (approximate)

LOCATION: Elihu M. Harris State Building
First Floor Auditorium
1515 Clay Street
Oakland, CA 94612

STAFF CONTACT: Dyan Whyte
510.622.2441 (phone)
510.622.2460 (fax)
dwhyte@waterboards.ca.gov

The proposed Basin Plan amendment, supporting staff report and environmental documentation, previously submitted public comments and the response thereto, and other documentation are available online at <http://www.waterboards.ca.gov/sanfranciscobay/tmdlmain.htm>. Paper copies will also be available from Terry Adams at 510.622.2306 (phone), 510.622.2460 (fax), tadams@waterboards.ca.gov.

The new 45-day public comment period on the proposed amendment will expire at 5:00 p.m. on October 16, 2006. All written comments, evidence, proposed testimony and exhibits on or concerning the proposed amendment shall be submitted no later than this date and time to the staff contact identified above; however, persons are not required to resubmit their previously submitted comments, evidence, proposed testimony and exhibits, as they are already part of the record and will be considered by the Water Board. Non-evidentiary policy statements to be made at the hearing need not be submitted in advance.

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

The Water Board's action on the proposed amendment will be taken in accordance with a regulatory program certified under Section 21080.5 of the Public Resources Code as exempt from the requirement to prepare an environmental impact report under the California Environmental Quality Act (Public Resources Code Section 2100 et seq.) and with other applicable laws and regulations.

The public hearing will be conducted in accordance with 23 Cal. Code of Regs. § 649.3. Time limits may be imposed on oral testimony at the public hearings; groups are encouraged to designate a spokesperson.

A map and directions to the hearing are available online at www.waterboards.ca.gov/sanfranciscobay/direction.htm. The location of the hearings is accessible to persons with disabilities. Individuals who require special accommodations are requested to contact Executive Assistant Mary Tryon, (510) 622 2399, mtryon@waterboards.ca.gov, at least five (5) working days before a meeting. TTY users may contact the California Relay Service at 1-800-735-2929 or voice line at 1-800-735-2922.

Bruce H. Wolfe
Executive Officer



California Regional Water Quality Control Board

San Francisco Bay Region



Linda S. Adams
Secretary for
Environmental Protection

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Arnold Schwarzenegger
Governor

June 30, 2006

NOTICE OF PUBLIC HEARINGS NOTICE OF FILING A DRAFT ENVIRONMENTAL DOCUMENT To Amend the Water Quality Control Plan for the San Francisco Bay Basin

The San Francisco Bay Regional Water Quality Control Board (Water Board) will consider an amendment to the Water Quality Control Plan for San Francisco Bay Basin ("the Basin Plan") during public hearings on September 13 and November 8, 2006. The proposed amendment would:

Establish a total maximum daily load (TMDL) for sediment in Napa River, and an implementation plan to achieve the TMDL and related habitat enhancement objectives

Action on the proposed amendment will be taken in accordance with a regulatory program certified under Section 21080.5 of the Public Resources Code as exempt from the requirement to prepare an environmental impact report under the California Environmental Quality Act (Public Resources Code Section 2100 et seq.) and with other applicable laws and regulations.

There will be two public hearings on the proposed Basin Plan amendment:

- DATES:** September 13, 2006
November 8, 2006
- TIME:** 9:00 a.m. (approximate)
- LOCATION:** Elihu M. Harris State Building
First Floor Auditorium
1515 Clay Street
Oakland, CA 94612
- STAFF CONTACT:** Mike Napolitano
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
510.622.2397 (ph.)
510.622.2460 (fax)
mnapolitano@waterboards.ca.gov
- MATERIALS:** The proposed Basin Plan amendment, supporting staff report, and other documentation will be available online on June 30, 2006 at www.waterboards.ca.gov/sanfranciscobay/napariversedimenttmdl.htm. Paper copies will also be available by contacting:
Terry Adams
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
510.622.2306 (ph.)
510.622.2460 (fax)
tadams@waterboards.ca.gov

Paper copies also can be reviewed at the reference desk in the following public libraries:

Saint Helena Public Library 1492 Library Lane St. Helena, CA	Calistoga Public Library 1108 Myrtle Street Calistoga, CA	Napa City/County Library 580 Coombs Street Napa, CA
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The 45 day public comment period for the proposed amendment expires at 5:00 p.m. on **August 15, 2006**. All written comments on the proposed amendment are due by this date to the staff contact identified above. Additionally, all evidence, testimony, and exhibits to be offered at the September hearing must be submitted in writing by this date to the above staff contact. Non-evidentiary policy statements to be made at the September hearing need not be submitted in advance.

The Water Board will receive oral public testimony on the proposed amendment at the September hearing. At the conclusion of the September hearing, in response to written comments and testimony received, the Water Board may recommend that staff make changes to the proposed amendment to be presented for its consideration at the subsequent hearing.

The Water Board will not take action until the November hearing. Water Board staff will release any proposed changes to the proposed Basin Plan amendment and/or accompanying staff report prior to the November hearing. Oral public testimony at the November hearing will be limited to comments on changes to the Basin Plan amendment the Water Board or its staff may propose subsequent to the June 30 version. At the conclusion of the November hearing, the Water Board will consider adoption of the proposed Basin Plan amendment, including changes to the proposed amendment that are consistent with the general purpose of the proposed amendment and are a logical outgrowth of the evidence and testimony received.

The public hearings will be conducted in accordance with 23 Cal. Code of Regs. § 649.3. Time limits may be imposed on oral testimony at the public hearings; groups are encouraged to designate a spokesperson. All exhibits presented at the hearing, including charts, graphs, and other testimony must be left with the Water Board. They will become part of the administrative record.

A map and directions to the hearing are available online at www.waterboards.ca.gov/sanfranciscobay/direction.htm. The location of the hearings is accessible to persons with disabilities. Individuals who require special accommodations are requested to contact Executive Assistant Mary Tryon, (510) 622 2399, mtryon@waterboards.ca.gov, at least five (5) working days before a meeting. TTY users may contact the California Relay Service at 1-800-735-2929 or voice line at 1-800-735-2922.

Bruce H. Wolfe
Executive Officer

Appendix C

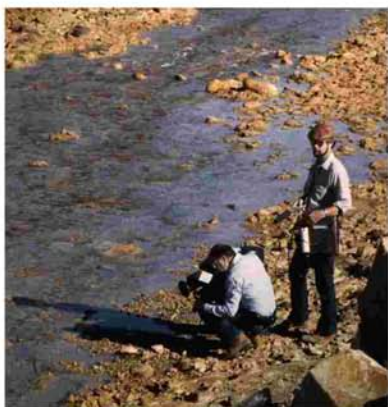
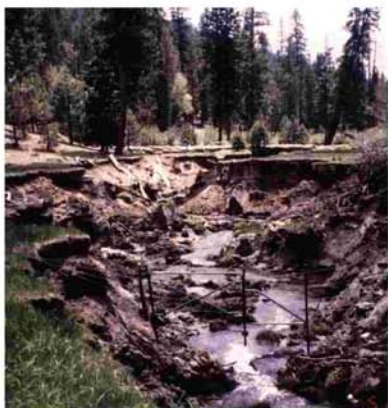
Comment Letters

California Department of Fish and Game
City of Calistoga
City of Napa
Clean South Bay
County of Napa
Prof. William Dietrich, U.C. Berkeley
Friends of the Napa River
Law Offices of Lester F. Hardy (with attachments)
Living Rivers Council (submitted by Law Offices of Thomas Lippe,
with attachments)
Napa County Farm Bureau
Natural Resources Conservation Service, Napa Field Office (with
attachment)
NOAA National Marine Fisheries Service
Rutherford Dust Restoration Team (John Williams and Davie Pina)
Ed Schulz (submitted by Shirleen Hall)
Sierra Club, Napa Group
U.S. Environmental Protection Agency
Wine Institute (two letters)

Note: Living Rivers Council submitted 31 exhibits in support of its comments. A comment letter and three of these exhibits, prepared by technical consultants and commenting directly on the amendment and staff report, are included in this appendix. A complete set of Living Rivers Council's exhibits is available on request to Mike Napolitano, 510.622.2397 or mnapolitano@waterboards.ca.gov.

FACT SHEET

POLICY FOR THE IMPLEMENTATION AND ENFORCEMENT OF THE NONPOINT SOURCE POLLUTION CONTROL PROGRAM (NPS Implementation and Enforcement Policy)



Why Is The NPS Implementation And Enforcement Policy Necessary?

- California's most serious water quality problem is NPS pollution. Polluted runoff from nonpoint sources accounts for more than 76 percent of the water bodies where Total Maximum Daily Loads (TMDLs) are required.
- The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) was amended in 1999 to require the SWRCB to develop guidance to enforce the state's NPS pollution control program. The SWRCB complied by adopting the NPS Implementation and Enforcement Policy on May 20, 2004. The Office of Administrative Law approved the policy on August 26, 2004.

What Does The Policy Require The RWQCBs To Do?

- The RWQCBs must regulate all nonpoint sources of pollution, using the administrative permitting authorities provided by the Porter-Cologne Act.

The permitting authorities include but are not limited to:

- Basin Plan prohibitions
- Waste Discharge Requirements (WDRs)
- Waivers of WDRs. In addition, Porter-Cologne requires that:
 - Waivers must be conditional and may be terminated at any time.
 - Waivers must be consistent with the public interest and any applicable state or regional water quality control plan.
 - Waivers may not exceed five years, but may be renewed following consideration of the necessity for issuing WDRs.
 - Waivers must be enforced.

What Are Dischargers Required To Do?

- Dischargers must comply with the administrative permits issued by the RWQCBs by participating in the development and implementation of NPS pollution control programs, either individually or collectively as participants in third-party coalitions.
- NPS pollution control implementation programs may be developed by a RWQCB, an individual discharger, or a discharger coalition in cooperation with a third-party representative, organization or government agency. The third-party role is restricted to entities that are not actual dischargers under RWQCB/SWRCB permitting and/or enforcement jurisdiction.

POLICY FOR THE IMPLEMENTATION AND ENFORCEMENT OF THE NONPOINT SOURCE POLLUTION CONTROL PROGRAM

- All NPS pollution control programs must meet the requirements of the following (Five) Key Elements described in the NPS Implementation and Enforcement Policy. Each implementation program must be endorsed or approved by the appropriate RWQCB.
- **Key Element 1:** A NPS control implementation program's ultimate purpose must be explicitly stated and at a minimum address NPS pollution control in a manner that achieves and maintains water quality objectives.
- **Key Element 2:** The NPS pollution control implementation program shall include a description of the management practices (MPs) and other program elements expected to be implemented, along with an evaluation program that ensures proper implementation and verification.
- **Key Element 3:** The implementation program shall include a time schedule and quantifiable milestones, should the RWQCB so require.
- **Key Element 4:** The implementation program shall include sufficient feedback mechanisms so that the RWQCB, dischargers, and the public can determine if the implementation program is achieving its stated purpose(s), or whether additional or different MPs or other actions are required.
- **Key Element 5:** Each RWQCB shall make clear, in advance, the potential consequences for failure to achieve an NPS implementation program's objectives, emphasizing that it is the responsibility of individual dischargers to take all necessary implementation actions to meet water quality requirements.

What Kind Of Enforcement Does The Policy Require?

- Individual dischargers, including both landowners and operators, continue to bear ultimate responsibility for complying with a RWQCB's water quality requirements and orders. All RWQCB enforcement actions taken will be taken against non-compliant individual dischargers, not third-party representatives. All enforcement actions taken shall be consistent with the SWRCB Enforcement Policy (SWRCB 2002).

**Find out more about the
Nonpoint Source Pollution Control Program
www.waterboards.ca.gov/waterquality**



Subject: San Francisco Bay RWQCB Stream and Wetlands Policy Field Trip

This is a message from the California Regional Water Quality Control Board, San Francisco Bay Region (2).

Stream and Wetlands System Protection Policy list members,

The San Francisco Bay Regional Water Quality Control Board has organized a field trip for Stream and Wetlands System Protection Policy (Policy) stakeholders interested in learning about the water quality effects of urbanization, watershed science, and stream protection. The field trip will occur October 5th from 9:30 * 12:30.

The field trip will offer participants an opportunity to learn Policy concepts while visiting three stream sites in El Cerrito and Richmond. The tour will include stops at:

- An innovative residential stormwater project on Baxter Creek at Poinsett Street demonstrating how daylighting can be an alternative to an expensive storm drain repair project
- A streambank stabilization project on Wildcat Creek at Church Lane displaying bioengineering approaches to erosion control
- A multi-objective floodplain project on Wildcat Creek illustrating how a watershed council substituted a conventional channelized flood control project with a multi-objective floodplain project based on natural river science principles

There is limited space available for this tour, please RSVP Ben Livsey at (510) 622-2308 or BLivsey@waterboards.ca.gov if you planning on attending. The Regional Water Board will not provide transportation; however, we encourage participants to carpool and will organize a casual carpool from the first meeting location at the old Albertsons on the corner of San Pablo Ave. and MacDonald Ave. a short walk from the El Cerrito del Norte BART station. We will email out and post on the website more information regarding this tour soon. For more information on the proposed Policy please visit the website at: <http://www.waterboards.ca.gov/sanfranciscobay/streamandwetlands.htm>.



 California Environmental Protection Agency
STATE WATER RESOURCES CONTROL BOARD
WATER RIGHTS

Instream Flows Policy

Policy for Maintaining Instream Flows in Northern California Coastal Streams

The Division of Water Rights is in the process of preparing a State Water Board Policy for Maintaining Instream Flows in Northern California Coastal Streams. The proposed policy may affect water diversions in coastal streams in portions of Marin, Napa, Sonoma, Mendocino, and Humboldt Counties. Water Code Sections 1259.2 and 1259.1 require the State Water Board adopt the Policy by January 1, 2008. These Water Code sections were enacted by Assembly Bill 2121, which was signed by the Governor in September 2004. The Policy will be prepared in accordance with state policy for water quality control, which requires the preparation of environmental documents.

CEQA Scoping Meeting

- [Notice of Preparation and Notice of August 16, 2006 Public Scoping Meeting](#)
- [Environmental Checklist](#)
- [August 16, 2006 Scoping Meeting \(PowerPoint Presentation\)](#)
- [Instream Flow Policy Area Map \(PowerPoint Presentation\)](#)
- Written Comment received:
 - [Alder Springs Ranch and Vineyard](#)
 - [Beth Trachtenberg](#)
 - [Brenda Adelman](#)
 - [California Department of Fish and Game](#)
 - [California Department of Parks and Recreation](#)
 - [California Farm Bureau Association](#)
 - [California Regional Water Quality Control Board - North Coast Region](#)
 - [California Regional Water Quality Control Board - San Francisco Bay Region](#)
 - [City of Fort Bragg](#)
 - [City of Napa](#)
 - [Colleen Fernald](#)
 - [County of Napa](#)
 - [County of Sonoma](#)
 - [Dewayne Starnes](#)
 - [Fort Bragg Trout Farm](#)
 - [Friends of the Navarro Watershed](#)
 - [John Dickson](#)
 - [Living Rivers Council and Earth Defense for the Environment Now](#)
 - [MBK Engineers](#)
 - [North Coast Water Rights Working Group](#)
 - [North Marin Water District](#)
 - [Oz Farms](#)
 - [Pauline Sanderson](#)
 - [Porgans & Associates](#)
 - [Rudolph Light](#)
 - [Salmon Creek Watershed Council](#)
 - [Sanctuary Forest](#)

- [Senator Sheila Kuehl](#)
- [Sierra Club](#)
- [Stoel Rives LLP](#)
- [Thomas A. Kamm](#)
- [Trout Unlimited and Peregrine Audubon Society](#)

To receive updates by e-mail regarding the Proposed Instream Flows Policy for Northern California Coastal Streams, subscribe on-line to the [AB2121 Instream Flows Policy mailing list](#)

▶▶ For related information, please see our [Northern California Coastal Streams](#) link.

(updated 9/6/06)

[Back to Top of Page](#)



COUNTY *of* NAPA

ROBERT J. PETERSON, P.E.
Director of Public Works
County Surveyor-County-Engineer
Road Commissioner

DONALD G. RIDENHOUR, P.E.
Assistant Director of Public Works

September 20, 2006

Charles Slutzkin, Chair
Watershed Information Center and Conservancy Board
1195 Third Street, Suite 210
Napa, CA 94559

Subject: Napa River Sediment Reduction and Habitat Enhancement Plan
Oakville Cross Road to Oak Knoll Avenue

Dear Chairperson Slutzkin:

Consistent with the direction of the Napa County Board of Supervisors (BOS) related to watershed restoration and enhancement projects, the subject project will be presented to the WICC Board on September 28, 2006, prior to going before the BOS for consideration. This project is modeled from, and essentially is a down-stream continuation of, the efforts begun on the Rutherford Reach of the Napa River, a project sponsored by the Rutherford Dust Society. Having received BOS approval in 2004, the Rutherford project is now nearing completion of the preliminary design phase. The Oakville to Oak Knoll Project Plan, being presented for your consideration and recommendation to the Board of Supervisors, is being facilitated by the California Land Stewardship Institute (CLSI), a non-profit organization that is also leading the Fish Friendly Farming Environmental Certification Program in Napa County.

CLSI approached county staff regarding the potential for Measure A funding to match a planning grant submitted by CLSI to the State Water Resources Control Board (SWRCB). The \$500,000 SWRCB grant has been recommended for funding and will likely be awarded. Staff met with Ms. Laurel Marcus of CLSI to discuss the project scope and the request of County (local) matching funds. We believe the project is consistent with the requirements for use of Measure A funds. The project is located in the unincorporated area of the county in a predominately agricultural watershed, incorporates storm water runoff improvements, and will play a key role in future TMDL implementation efforts. At this time, \$230,000 of County Measure A funding is being requested for the local match.

NAPA COUNTY DEPARTMENT OF PUBLIC WORKS
1195 Third Street • Suite 201 • Napa, CA 94559 • (707) 253-4351
www.co.napa.ca.us FAX (707) 253-4627

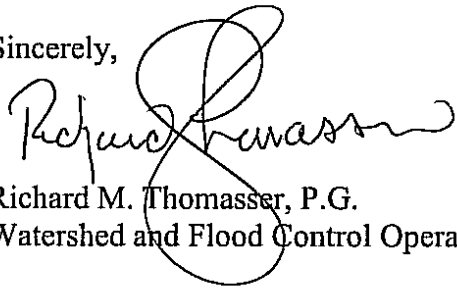
Some of the issues discussed with Ms. Marcus include ensuring the project is well supported by the affected landowners along the River. Ms. Marcus has provided several letters of support from landowners and other organizations. It should be stressed that landowner support and participation in this project is imperative for its success and eventual implementation. In addition, a funding mechanism will need to be developed for ongoing facilitation efforts for future phases of the project. An approach similar to that utilized by Rutherford reach landowners may be one possibility. It is also very important that all affected landowners understand the goals and objectives of the project from the start, and are kept informed throughout the planning and implementation process.

One element of the proposed project scope is the evaluation and analysis of possible long-term management options for the Napa River to allow for landowner representation, on-going maintenance of natural resources and water quality conditions and flood and bank erosion control improvements. This is a key issue for success and integration of the restoration efforts on the Napa River such as the Rutherford project and this proposed Oakville-Oak Knoll project.

County staff will be present at your September 28, 2006 meeting to discuss the project, Measure A applicability and possible funding options.

We ask for your careful consideration that this project as described meets the overall objectives set forth by the WICC for watershed resource management and restoration, including assessment and data management goals. Your feedback and recommendation to the Board of Supervisors will be instrumental in their decision on this project.

Sincerely,



Richard M. Thomasser, P.G.
Watershed and Flood Control Operations Manager

cc: Mr. Robert Peterson, Director, Napa County Department of Public Works
Mr. Bill Dodd, Chair, Napa County Board of Supervisors
Ms. Diane Dillon, Supervisor District 3

CALIFORNIA LAND STEWARDSHIP INSTITUTE

Charles Slutzkin, Chair
Watershed Information Center & Conservancy Board
1195 Third St., Suite 210
Napa, CA 94559

Sept. 10, 2006

Dear Chairman Slutzkin,

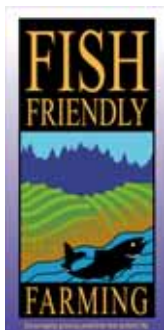
Our organization, the California Land Stewardship Institute (CLSI), operates the Fish Friendly Farming (FFF) Environmental Certification Program in Napa County, also called the Napa Green Program. A number of properties which include the Napa River are enrolled and have been certified under the program. As part of the certification the landowners/managers have agreed to participate in a river planning and stewardship process. In order to address water quality and natural resource improvements and to assure landowner involvement, CLSI applied for a State grant to prepare a Napa River Sediment Reduction and Habitat Enhancement Plan for the Oakville Cross Road to Oak Knoll Ave. reach.

The State Water Resource Control Board approved our proposal for \$500,000 in funding on Sept. 6, 2006. As part of the preparation of our proposal we met with staff from the County Flood Control District regarding Measure A funds as a match to the State grant. We are now requesting that the WICC review and consider our proposal for \$230,000 in funding for a recommendation to the Board of Supervisors.

Project Description

The Napa River Sediment Reduction and Habitat Enhancement Plan will address water quality, flooding, bank erosion problems and natural resources on a 10-mile section of the Napa River stretching from Oakville Cross Road to Oak Knoll Ave (Figure 1). This section of the Napa River is the next reach downstream of the Rutherford Reach project area (Zinfandel Lane to Oakville Cross Road). The 8-mile Rutherford Reach is beginning the implementation of enhancement and restoration efforts following several years of planning.

The Oakville to Oak Knoll Reach suffers from channel incision with bank collapse, erosion of channel bedforms (riffles, bars, pools) important to salmonids and a reduced riparian corridor. Channel incision on the Napa River was studied in the Napa River Limiting Factors Analysis and identified in the 2005 Technical Report on the TMDL for the Napa River as a major source of direct delivery of fine sediment. As a channel incises and downcuts into its alluvial floodplain, most flood flows become confined to the channel and no longer spill out onto the floodplain and slow down. This situation creates higher velocity flows in the channel, inducing further erosion



Fish Friendly Farming® Environmental Certification Program
Mendocino, Sonoma, Napa and Solano Counties
A project of the California Land Stewardship Institute
707 869 2760 email: info@fishfriendlyfarming.org
www.fishfriendlyfarming.org

and downcutting. This process will continue until the banks of the river channel become tall (20ft+) and unstable and collapse in flood events. For most of this reach of the Napa River, the channel is highly incised with unstable banks of 15-20 feet and large areas of shallow pool/glide habitat. The January 2006 flood caused extensive channel scour and bank collapse, loss of riparian habitat, flooding and property damage. As the banks collapse, they directly contribute fine sediment to the river, impairing beneficial uses. The incision of the main river channel is now progressing up tributaries, increasing erosion and loss of habitat.

The plan will comprehensively assess, inventory and evaluate a significant area of the Napa River. All aspects of the system will be included - hydrology, geomorphology, geology, riparian and aquatic biology, hydraulic engineering, as well as land use and socio-economic concerns. Incising river systems require that the river channel be addressed first to reduce the migration of incision up tributaries and other negative effects. Many habitat issues in tributary creeks in these types of systems can not be addressed through actions in the drainage area, but must be addressed through changes to the incising river channel.

This project will provide a detailed, community-based plan for a 10-mile reach of the Napa River. The TMDL for the Napa River identified incision on the main river channel and migration of incision up tributary channels as a primary source of fine sediment. The TMDL calls for a 50% reduction of sediment from this source. This project will serve to implement the TMDL and, due to the technical approach of re-balancing the channel form and reducing flow velocities also benefit habitats and reduce property damage through creation of a more stable river channel.

Landowner involvement will be a large focus of the plan. The Napa River is privately owned and landowners need to be an integrated part of the plan to assure implementation. We are proposing to have staff which will meet regularly with owners to keep them up to date, answer questions, maintain owner involvement and provide consistent landowner input to the planning process. Agencies, scientists, and organizations will also be involved in a Technical Advisory Group (TAG) will meet quarterly, or more frequently, if needed, to review assessment methods, work products and alternatives.

The goals of the Napa River Plan include:

1. Characterize the natural resources of the Napa River in the 10-mile project area between Oakville Cross Road and Oak Knoll Ave. by evaluating geomorphic, hydrologic and ecological features and processes.
2. Use the scientific characterization as a basis for the plan to assure the proposed improvements reflect the actual river processes and realistic alternatives.
3. Incorporate landowners into the planning process to assure the plan is acceptable and supported by the river's owners.
4. Incorporate local, federal and state resource and regulatory agencies into the planning process to assure the plan is acceptable and supported by the agencies.
5. Complete a plan which provides for a long-term strategy to restore balance to the Napa River, and which protects and enhances beneficial uses of the Napa River.
6. The plan will outline a strategy of measures and responsible public and private parties to implement water quality improvements and sustain these improvements over the long term.

Project Team

The California Land Stewardship Institute (CLSI) will work in partnership with the Napa County Resource Conservation District (RCD) on this plan. Both CLSI and RCD work extensively on resource enhancement and restoration projects on private land. CLSI staff has overseen large natural resource planning efforts. CLSI will carry out the river landowner coordinator task, the riparian biology and GIS work, manage the project and oversee all administrative tasks.

The Napa RCD will carry out the channel surveys, the fisheries evaluation and part of the river landowner coordinator task. The Napa RCD has been a leader in resource protection and restoration programs in Napa County for many years.

The geomorphology evaluation and hydraulic modeling will be carried out by Philip Williams and Associates (PWA). PWA completed the concept plan for the Rutherford Reach.

The Rutherford Dust Restoration Team will be involved in a review of potential organization types and institutional arrangements to manage the river over the long term and provide landowner representation.

Existing Information

There are few existing sources of information specific to the section of the Napa River encompassed by the plan. There are countywide information sources, such as the Napa County Baseline Data Report which we have reviewed. The Natural Diversity Data Base contains records of occurrences of rare and endangered plant and animal species in Napa County. In addition, a number of general digital data layers, such as the CalVeg layer, land use, streams, soils and geology are also available and will be compiled into the GIS. However, the resolution of these digital layers is 30 meters/pixel and is not detailed enough for this plan. All of these information sources generally describe natural resources in the plan area, but are not detailed enough to use as a basis for the river plan.

The Napa RCD has a MIKE-11 model of the entire Napa River channel, which utilizes 1996 surveyed channel cross sections at 1,000 ft intervals. This model can evaluate general hydraulic conditions in the channel and changed conditions created by various measures. Napa County has recently had a LIDAR dataset (1 meter resolution and 0.15 meter vertical accuracy) completed for the Napa River watershed, which can be used to characterize elevations in the plan area. The LIDAR data do not cover the area of the riverbanks. The Napa RCD completed habitat typing and snorkel surveys in the Oakville to Yountville Cross Roads section of the Napa River in 2004 as part of the Central Napa River Watershed Study. The RCD also had one temperature logger at the Yountville Cross Road in 2003-2004.

At the downstream end of this river reach, there is a USGS gaging station (Napa River near Napa #11458000). Upstream of this reach there is another USGS gaging station at the Zinfandel Road Bridge (Napa River near St. Helena #11456000). The Napa Fire Station has a rainfall gaging station with a very long period of record (1905-2006). There are other rainfall stations in other areas of the watershed with shorter but useful rainfall records.

The recent design work completed for the Rutherford Reach for the Napa RCD will be evaluated. The hydraulic model in particular will be reviewed in order to assure consistency in inputs and assumptions between the models for the two reaches. Fish surveys and other studies from the Rutherford Reach will also be reviewed. We will search for additional studies that include this reach of the Napa River and will consult with the San Francisco Estuary Institute on any mapping/historic aerial photos they may have available with the County Planning Dept. and with the California Department of Fish and Game on studies of their reserve on the Napa River in this reach.

There are a few recent studies completed as part of the TMDL which contain trends information for the river and the watershed. These include the Napa River Basin Limiting Factors Analysis (Stillwater Sciences and W. Dietrich, 2002), the Technical Report on the Fine Sediment TMDL and the Technical Report on the Pathogen TMDL (San Francisco Regional Water Quality Control Board 2005). These reports identify the numerous causes of channel incision in the Napa River and identify channel incision as major source of fine sediment loading. The reports document variable incision rates along the length

of the Napa River and calculate the average rate at 0.5 cm/year for the past 40 years as 50 times greater than natural background rates.

Since there are few detailed studies of the plan area, several types of data will need to be collected. These are described in the work plan.

Summary of Work Plan

Task 1 Landowner Involvement

Complete outreach to all landowners in the plan area. Hold monthly meetings for landowners. We will be looking for individuals who have a high level interest in the project who would like to be more involved and act as local leaders. We will also have small group and one on one meetings to assure owner/managers of how their issues will be included and to determine the structure for the landowner involvement. We expect to have several meetings with the landowners and the scientific consultant to explain why we are studying the river in the manner that we are and the type of observations we need to collect from owners/ managers. Present the findings of the major reports and work items for comment including the scientific approach, Opportunities and Constraints Analysis/ Existing Conditions Report; Preliminary Alternatives, Draft Plan and Final Plan.

Task 2 Technical Advisory Group

Organize Technical Advisory Group representatives to serve as an oversight group for the plan. Representatives from the San Francisco Bay Regional Water Quality Control Board, NOAA-Fisheries, California Department of Fish and Game, Napa County Planning Department, Napa County Flood Control District, Town of Yountville, Natural Resource Conservation Service and other organizations. Hold meetings of the TAG at quarterly, or greater, intervals to gain input on major work products including the scientific approach, Opportunities and Constraints/ Existing Conditions Report, Preliminary Alternatives, Draft Plan and Final Plan.

Task 3: Data Collection

GIS Creation

Establish GIS for the plan area, using existing layers for topography, elevation, streams, vegetation, land use, soils and geology. Add layers and database to GIS for spatial data collected in Task 3

Access

Establish access agreements with landowners for field data collection.

River Channel Surveys

In order to supplement the County LIDAR dataset (1-meter resolution and 0.15 meter vertical accuracy) and to provide more accurate topographical information for the channel bottom and banks, cross sectional surveys of the project reach will be completed with an average spacing of one cross section every 500 ft. A sample of the existing cross sections (approximately 5 out of 40) will be resurveyed as closely as possible to verify their representativeness. A longitudinal profile will also be surveyed. Each cross section will be marked with a semi-permanent monument (rebar with plastic cap) to serve as a control point location, and GPS coordinates will be recorded. Each cross section will include grade breaks, channel thalweg, and the edge of the adjacent vineyard or top of bank (on each side of the channel). Survey data will be compiled and graphed in Excel and a format compatible with the hydraulic model.

Landowner Field Mapping

The scientific team will meet with landowners on their property to map problem areas, flood lines, erosion problems and other areas of concern. Areas will be mapped using a GPS/ArcGIS system and compiled into a GIS layer.

Geomorphic Features Survey

The geomorphologist will conduct a field survey of the channel to evaluate the occurrence of various bedforms (pool, riffle, bar, point bar, glide), width to depth ratio, bank erosion, stable areas, areas where the channel is connected to its floodplain and areas where the only floodplain is disconnected, the sinuosity of the channel and bed composition. This task will break the river into a series of distinct reaches with similar conditions, and determine the relative stability of each reach, so that problems can be identified and a prioritized list of solutions developed. In addition the assessment will identify specific 'hot spots' (e.g. eroding banks) and restoration opportunities. The assessment will be compiled into a GIS layer and summary report.

Riparian Habitat Survey

Using the GPS/GIS (Arc-Pad) methodology, record the locations of invasive plant stands, density and extent of riparian forest including species present; diversity in stand age, size and species; an evaluation of understory plant diversity and an evaluation of the regeneration potential of overstory species based upon the particular requirements of the type of tree and the availability of those physical requirements along the river channel. The analysis of regeneration potential allows for a review of the sustainability of the existing riparian habitat under the current physical conditions and identifies the need for a change in those conditions to allow for a self-sustaining riparian system in the future. Canopy cover measurements will be taken throughout the plan area. Data will be compiled into a GIS layer and summary report.

Fish Habitat Survey

Conduct a detailed habitat survey of the 10 mile reach to document the amount and quality of available habitat for native fishes and other aquatic organisms, specifically steelhead trout, Chinook salmon, and California freshwater shrimp. The survey will target key habitat features including substrate composition, in-stream shelter, high-flow refugia, riffle margin and backwater rearing habitat, and spawning patch distribution. A qualitative assessment will be made of several selected pools' ability to provide refuge from high winter flows. This will be based on the location of pools in the channel, location and placement of pool forming elements, and likelihood of backwater eddies and slow-water. A qualitative assessment will be made of other roughness elements within the stream reach (woody debris, boulders, cobble, and in-stream vegetation). These elements may provide in-stream cover, but may not be of sufficient size, placement, or orientation to create high flow refugia. Connectivity to the floodplain will be evaluated as refugia from high flows and also for stranding potential (i.e. side channels or scour holes in the floodplain that fill up during floods, but become isolated shortly after the water recedes). Data will be compiled into a GIS layer and a summary report.

Conduct surveys to document salmon densities and distribution within the reach. These will include escapement (carcass) surveys in the fall for adult Chinook salmon and snorkel surveys in the spring for juvenile Chinook and steelhead. Escapement will be estimated for Chinook salmon using carcass mark-recapture techniques, visual counts of live fish, and counts of constructed redds. Beginning in November and extending through December, surveys will be conducted every 9-13 days. This sampling interval corresponds to published residence times of spawning salmon. In order to evaluate spawning success and rearing conditions, a snorkel survey will be conducted during the spring to assess juvenile abundance and distribution. Juvenile surveys will be carried out using a modified Hankin-Reeves methodology, which has been used extensively in the Napa River basin. Quantitative data on live Chinook salmon densities and distribution, carcass count results with reach population estimates, redd

locations, and an assessment of spawning and juvenile rearing success will be compiled into a GIS layer and summary report.

Water Temperature Monitoring

Conduct water temperature and water quality monitoring at ten sites along the reach. Continuous temperature loggers will be deployed at ten potential salmonid spawning and/or rearing sites to chronicle the full thermal regime of the reach. Water quality will be measured at these ten sites. Parameters will include dissolved oxygen, surface temperature, pH, specific conductance, turbidity, and observations on color and odor. Data will be compiled into the GIS, Excel spreadsheets and a summary report.

Task 4: Hydraulic Model

Set up and calibrate the MIKE FLOOD model for the project area using the LIDAR data and surveyed channel cross sections. MIKE FLOOD is a dynamically linked one-dimensional and two-dimensional flood modeling package. It uses a one-dimensional hydraulic model (MIKE-11) to efficiently simulate the channel flows, and integrates this with a two-dimensional model (MIKE-21) to simulate floodplain flows, allowing these areas to be simulated in more detail as needed. This approach has the advantage of efficiently building upon the existing MIKE-11 model for the Napa River, while expanding it into a more effective and detailed floodplain flood modeling tool. This model package is also well suited to take advantage of existing County topographic information such as the high resolution LIDAR data.

MIKE FLOOD estimates flood inundation level, velocity and direction for the floodplain. It allows several processes to be modeled that are especially relevant to flood protection and floodplain and river restoration. Run preliminary alternatives to simulate the effects of a variety of measures, including creating levee setbacks, bank setbacks, lowered terraces, reconnection of secondary channels, and others. MIKE FLOOD will be used to determine flow depth and velocity in the channel and on the floodplain for a number of alternatives to determine the effects and functions for riparian and fish habitat and reduced channel erosion and sediment loading.

Task 5: Opportunities and Constraints/Existing Conditions Report

Prepare an Opportunities and Constraints/Existing Conditions Report summarizing the results of Tasks 1-4. This task will identify a suite of possible actions that could be taken to restore the river, and the relevant constraints.

Task 6: Preliminary Alternatives

Formulate three preliminary alternatives for the river. This will involve developing estimates of the cost and footprint of project elements for each alternative. The three alternatives will be simulated in the hydraulic model to assess the flood risk/benefit associated with each approach, and the effects on riparian and fish habitats, reductions in sediment loading and property damage. Produce a report and maps depicting the details of each alternative.

Task 7: Institutional Review

Evaluate different options to provide long-term management of the Napa River that allow for landowner representation, on-going maintenance of natural resource and water quality conditions and flood and bank erosion control improvements. A summary report will be produced. A committee of landowners including representatives of the appellation and agricultural groups and others will be

involved in this task with the Rutherford Dust Society, Napa County Flood Control District and the WICC.

Task 8 Draft Concept Plan

Based on input from the various reviews of the preliminary alternatives, formulate one concept alternative and prepare a draft concept plan which incorporates the existing conditions report with 1"=100' drawings, typical grading plans, typical planting plans, typical detail sheets for structures. The Draft Concept Plan will include: the characterization of the natural condition of the plan area completed in the Existing Conditions Report; detailed plans for measurable changes to the channel to provide water quality improvements and the scientific reasoning behind why these changes represent methods for achieving and sustaining water quality improvements, the role and responsibilities of the private landowners, local, state, and federal agencies in implementing the plan, an implementation timeline for the plan and a monitoring program to demonstrate and document the effectiveness of the plan in implementing water quality improvements.

Conduct individual meetings with landowners to review the Draft Concept Plan and proposed changes on their property and revise Plan as needed. Hold TAG meeting to review Draft Concept Plan

Task 9: Public Meeting and Presentation of Draft Concept Plan

Task 10: Final Concept Plan

Based on feedback on the draft plan, revise and create a Final Concept Plan.

Measure A Funds

Specifically, the requested Napa County matching funds will be used to:

1. Complete surveys of channel cross-sections described in Task 3, \$35,000
2. Begin and carry out a portion of the landowner involvement process described in Task 1, \$50,000
3. Set up and operate the MIKE FLOOD hydraulic model to simulate existing conditions and plan alternatives and predict channel flow velocities, floodplain inundation areas and the effects of improvements on downstream flood levels described in Task 4, \$105,000
4. Conduct an institutional evaluation for long term organizations to operate and maintain Napa River projects described in Task 7, \$40,000

I will be available at the September 28, 2006 meeting to answer questions and provide additional information. We look forward to working with the WICC and Napa County on this vital project.

Sincerely



Laurel Marcus
Executive Director

MAP OF PROJECT AREA

**FIGURE 1
NAPA RIVER PLAN
PROJECT AREA**



Oakville Rd

Rector Creek

GONN GR
NAPA R

Soda Creek

DRY GR

DRY GR

Oak Knoll Ave



LETTERS OF SUPPORT



napa valley vintners

post office box 141
st. helena, ca 94574
tel 707 963 3388
fax 707 963 3488

www.napavintners.com

May 31, 2006

Laurel Marcus
California Land Stewardship Institute
3661 Grand Ave #204
Oakland CA 94610

Re: **PIN# 9318 - Napa River Sediment Reduction and Habitat Enhancement Plan**

To whom it may concern:

The Napa Valley Vintners supports the Napa River Sediment Reduction and Habitat Enhancement Plan submitted by The California Land Stewardship Institute.

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Avenue and document features of the river. The planning process will focus on landowner involvement to assure that the plan recommendations are endorsed by river owners.

This plan is an important next step in landowner-endorsed, scientifically detailed restoration of the Napa River. The plan will address the problems of river channel incision, a concern for water quality and a high priority in the fine sediment TMDL. Fishery and riparian habitats will also be addressed. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns and involve government agencies and landowners. We encourage you to fully fund the Napa River plan.

The Napa Valley Vintners (NVV) trade association is the sole organization responsible for promoting and protecting the Napa Valley Appellation as a winegrowing region second to none in the world. Respect for our history reinforces our commitment to the preservation and enhancement of the Valley's land, wine, and community for future generations. We address the shared interests of our more than 270 members and aspire to be the essential organization for all Napa Valley vintners.

Thank you for your consideration.

Sincerely,

Hugh Davies
President of the Board of Directors



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Ave., Room 325
Santa Rosa, CA 95404-6528

May 31, 2006

In response refer to:
SWR/F/SWR3:JJD

Re: **PIN# 9318 - Napa River Sediment Reduction and Habitat Enhancement Plan**

To whom it may concern:

On behalf of NOAA's National Marine Fisheries Service (NMFS), I write to express my support for the Napa River Sediment Reduction and Habitat Enhancement Plan submitted by The California Land Stewardship Institute (CLSI).

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Avenue and document features of the river. The planning process will focus on landowner involvement to assure that the plan recommendations are endorsed by river owners. The CLSI has a demonstrated ability to include landowners in their programs and projects which have helped lead to success in gaining access for their assessments and resulted in on the ground improvement projects such as those in the Fish Friendly Fanning (FFF) program.

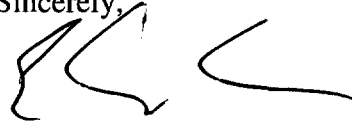
This plan is an important next step in the restoration of the Napa River which must include scientific assessment as well as landowner understanding and endorsement in order to succeed. The plan will address the problem of channel incision which is impacting water quality in the river. Addressing this sediment source is also a high priority in the draft sediment total maximum daily load. Fishery and riparian habitats are detrimentally impacted by the current condition of the river and improvements in these habitats are expected to come from the development and execution of this plan. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns through the involvement of government agencies and landowners.

NMFS will participate in the development of the plan as appropriate in order to provide our fisheries expertise to the group. We will continue to support and participate in the FFF program in Napa County as well. Execution of the plan should aid in the conservation of Endangered Species Act listed steelhead trout as well as improve conditions for the fall-run Chinook salmon and other aquatic species which utilize the watershed. We encourage you to fully fund the Napa River plan.



Thank you for your consideration. Please contact Joe Dillon of my staff with any questions at (707) 575-6093 or Joseph.J.Dillon@noaa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Edmondson', with a long horizontal flourish extending to the right.

Steven A. Edmondson
Northern California Habitat Supervisor

**GAMBLE VINEYARD
P.O.BOX 670
ST.HELENA CA 94574**

May 30, 2006

Re: PIN# 9318 - Napa River Sediment Reduction and Habitat Enhancement Plan

To whom it may concern:

On behalf of **Gamble Vineyard** I write to express my support for the Napa River Sediment Reduction and Habitat Enhancement Plan submitted by The California Land Stewardship Institute.

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Ave. and document features of the river. The planning process will focus on landowner involvement to assure that the plan recommendations are endorsed by river owners.

This plan is an important next step in landowner-endorsed, scientifically detailed restoration of the Napa River. The plan will address the problems of river channel incision, a concern for water quality and a high priority in the fine sediment TMDL. Fishery and riparian habitats will also be addressed. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns.

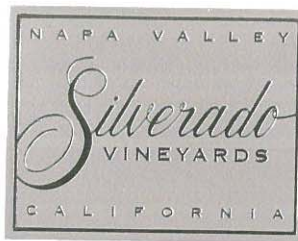
I encourage you to fully fund the Napa River plan.

I organically farm 26 acres within this reach, and am enrolled in the fish friendly/green certification project. I farm another 100 acres in the Rutherford Reach of Napa River. My experience shows me that land-owner endorsed cooperative projects such as this are resulting in more work done faster than through regulations. As a result both farmer and public see improvement in their environment sooner on multiple fronts.

Thank you for your consideration.

Sincerely,

Tom Gamble



June 1, 2006

Re: **PIN# 9318 - Napa River Sediment Reduction and Habitat Enhancement Plan**

To whom it may concern:

On behalf of Silverado Vineyards I write to express my support for the Napa River Sediment Reduction and Habitat Enhancement Plan submitted by The California Land Stewardship Institute.

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Ave. and document features of the river. The planning process will focus on landowner involvement to assure that the plan recommendations are endorsed by river owners.

This plan is an important next step in landowner-endorsed, scientifically detailed restoration of the Napa River. The plan will address the problems of river channel incision, a concern for water quality and a high priority in the fine sediment TMDL. Fishery and riparian habitats will also be addressed. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns.

We encourage you to fully fund the Napa River plan and thank you for your consideration.

Sincerely,

Jonathan Emmerich
Winemaker

JE:rmj



NAPA COUNTY FARM BUREAU

June 1, 2006

Re: **PIN# 9318 - Napa River Sediment Reduction and Habitat Enhancement Plan**

To whom it may concern:

On behalf of Napa County Farm Bureau, I write to express my support for the Napa River Sediment Reduction and Habitat Enhancement Plan submitted by The California Land Stewardship Institute.

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Avenue and document features of the river. The planning process will focus on landowner involvement to assure that river owners endorse the plan recommendations.

This plan is an important next step in landowner-endorsed, scientifically detailed restoration of the Napa River. The plan will address the problems of river channel incision, a concern for water quality and a high priority in the fine sediment TMDL. Fishery and riparian habitats will also be addressed. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns.

Napa County Farm Bureau represents farmers and ranchers throughout our county and our 1,100 members support our goal of promoting sustainable agriculture. Over the last several years, we have worked with Laurel Marcus and found her guidance and expertise on sustainable farming practices to be very beneficial.

We encourage you to fully fund the Napa River plan.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Al Wagner'.

Al Wagner
President

June 1, 2006

Laurel Marcus
California Land Stewardship Institute
3661 Grand Ave. #204
Oakland CA 94610

Re: PIN# 9318 - Napa River Sediment Reduction and Habitat Enhancement Plan

To Whom It May Concern:

On behalf of the Napa Valley Grapegrowers, I write to express support for the Napa River Sediment Reduction and Habitat Enhancement Plan Proposal submitted by The California Land Stewardship Institute.

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Ave. and document features of the river. The planning process will focus on landowner involvement to assure that the plan recommendations are endorsed by river owners.

This plan is an important next step in landowner-endorsed, scientifically detailed restoration of the Napa River. The plan will address the problems of river channel incision, a concern for water quality and a high priority in the fine sediment TMDL. Fishery and riparian habitats will also be addressed. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns.

The Napa Valley Grapegrowers is deeply committed to environmental stewardship and sustainable farming. We believe that the Napa River Plan offers a clear and effective path towards achieving those objectives.

We encourage you to fully fund the Napa River plan.

Sincerely,

Jennifer Kopp, Executive Director



Foster's Wine Estates
P.O. Box 111, 1000 Pratt Avenue, St.
Helena, CA 94574
Phone: (707) 963-7115
FAX: (707) 963-4160

June 5, 2006

Re: PIN# 9318 - Napa River Sediment Reduction and Habitat Enhancement Plan

To whom it may concern:

On behalf of Fosters Wine Estates Americas, I write to express my support for the Napa River Sediment Reduction and Habitat Enhancement Plan submitted by The California Land Stewardship Institute.

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Ave. and document features of the river. The planning process will focus on landowner involvement to assure that the plan recommendations are endorsed by river owners.

This plan is an important next step in landowner-endorsed, scientifically detailed restoration of the Napa River. The plan will address the problems of river channel incision, a concern for water quality and a high priority in the fine sediment TMDL. Fishery and riparian habitats will also be addressed. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns.

We encourage you to fully fund the Napa River plan.

Fosters Wine Estates Americas owns and leases miles of riverfront vineyards between Oakville Cross Road and Oak Knoll Avenue. We look forward to being actively involved in the Napa River Sediment Reduction and Habitat Enhancement Plan.

Thank you for your consideration.

Sincerely,

Ryan Leininger
Viticulturist,
Fosters Wine Estates Americas

HALL

June 7, 2006

To whom it may concern:

On behalf of Hall Wines, I write to express my support for the Napa River Sediment Reduction and Habitat Enhancement Plan submitted by The California Land Stewardship Institute.

The proposed plan will evaluate the conditions of 10 miles of the Napa River from Oakville Cross Road to Oak Knoll Ave. and document features of the river. The planning process will focus on landowner involvement to assure that the plan recommendations are endorsed by river owners.

This plan is an important next step in landowner-endorsed, scientifically detailed restoration of the Napa River. The plan will address the problems of river channel incision, a concern for water quality and a high priority in the fine sediment TMDL. Fishery and riparian habitats will also be addressed. Channel incision is a concern for many landowners due to the high degree of bank instability and failure, levee erosion and overtopping and high maintenance costs. The proposed plan will address all of these concerns.

We encourage you to fully fund the Napa River plan.

Thank you for your consideration.

Sincerely,



Patty Saldivar McClain
Director of Vineyard Operations
Hall Wines

401 St. Helena Highway South · St. Helena, CA 94574

Toll Free 866.667.HALL [4255] · T 707.967.2626 · F 707.967.2634 · www.hallwines.com



COUNTY *of* NAPA

ROBERT J. PETERSON, P.E.
Director of Public Works
County Surveyor-County-Engineer
Road Commissioner

DONALD G. RIDENHOUR, P.E.
Assistant Director of Public Works

September 20, 2006

Charles Slutzkin, Chair
Watershed Information Center and Conservancy Board
1195 Third Street, Suite 210
Napa, CA 94559

Subject: Milliken Creek Flood Reduction and Creek Stabilization Study
Westgate Drive to Atlas Peak Road

Dear Chairperson Slutzkin:

Consistent with the direction of the Napa County Board of Supervisors (BOS) related to watershed restoration and enhancement projects, the subject study project will be presented to the WICC Board on September 28, 2006, prior to going before the BOS for consideration. This study is being proposed jointly by Silverado Property Owners Association (SPOA) and Silverado Country Club (SCC). SPOA and SCC requested a proposal from HSI Hydrologic Systems, facilitated by Mr. Tyler York and Ms. Laurel Marcus and Associates. The study reach encompasses the approximately 7,000 linear foot reach of Milliken Creek which passes through Silverado Country Club golf course and adjacent residential subdivisions. This reach of Milliken Creek experienced significant flood damage and erosion problems as a result of the December 31, 2005 storm. In particular, several homes on Kannapali Drive were flooded.

SPOA President Joe Russoniello and SCC General Manager Kirk Candland approached county staff regarding the potential for Measure A funding to conduct a flood reduction and creek stabilization study that would cost approximately \$75,000. Public Works and Flood Control staff believe the project includes elements consistent with the requirements for use of Measure A funds and would support the County's unincorporated area flood damage reduction goals.

Some of the issues discussed with Mr. Russoniello and Mr. Candland include ensuring the study is properly designed to evaluate potential solutions to the flooding problems that impact the Kannapali Drive area. To this end, the proposal has been revised to better meet this goal.

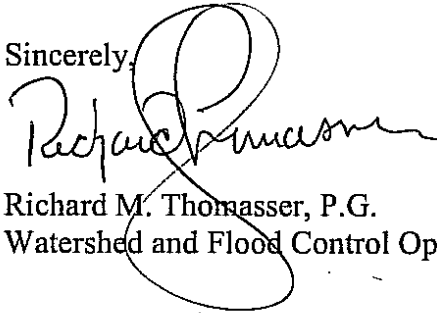
NAPA COUNTY DEPARTMENT OF PUBLIC WORKS
1195 Third Street • Suite 201 • Napa, CA 94559 • (707) 253-4351
www.co.napa.ca.us FAX (707) 253-4627

Furthermore, at the suggestion of BOS Chair Bill Dodd, staff has sought participation by Phill Blake, District Conservationist of Natural Resource Conservation Service (NRCS) to serve as a peer reviewer on the study. Mr. Blake has agreed to provide such services.

County staff will be present at your meeting on September 28th to discuss the study, Measure A applicability, and funding options. Staff's proposed recommendation to the BOS will be for reimbursement of 1/3 of the cost of this study (approximately \$25,000), with the remaining 2/3 of study costs to be borne by SPOA and SCC at their discretion.

We ask for your careful consideration that this study as described meets the overall objectives set forth by the WICC for watershed resource management and restoration, including assessment and data management goals. Your feedback and recommendation to the BOS will be instrumental in their decision on this project.

Sincerely,



Richard M. Thomasser, P.G.
Watershed and Flood Control Operations Manager

cc: Mr. Robert Peterson, Director, Napa County Department of Public Works
Mr. Bill Dodd, Supervisor District 4 and BOS Chair

SILVERADO PROPERTY OWNERS' ASSOCIATION

1600 Atlas Peak Road
Napa, California 94558

September 8, 2006

Bob Peterson
Director of Public Works
Administration Building
1195 3rd Street, 2nd Floor
Napa, CA 94559

Re: Measure A Funding Proposal for Milliken Creek Restoration Project

Dear Mr. Peterson:

Following up on our meeting of August 31, 2006, I write in my capacity as President of the Silverado Property Owners Association, an association representing all of the property owners within the Silverado Country Club general plan including those properties that are adjacent to or otherwise affected by Milliken Creek. As you know, significant flooding and damage to many of those properties occurred as a result of 2005-2006 winter storm surges, in general, and the overflowing of Milliken Creek at various locations, in particular.

We are in the process of contracting with HSI Hydrologic Systems of San Rafael for the purpose of their providing a detailed historical study of Milliken Creek that will include restoration and remedial recommendations, engineering studies and the like which will assist private and public interests in the development of a comprehensive plan for managing Milliken Creek and its tributaries so as to reduce the likelihood of future flooding.

The first phase of this effort to provide a study and outline of remedial work to be performed is estimated to cost \$75,000. We propose that this effort be subjected to oversight and peer review by an independent organization acceptable to the County.

Accordingly, on behalf of the property owners in the affected areas, I request that the County of Napa authorize the allocation of Measure A funds in the amount of \$75,000 or such amount as is deemed necessary and proper to cover the cost of this phase of the undertaking.

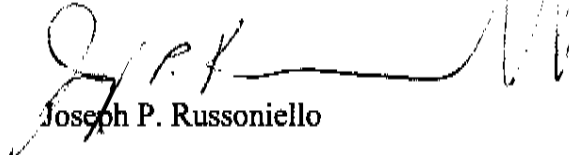
I would be happy to discuss this matter with you or your staff further. I can be reached during the day at (415) 693-2014.

**SILVERADO PROPERTY
OWNERS' ASSOCIATION**

September 8, 2006
Page 2

Thank you for your anticipated prompt attention to this request.

Very truly yours,



Joseph P. Russoniello

JPR:pem

cc: Bill Dodd, Chairman, Board of Supervisors, County of Napa
Tyler York
Vanessa Braun
Kirk Candland

1008219 v1/SF

Milliken Creek Flood Reduction and Creek Stabilization Plan

HSI Hydrologic Systems,

Laurel Marcus and Associates, and

Tyler York, Watershed Coordinator

Proposal to conduct a flood control and erosion mitigation study on Milliken Creek through the Silverado Estates Development.

Milliken Creek above Silverado Estates in Napa, California drains a watershed of approximately 16.8 square miles. The upper area of the watershed is relatively undeveloped. The downstream end of the watershed has been rapidly developing over the past decade. Recent flooding of houses along the lower end of the creek has highlighted the need for an understanding of the flood characteristics of the river through this reach. Little is known about the water elevation and erosion potential associated with recurrent floods, specifically the 100-year event. This information is required before any flood control work or long-term restoration can begin. This section of the creek also supports various aquatic habitats and a run of steelhead trout.

The January, 2006 flood caused widespread damage along Milliken Creek and adjacent property. Much of lower Milliken Creek flows through urban areas within the City of Napa. Figure 1 is a plan view of the watershed showing the location of the project site.

This proposal has been developed in response to homeowner/landowner requests for a project to, 1, reduce the potential for flood damage and 2, create a stable channel that will minimize bank erosion and preserve aquatic habitat.

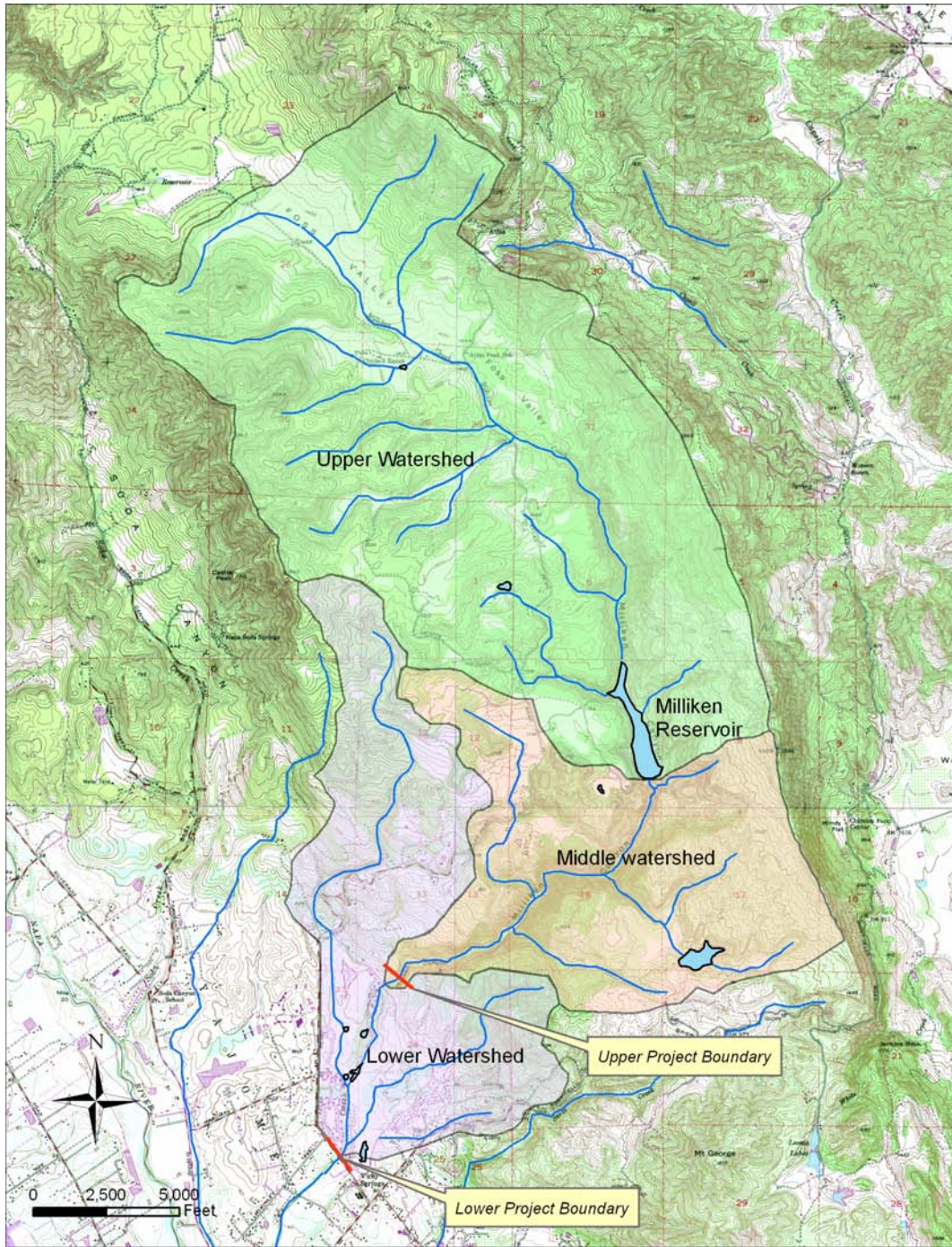


Figure 1 Milliken Creek Watershed Map



Figure 2 Project Site Map

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The reach that has experienced the greatest damage extends from immediately upstream of Westgate Drive to Atlas Peak Road. The majority of this 7,000 foot section of creek passes through the Silverado Country Club and adjacent residential subdivisions. This flood management plan will be performed in conjunction with several other ongoing studies to insure that it is integrated into a comprehensive watershed program. Of the 16.8 square mile drainage area of Milliken Creek, 9.5 square miles drain to Milliken Reservoir, 3.8 square miles drain to Milliken Creek upstream of the project, and 3.5 square miles drain to tributaries directly discharging on the project site.

The existing creek is undergoing bed and bank erosion through the length of the creek below Westgate Drive. The January 2006 flooding occurred at several locations throughout the reach. Several homeowners have had to perform emergency repairs to the bank to protect their property. Recent storms have aggravated the ongoing erosion process leading to accelerated degradation in many areas.

Any flood management elements that are proposed for the creek will require the cooperation of environmental organizations that are concerned with aquatic habitat along the creek as well as fish passage. There are four main goals of the flood management plan. A description of each goal is provided below.

1. To develop a set of flood mitigation elements that will insure the maintenance of flood capacity of the creek, thus protecting local homeowners.
2. To stabilize the creek within the limits of creek morphology.
3. To revegetate and enhance the creek so that it can provide a more stable and robust aquatic and riparian habitat.
4. To provide for consistent and safe fish passage through this reach of the river for migrating salmonids.

The process to accomplish these goals will require two stages. The first stage is to develop an understanding of the existing hydrology, hydraulics, and stable geomorphic condition of the system. Once this basic information is known, recommendations can be developed to reduce potential flooding, provide for a more stable creek system, without impacting the existing fish passage. We feel that it is important to understand the physical processes of the stream before making recommendations on

potential restoration elements. This approach provides for a long term solution that typically requires less ongoing maintenance.

Basic Information

An understanding of the creek hydrology entails understanding the flow through the creek, the frequency of high-, and low-flow events, the sediment load within the creek and the local inflow to the creek.

From a hydraulic perspective we need to understand the existing shape, depth, width and bed and bank characteristics of the creek. From this information a hydraulic model can be developed to determine the depth of flow, velocity, and sediment carrying capacity of the system.

This hydrology and hydraulic data will be combined and evaluated in terms of the existing stream morphology as well as potential stable morphologic conditions.

Mapping of vegetation and measuring of water temperatures will be used to characterize habitats on Milliken Creek and their relationship to channel and flood processes. The channel hydraulic analysis along with the geomorphic analysis will be used to evaluate fish passage, and identify any active barriers. These environmental components will facilitate permitting of the project and gain the cooperation of the California Department of Fish and Game.

The following tasks have been proposed to evaluate the above characteristics for the creek

Phase I Basic Data Collection

Task 1 Creek Survey

A survey of the creek will be performed to determine the alignment and geometry of the creek through the study reach. Up to thirty five cross-sections will be developed for use in the hydraulic model and sediment transport evaluation. This information will also be used to develop a longitudinal profile of the creek through the study reach.

Task 2 Hydrologic Evaluation

A hydrologic model of the watershed above the study reach will be developed to determine the potential flow within the creek. The model will be developed using the Corps of Engineers Hydrologic Modeling System (HMS). The HMS model simulates the surface runoff response of a river basin to

precipitation by representing the basin as an interconnected system of hydrologic and hydraulic components. A component may represent a surface runoff entity, a stream channel, or a reservoir, see Figure 1. HMS utilizes spatially-detailed information on climate, soil type, land use, digital elevation, and hydrologic parameters. This set of parameters specify the particular characteristics of the component and mathematical relations which describe the physical processes. The result of the modeling process is the computation of streamflow hydrographs at desired locations in the river basin. Figure three is an example schematic of a HMS basin and river interconnected system.

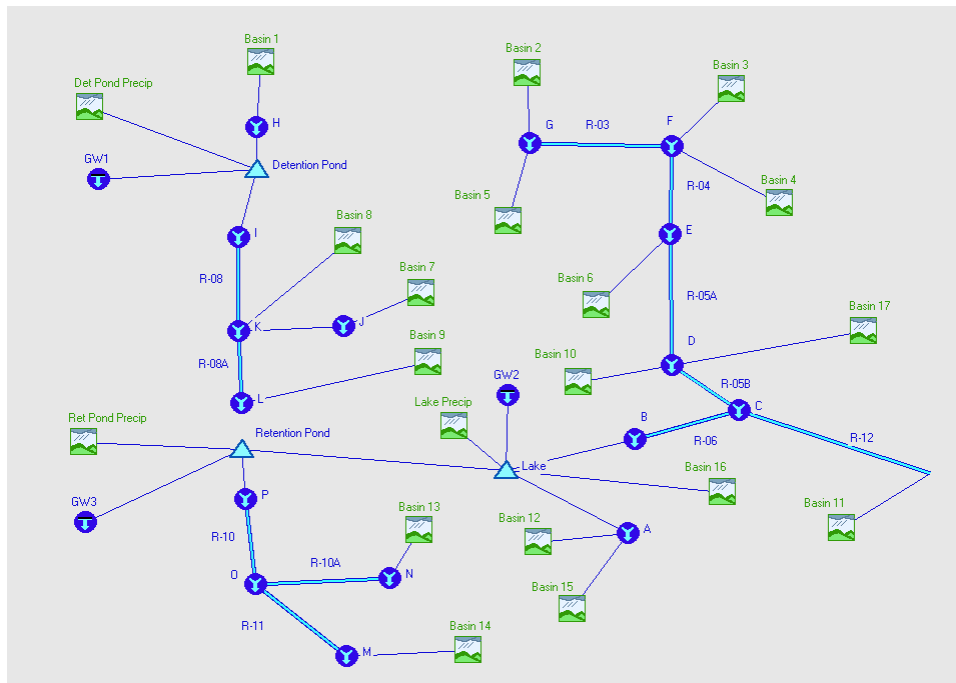


Figure 3 Hydrologic Model Schematic

If required, a different model could be used to insure coordination with the County Flood Control District or other agency stakeholders. Information concerning the discharges from Milliken Reservoir will be collected and assimilated into the hydrologic analysis. The 2-, 5-, 10-, 25-, 50-, and 100-year peak flows within the creek will be developed.

Task 3 Hydraulic Analysis

The HEC-2 Hydraulic Model is an integrated system of software that performs one-dimensional (1D) hydraulic calculations for a full network of natural and constructed channels developed by the Corps of Engineers. HEC-2 is designed to compute water surface profiles for steady, gradually varied flow in both natural and man-made channels. Both subcritical and supercritical profiles can be computed. The program can account for backwater created by bridges, culverts, weirs, and other floodplain structures. The program can be used to evaluate floodway encroachments, identify flood hazard zones, manage floodplains, and design and evaluate channel improvements. Figure 4 shows a typical channel cross section and the corresponding water surface elevation. The hydraulic program can compute the water surface profile along a channel reach given the flow discharge is known, see Figure 4. Figure 5 shows a typical view of the water surface profiles for the 10-, 50-, and 100-year storm events.

This model will be run for the creek discharges that were developed in Task 2. The output of the model will also be used to determine the sediment carrying capacity of the creek and the areas subject to the greatest potential erosion.

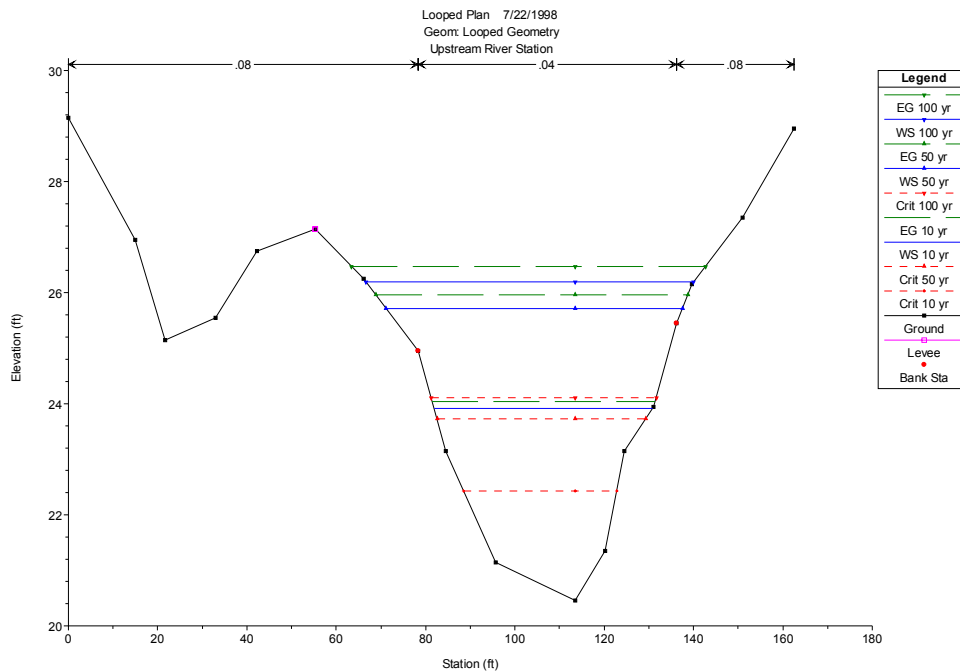


Figure 4 Typical Channel Cross-Section

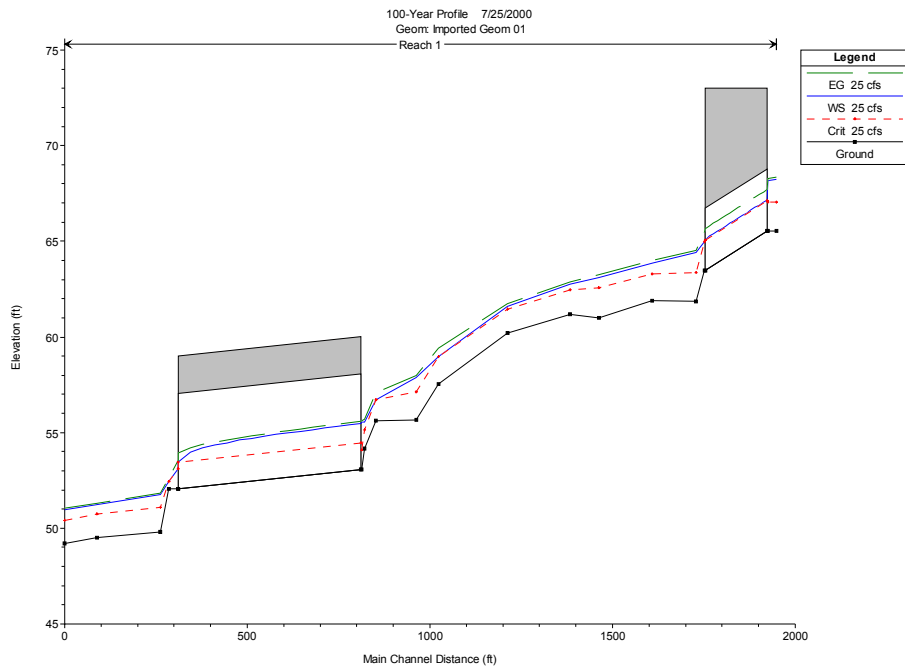


Figure 5 Typical Channel Profile With Ground and Water Surface Elevations

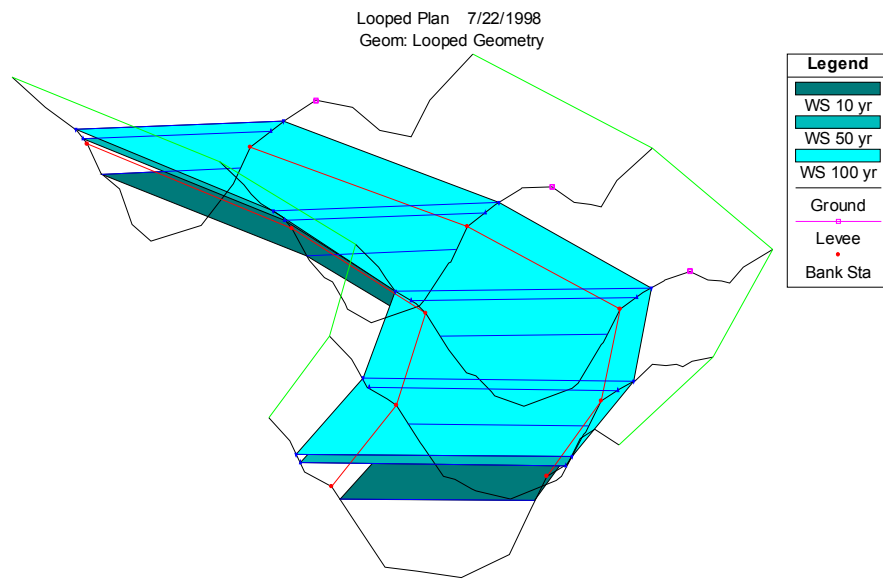


Figure 6 3-D Channel Profile View

Task 4 Sediment Loading Analysis

A sediment loading analysis will be conducted to determine the amount of sediment entering the reach from the upstream watershed. This information will be used in conjunction with the hydraulic model to determine the areas of high erosion potential.

Task 5 Geomorphic Analysis

The existing geomorphology of the creek will be evaluated in terms of historic meander patterns and its present condition. An assessment will be developed concerning what form the creek is tending towards so that the flood reduction and restoration elements can (to the greatest extent possible) be developed within the natural framework. Together with the hydraulic analysis of the creek, salmonid migration barriers will be identified and evaluated.

Task 6 Channel Mapping

A detailed condition map of the creek through the study reach will be developed. The map will identify the distressed areas and channel geometry through each of the subreaches.

Task 7 Vegetation Mapping

In conjunction with the geomorphologists, the ecologists will map the riparian corridor vegetation identifying native species type, abundance and density, areas of non-native invasive species, areas lacking sufficient shade canopy, areas with high quality canopy, trees which are undercut and subject to failure, and areas where vegetation type or density is insufficient to protect banks from erosion.

Task 8 Water Temperature Monitoring

This task will involve deployment of data loggers to monitor water temperatures for use in evaluating suitability of aquatic habitats to salmonids. This task would occur for a longer period of time than other tasks to create a baseline condition dataset.

Task 9 Identification of Areas Requiring Restoration

This task will develop a prioritized list of restoration elements for the study reach. The criteria for prioritization will be developed in terms of streambank erosion, salmonid migration barrier removal, potential flooding, potential property damage, and potential for habitat enhancement.

The costs associated with implementing Phase I of the project are provided in Table 1.

Table 1 - Phase I Cost Estimate

Task No.	Description	Hours	Total
1	Survey	132	14,400
2	Hydrologic Analysis	80	7,300
3	Hydraulic Analysis	64	6,000
4	Sediment Loading Analysis	116	12,200
5	Geomorphic Analysis	36	3,800
6	Channel Mapping	52	5,500
7	Vegetation Mapping	40	3,200
8	Water Temperature Monitoring	60	3,600
9	Flood Mitigation Recommendations	36	3,300
	Meetings	60	5,820
	Watershed Coordinator	120	9,000
	Total	796	\$74,120

Phase II Development of the Conceptual Flood Reduction and Mitigation Plan

After the elements of Task 9 have been identified conceptual flood reduction elements can be developed and implemented. The details and cost estimate for this Phase II effort will be developed when the mitigation elements, developed at the end of Phase I are better defined.