

DRAFT – TENTATIVE ORDER

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

In the matter of:)
)
SONOMA VALLEY COUNTY) **Order No. R2-2011-00xx**
SANITATION DISTRICT)
No. R2-2011-00xx for) **Settlement Agreement and Stipulation for**
Administrative Civil Liability) **Order; Order**
)

Section I: Introduction

This Settlement Agreement and Stipulation for Order (“Stipulation”) and Administrative Civil Liability Order (the “Order”) are issued in reference to an adjudicative proceeding initiated by the issuance of Administrative Civil Liability Complaint No. R2-2010-0093, dated July 15, 2010 (the “Complaint”). The parties to this proceeding are the San Francisco Bay Regional Water Quality Control Board (“Regional Water Board”) Prosecution Team, and Sonoma Valley County Sanitation District (“Discharger”) (collectively the “Parties”).

Section II: Recitals

1. The Discharger is the owner of the Collection System that serves the City of Sonoma and numerous unincorporated areas in the Sonoma Valley area in Sonoma County, California (the “Collection System”). The Collection System consists of approximately 135 miles of sewer pipe and two pump stations, and serves an approximate population of 16,452 equivalent single-family dwelling units. The Collection System is subject to the requirements set forth in Regional Water Board Order No. R2-2002-0046 (NPDES Permit No. CA0037800 or “2002 NPDES Permit”), incorporating the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993, by reference and attachment. From December 1, 2008, to the present, the Discharger is subject to Order No. R2-2008-0090 (NPDES Permit No. CA0037800 or “2008 NPDES Permit”), incorporating the federal Standard Provisions (Version 2007-1) by reference and attachment.

2. The Complaint describes an administrative civil liability totaling \$348,400 for 37 alleged violations of the 2002 NPDES Permit and the 2008 NPDES Permit. That amount includes staff costs of \$16,500. This Stipulation and Order is to resolve the 37 violations alleged in the Complaint and four additional violations of the 2008 NPDES Permit. Attachment A identifies the 41 total violations addressed and resolved by this Stipulation and Order.

3. To resolve by consent and without further administrative proceedings certain alleged violations of the California Water Code (“CWC”), set forth in Attachment A, the Discharger shall pay \$383,000 to the State Water Pollution Cleanup and Abatement Account, which includes \$16,500 for staff costs. Payment of \$199,750 is due no later than 30 days following the Regional Water Board executing this Order. The remaining \$183,250 in penalties shall be suspended pending completion of a Supplemental Environmental Project (“SEP”) for the Fryer Creek Habitat Enhancement Project in conjunction with Sonoma Valley County Sanitation District, Sonoma County Water Agency, and the Sonoma Ecology Center. The SEP outlined in Attachment B shall be incorporated into the Stipulation and Order and satisfies the provisions of Section IV, Part D of the State Water Board Water Quality Enforcement Policy (Resolution 96-030 as amended). The Discharger shall pay for SEP oversight costs in addition to resolving the 41 total violations for \$383,000.

4. The Parties have engaged in settlement negotiations and agree to settle the matter without administrative or civil litigation and by providing this Stipulation and Proposed Order to the Regional Water Board for adoption as an Order pursuant to Government Code section 11415.60. Upon the execution of this Stipulation and entry of the Order by the Regional Water Board, the terms and conditions of this Stipulation and the Order shall be binding upon the Parties.

5. The Regional Water Board Prosecution Team has determined based on the information in the record that the resolution of the alleged violations in Attachment A (a portion of which are approved for application to implementing the SEP) is fair and reasonable and fulfills its enforcement objectives.

Section III: Stipulations

The Parties stipulate to the following:

6. **Administrative Civil Liability:** The Discharger hereby agrees to pay the administrative civil liability totaling \$383,000 as set forth in Paragraph 3 of Section II herein. Further, the Discharger agrees that \$183,250 of this administrative civil liability shall be suspended (the “Suspended Liability”) pending completion of an SEP as set forth in Paragraph 3 of Section II herein and Attachment B attached hereto and incorporated by reference.

7. **Supplemental Environmental Project (SEP):** The Parties agree that this resolution includes an SEP as provided for as follows:

a. **Definitions**

- i) **Cleanup and Abatement Account:** The State Water Pollution Cleanup and Abatement Account.

- ii) Designated San Francisco Estuary Partnership Representative: The representative from the San Francisco Estuary Partnership (SFEP) responsible for oversight of the SEP on behalf of the Regional Water Board.
 - iii) Designated Regional Water Board Representative: The representative from the Regional Water Board who serves as the main contact person for this enforcement case.
 - iv) Milestone Requirement: A requirement with an established time schedule for meeting/ascertaining certain identified measurements of completed work.
 - v) SEP Completion Date: The date in which the SEP will be completed in its entirety.
 - vi) Payment Administrator: The person at the Regional Water Board who receives the payments.
- b. **Payment and Costs:** The Discharger shall pay the unsuspended portion of the total administrative liability amount within 30 days of receipt of the Stipulation and Proposed Order executed on behalf of the Regional Water Board to the Cleanup and Abatement Account. The payment of Regional Water Board staff costs incurred for overseeing the implementation of the SEP is addressed in Paragraph 12, below. Payment shall be submitted to the attention of the Payment Administrator. Payment of any unexpended SEP funds is addressed in Paragraph 17 of this Stipulation below. Payment in the event of failure to complete the SEP is addressed in Paragraph 20 of this Stipulation below.
- c. **SEP Performance:** Upon the Regional Water Board's acceptance of this Stipulation and entry of this Proposed Order, the Discharger agrees to perform the SEP as described further in paragraphs 8-14 below.

8. **SEP Description:** The Fryer Creek Habitat Enhancement Project is to address issues identified in the Sonoma Creek Watershed Sediment Total Maximum Daily Load (TMDL). The SEP is designed to improve upland and aquatic wildlife habitat for native fisheries and preserve special-status species. Planting trees, shrubs, and grasses will help sequester carbon and enhance habitat for red-legged frogs, western pond turtles, existing warm water fisheries, and possibly Chinook salmon or steelhead. The planting of native species to stabilize the channel and banks will reduce erosion and sediment inputs to the stream channel, displace or reduce the prevalence of aquatic non-native weeds, filter and slow adjacent surface storm water runoff to prevent sediment build up, and to decrease intrusive sediment removal project impacts. Water quality monitoring and comparison to other watershed tributaries will provide critical indicators of stream health and help steer watershed management practices.

9. **SEP Coordination:** The Discharger will coordinate with the Sonoma County Water Agency that is planning to remove sediment in the Fryer Creek Flood Control Channel for combined benefits to improve water quality, fish and wildlife habitat, flood

conveyance, and appearances. The Sonoma Ecology Center will coordinate all tasks, subcontractors and communications with stakeholders in the project area, including the Discharger, Sonoma County Water Agency, and the Regional Water Board and other entities. The Discharger shall receive approval of the Draft Detail Plans from the Sonoma County Water Agency, before submitting the Draft Detail Plans to the Regional Water Board for approval. The Discharger retains all responsibility toward the Regional Water Board for constructing the SEP, its monitoring provisions, and ensuring the SEP is successful as described in the Project Performance Measures contained in Attachment B.

10. **Representation of the Discharger:** As a material consideration for the Regional Water Board's acceptance of this Stipulation and entry of the Proposed Order, the Discharger represents that it will utilize the funds as outlined in Paragraphs 3 and 7 to implement the SEP in accordance with the Project Milestones and Budget schedule contained in Attachment B. The Discharger understands that its promise to implement the SEP, in its entirety and in accordance with the Project Milestones and Budget schedule for performance, is a material condition of this settlement of the administrative civil liability between the Discharger and the Regional Water Board.

11. **Agreement of Discharger to Implement SEP:** The Discharger represents that upon the Regional Water Board's acceptance of this Stipulation and entry of this Proposed Order: 1) it will spend the SEP funding amount as described in this Stipulation and Proposed Order; 2) it will provide a certified, written report to the Regional Water Board consistent with the terms of this Stipulation, including Attachment B, detailing the implementation of the SEP; and 3) within 30 days of the completion of the SEP, it will provide written certification, under penalty of perjury, that the Discharger complied with all applicable environmental laws and regulations in implementing the SEP including but not limited to the California Environmental Quality Act (CEQA), the federal Clean Water Act and the Porter-Cologne Act. The Discharger agrees that the Regional Water Board has the right to require an audit of the funds expended by it to implement the SEP, as further described in Paragraph 16 below. (See Paragraph 20 for the consequences for failure to complete the SEP.)

12. **Third Party Oversight Costs:** The Discharger agrees to contract with the San Francisco Estuary Partnership (SFEP) to perform oversight services for implementing the SEP, and to pay costs for such oversight pursuant to that contract with check(s) payable to the Association of Bay Area Governments.

13. **Submittal of Progress Reports:** Commencing July 1, 2011, the Discharger shall provide quarterly progress reports regarding implementation of the SEP to the SFEP representative who is designated to oversee the SEPs for the Regional Water Board. The Discharger shall also provide the quarterly reports to the State Water Board's Division of Financial Assistance, The quarterly reports shall include but not be limited to a discussion of progress with meeting project performance measures and an accounting of all costs and expenses incurred for each SEP. The requirement for quarterly progress reports will terminate

upon the Discharger's submittal of the final reports described below in Paragraph 15. If no activity occurred during a particular quarter, a quarterly report so stating shall be submitted.

14. Certification of Completion of SEP: On or before the applicable SEP Completion Date, the Discharger shall submit the final monitoring report with a certified statement of completion of the SEP (Certification of Completion). The Certification of Completion shall be submitted under penalty of perjury, to the Designated Water Board Representative and the State Water Resources Control Board's Division of Financial Assistance, by a responsible official representing the Discharger. The Certification of Completion shall include following:

- a. Certification that the SEP has been completed in accordance with the terms of this Stipulation. Such documentation may include photographs, invoices, receipts, certifications, and other materials reasonably necessary for the Regional Water Board to evaluate the completion of the SEP and the costs incurred by the Discharger.
- b. Certification documenting the expenditures by the Discharger during the completion period for the SEPs. The Discharger's expenditures may be external payments to outside vendors or contractors performing the SEP. In making such certification, the Discharger official may rely upon their normal project tracking systems that capture employee time expenditures and external payments to outside vendors, such as environmental and information technology contractors or consultants. The expenditure certification need not address any costs incurred by the Regional Water Board for oversight. The Discharger shall provide any additional information requested by the Regional Water Board staff that is reasonably necessary to verify SEP expenditures.
- c. Certification, under penalty of perjury, that the Discharger followed all applicable environmental laws and regulations in the implementation of the SEP including, but not limited to, the California Environmental Quality Act (CEQA), the federal Clean Water Act (CWA), and the Porter-Cologne Act. To ensure compliance with CEQA where necessary, the Discharger shall provide the Regional Water Board with the following documents from the lead agency prior to commencing SEP construction:
 - i) Categorical or statutory exemptions relied upon by the Discharger;
 - ii) Negative Declaration if there are no potentially "significant" impacts;
 - iii) Mitigated Negative Declaration if there are potentially "significant" impacts but revisions to the project have been made or may be made to avoid or mitigate those potentially significant impacts; or
 - i) An Environmental Impact Report (EIR).

15. Regional Water Board Acceptance of Completed SEP: Upon the Discharger's satisfaction of its obligations under this Stipulation, the completion of the SEP, and all

related monitoring and reporting, and any audits, the Designated Water Board Representative shall request that the Regional Water Board issue a "Satisfaction of Order." The issuance of the Satisfaction of Order shall terminate any further obligations of the Settling Discharger under this Stipulation.

16. **Third Party Audit:** If the Designated Water Board Representative obtains information that causes the representative to reasonably believe that the Discharger has not expended money in the amounts claimed by the Discharger, or has not adequately completed any of the work in the SEP Project Milestones and Budget schedule, she may require the Discharger, at its sole cost, to submit an audit report prepared by an independent third party. In the event of such an audit, the Discharger agrees that it will provide the third-party auditor with access to all documents which the auditor requests. Such information shall be provided to the Designated Water Board Representative within three months of the completion of the Discharger's SEP obligations. The audit need not address any costs incurred by the Regional Board for oversight.

17. **Failure to Expend All Suspended Administrative Civil Liability Funds on the Approved SEP:** In the event that the Discharger is not able to demonstrate to the reasonable satisfaction of the Assistant Executive Officer that it has spent the entire SEP amount for the completion of the SEP, and all SEP related monitoring and reporting costs required pursuant to Attachment B and this Stipulation (excluding costs of Regional Water Board oversight), the Discharger shall pay as an administrative civil liability to the State Water Pollution Cleanup and Abatement Account the difference between the Suspended Administrative Civil Liability and the amount Discharger can demonstrate was actually spent on the SEP.

18. **Completion of SEP contingent upon Programmatic Permit:** Commencement of the SEP is contingent on obtaining programmatic permitting approval for the Sonoma County Water Agency's Stream Maintenance Program (SMP) from the Regional Water Quality Control Board in the form of (Waste Discharge Requirements (WDRs) and a Monitoring and Reporting Program (MRP) (designated at this point as application # R2-2010-XXX). The SMP application was submitted to the Regional Water Quality Control Board on April 6, 2009. The proposed dates identified in the Project Milestones and Budget section of the SEP are based on an estimated adoption of the programmatic permit by the Regional Board by April 30, 2011. If the approval of the programmatic permit occurs after April 30, 2011, the proposed dates identified in the Project Milestones and Budget section of the SEP will adjust to 30 days after the Sonoma County Water Agency programmatic permit is adopted by the Regional Water Board. The SEP shall be completed no later than 1005 days after approval of the programmatic permit or January 31, 2014, whichever is later.

19. **Floodplain Adaptive Management:** If the Sonoma County Water Agency determines planting from the SEP is causing a problem with flood protection, the Water Agency, after consulting with the Assistant Executive Officer, may require the Discharger to alter or remove such planting to a level that will provide sufficient flood

protection. Alteration or removal of planting shall be the minimum necessary to provide the sufficient level of flood protection as determined by the Water Agency.

20. **Failure to Complete the SEP:** If the SEP is not fully implemented within the SEP Completion Period required by this Stipulation and Proposed Order, or there has been a material failure to satisfy a Milestone Requirement, the Designated Regional Water Board Representative shall issue a Notice of Violation. As a consequence, the Discharger shall be liable to pay the entire Suspended Liability, or some portion thereof. The Discharger may not be entitled to any credit, offset, or reimbursement from the Regional Water Board for expenditures made on the SEP prior to the date of the “Notice of Violation” by the Regional Water Board. The amount of the Suspended Liability owed shall be determined via a “Motion for Payment of Suspended Liability” before the Regional Water Board. Upon a final determination of the amount of the Suspended Liability assessed, the amount owed shall be paid to the State Water Pollution Cleanup and Abatement Account within thirty (30) days after the Regional Board serves its final determination on the Discharger. The Discharger shall be liable for the Regional Water Board’s reasonable costs of enforcement, including but not limited to legal costs and expert witness fees. Payment of the assessed Suspended Liability amount will satisfy the Discharger’s obligations pursuant to this Stipulation and the Proposed Order to implement the SEP.

21. **Publicity Associated with SEP:** Whenever the Discharger or its agents or subcontractors (including those associated with the Sonoma County Water Agency) publicizes one or more elements of the SEP, they shall state in a **prominent manner** that the project is being undertaken as part of the settlement of an enforcement action by the San Francisco Bay Regional Water Quality Control Board against the Discharger.

22. **Regional Water Board is Not Liable:** Neither the Regional Water Board members nor the Regional Water Board staff, attorneys, or representatives shall be liable for any injury or damage to persons or property resulting from acts or omissions by the Discharger, its directors, officers, employees, agents, representatives or contractors in carrying out activities pursuant to this Stipulation and Proposed Order, nor shall the Regional Water Board, its members or staff be held as parties to or guarantors of any contract entered into by the Discharger, its directors, officers, employees, agents, representatives or contractors in carrying out activities pursuant to this Stipulation and Proposed Order. The Discharger covenants not to sue or pursue any administrative or civil claim(s) against any state agency or the State of California, their officers, board members, employees, representatives, agents, or attorney arising out of or relating to any covered matter.

23. **Compliance with Applicable Laws:** The Discharger understands that payment of the administrative civil liability in accordance with the terms of this Stipulation and Proposed Order, or compliance with the terms of this Stipulation and Proposed Order is not a substitute for future compliance with applicable laws, and that additional continuing violations of the type alleged in the Complaint may subject them to further

enforcement by the Regional Water Board, including additional administrative civil liability.

24. Party Contacts for Communications related to Stipulation and Proposed Order:

For the Regional Water Board:

Ms. Gina Kathuria
San Francisco Bay Regional Water Board
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2378
gkathuria@waterboards.ca.gov

For the Discharger:

Mr. Kevin Booker
Sonoma Valley County Sanitation District
404 Aviation Blvd
Santa Rosa, CA 95403
(707) 547-1912
kevin.booker@scwa.ca.gov

25. Attorney's Fees and Costs: Except as otherwise provided herein, each Party shall bear all attorneys' fees and costs arising from the Party's own counsel in connection with the matters set forth herein.

26. Matters Addressed by Stipulation: Upon adoption of this Stipulation and entry of the Proposed Order by the Regional Water Board, this Stipulation and Proposed Order represent a final and binding resolution to settle, as set forth herein, all claims, violations or causes of action alleged in the Complaint, based on the specific facts alleged in the Complaint and/or this Stipulation ("Covered Matters"). The provisions of this paragraph are expressly conditioned on the full payment of the administrative civil liability as provided herein by the deadlines specified in this Stipulation, and the Discharger's full satisfaction of the obligations described in this Stipulation and Proposed Order.

27. Public Notice: The Discharger understands that this Stipulation and the Proposed Order must be noticed for a 30-day public review period prior to consideration by the Regional Water Board. In the event objections are raised during the public comment period, the Regional Water Board may, under certain circumstances, require a public hearing regarding the Stipulation. In that event, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the Stipulation and the Proposed Order as necessary or advisable under the circumstances.

28. **Addressing Objections Raised During Public Comment Period:** The Parties agree that the procedures contemplated for adopting the Stipulation and Proposed Order by the Regional Water Board and review of this Stipulation by the public are lawful and adequate. In the event procedural objections are raised prior to the Stipulation and Proposed Order becoming effective, the Parties agree to meet and confer concerning any such objections, and may agree to revise or adjust the procedure as necessary or advisable under the circumstances.

29. **Interpretation:** This Stipulation and Proposed Order shall be construed as if the Parties prepared it jointly. Any uncertainty or ambiguity shall not be interpreted against any one Party. The Discharger is represented by counsel in this matter.

30. **Modification:** This Stipulation and Proposed Order shall not be modified by any of the Parties by oral representation made before or after its execution. All modifications must be in writing and signed by all Parties and approved by the Regional Water Board.

31. **If Proposed Order Does Not Take Effect:** In the event that this Stipulation and/or the Proposed Order does not take effect because it is not approved by the Regional Water Board, or its delegee, or is vacated in whole or in part by the State Water Resources Control Board or a court, the Parties acknowledge that they expect to proceed to a contested evidentiary hearing before the Regional Water Board to determine whether to assess administrative civil liabilities for the underlying alleged violations, unless the Parties agree otherwise. The Parties agree to re-initiate the hearing process in that new hearing procedures will issue with scheduled due dates for a hearing within 90 days from the date the Stipulation and/or the Proposed Order is deemed not accepted by the Regional Water Board. The Parties agree that all oral and written statements and agreements made during the course of settlement discussions will not be admissible as evidence in the hearing pursuant to California Evidence Code section 1152. The Parties agree to waive any and all objections based on settlement communications in this matter, other than California Evidence Code section 1152 evidentiary objections, including, but not limited to:

- a. Objections related to prejudice or bias of any of the Regional Water Board members or their advisors and any other objections that are premised in whole or in part on the fact that the Regional Water Board members or their advisors were exposed to some of the material facts and the Parties' settlement positions as a consequence of reviewing the Stipulation, and therefore may have formed impressions or conclusions prior to any contested evidentiary hearing on the Complaint in this matter; or
- b. Laches or delay or other equitable defenses based on the time period for administrative or judicial review to the extent this period has been extended by these settlement proceedings.

32. **Waiver of Hearing:** The Discharger has been informed of the rights provided by CWC section 13323, subdivision (b), and hereby waives its right to a hearing before the Regional Water Board prior to the adoption of the Stipulation and Proposed Order.

33. **Waiver of Right to Petition:** The Discharger hereby waives its right to petition the Regional Water Board's adoption of the Stipulation and Proposed Order for review by the State Water Resources Control Board, and further waives its rights, if any, to appeal the same to a California Superior Court and/or any California appellate level court.

34. **Necessity for Written Approvals:** All approvals and decisions of the Regional Water Board under the terms of this Proposed Order shall be communicated to the Discharger in writing. No oral advice, guidance, suggestions or comments by employees or officials of the Regional Water Board regarding submissions or notices shall be construed to relieve the Discharger of its obligation to obtain any final written approval required by this Proposed Order.

35. **Authority to Bind:** Each person executing this Stipulation in a representative capacity represents and warrants that he or she is authorized to execute this Stipulation on behalf of and to bind the entity on whose behalf he or she executes the Stipulation.

36. **Effective Date:** The obligations under this Stipulation are effective and binding on the Parties only upon the approval of the Stipulation and entry of the Proposed Order by the Regional Water Board or delegee, which incorporates the terms of this Stipulation.

37. **Severability:** The provisions of this Stipulation and the Proposed Order are severable; should any provision be found invalid the remainder shall remain in full force and effect.

Counterpart Signatures: This Stipulation may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute

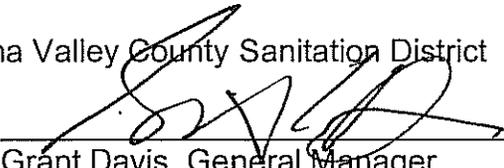
IT IS SO STIPULATED.

California Regional Water Quality Control Board Prosecution Team
San Francisco Bay Region

By: 
Thomas E. Mumley, Assistant Executive Officer

Date: March 16, 2011

Sonoma Valley County Sanitation District

By: 
Grant Davis, General Manager

Date: 3/15/11

Section IV: Order of the Regional Water Board

38. This Order incorporates the foregoing Stipulation.

39. In accepting this settlement, the Regional Water Board, or its delegee, has considered, where applicable, each of the factors prescribed in CWC section 13385(e). The Regional Water Board's consideration of these factors is based upon information obtained by the Regional Water Board Prosecution Team in investigating the allegations in the Complaint or otherwise provided to the Regional Water Board. In addition to these factors, this settlement recovers the costs incurred by the staff of the Regional Water Board for this matter.

40. This is an action to enforce the laws and regulations administered by the Regional Water Board. The Regional Water Board finds that issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, sections 21000 et seq.), in accordance with section 15321(a)(2), Title 14, of the California Code of Regulations.

Pursuant to CWC section 13323 and Government Code section 11415.60, **IT IS HEREBY ORDERED** on behalf of the California San Francisco Bay Regional Water Quality Control Board.

Bruce H. Wolfe
Executive Officer

Date: _____

Table 1: Sonoma Valley County Sanitation District reported SSOs in CIWQS from May 2, 2007, through July 31, 2010, and reported SSOs in eReporting database from January 31, 2007, through May 1, 2007

Start Date	End Date	Location	Gallons Discharged	Gallons Recovered	Gallons Reached Surface Water	Final Spill Destination	Impacted Surface Water	Cause	Maximum Penalty (if CWC 13385)
7/12/2010	7/12/2010	Madrone Rd. Siphon	20150	0	20150	Surface Water	Sonoma Creek	Pipe structural problem/failure	\$200,150
7/6/2010	7/6/2010	18878 Railroad Ave	365	200	165	Storm Drain; Street/curb and gutter; large culvert	NA	Debris-Rags	\$10,000
4/30/2010	4/30/2010	Meadowbrook Trailer Park	500	0	500	Storm Drain; Street/curb and gutter; surface water	Agua Caliente Cre	Pipe structural problem/failure	\$10,000
2/24/2010	2/24/2010	174 Piper SV	6120	0	6120	Storm Drain; Street/curb and gutter; surface water	Fryer Creek	Grease deposition (FOG)	\$61,200
1/21/2010	1/21/2010	4th St East/ East Spain St	150	0	150	Storm drain;Street/curb and gutter;Surface water	Nathanson Creek	Flow exceeded capacity	\$10,000
1/20/2010	1/20/2010	Spring Valley Apts / Vailetti Dr	6930	0	6930	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$69,300
1/20/2010	1/20/2010	4th st. East/ Spain St.	1220	0	1220	Storm drain;Street/curb and gutter;Surface water	Nathanson Creek	Rainfall exceeded design	\$12,200
1/20/2010	1/20/2010	100 Vailetti Dr.	360	0	360	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$10,000
1/20/2010	1/20/2010	Rancho Vista Trailer Park (17324 Sonoma Highway)	15600	0	15600	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$156,000
1/20/2010	1/20/2010	Happy Ln	29250	0	29250	Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$292,500
11/30/2009	11/30/2009	20 El Nido Ct	45	0	0	Storm drain;Street/curb and gutter	NA	Root intrusion	\$10,000
10/1/2009	10/1/2009	756 Oak Ln	100	0	0	Street/curb and gutter		Root intrusion	\$10,000
7/23/2009	7/23/2009	133 W Agua Caliente Road	138	0	0	Unpaved surface		Debris-Rags	\$10,000
7/18/2009	7/18/2009	757 Donner	5	5	0	Street/curb and gutter		Root intrusion	\$10,000
7/7/2009	7/7/2009	18779 Jami Lee Ln, El Verano	180	20	0	Storm drain;Street/curb and gutter	NA	Root intrusion	\$10,000
6/30/2009	6/30/2009	18784 Jami Lee Ln, El Verano	76	20	56	Storm drain;Street/curb and gutter	NA	Debris-Rags	\$10,000
6/3/2009	6/3/2009	201 Napa Rd	370	250	100	Surface water;Unpaved surface;Other (specify below)	Nathanson Creek	Debris-General	\$10,000
2/22/2009	2/22/2009	598 Bokman Place, Boyes	16	0	16	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Flow exceeded capacity	\$10,000
2/15/2009	2/15/2009	SV-17893 Greger St, Boyes	4200	0	4200	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Grease deposition (FOG)	\$42,000
1/26/2009	1/26/2009	391 Fourth St East SV	300	100	200	Storm drain;Street/curb and gutter;Surface water	Nathanson Creek	Pipe structural problem/failure	\$10,000
12/12/2008	12/12/2008	671 Ross Ct SV	50	0	0	Other paved surface		Root intrusion	\$10,000
10/18/2008	10/18/2008	18555 Riverside Dr SV	30	0	0	Other (specify below)		Pipe structural problem/failure	\$10,000
10/10/2008	10/10/2008	17291 Hillcrest Sonoma	30	0	0	Other paved surface		Root intrusion	\$10,000
9/22/2008	9/22/2008	17109 Sonoma Hwy	300	0	0	Storm drain;Unpaved surface;Other (specify below)	NA	Grease deposition (FOG)	\$10,000
8/5/2008	8/5/2008	473 W Macarthur St	5	0	0	Other (specify below)		Root intrusion	\$10,000
6/21/2008	6/21/2008	SV-18175 Sonoma Hwy (12)	220	20	200	Building or structure;Storm drain;Unpaved surface;Other (specify below)	NA	Grease deposition (FOG)	\$10,000
6/12/2008	6/12/2008	SV-18880 Sonoma Hwy	50	0	0	Street/curb and gutter;Unpaved surface		Root intrusion	\$10,000
2/3/2008	2/3/2008	SV Rancho Vista / 17232 Sonoma Hwy	2100	0	2100	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$21,000
2/3/2008	2/3/2008	SV 18579 Happy Ln	48000	0	48000	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$480,000
2/2/2008	2/3/2008	599 Bokman Place, Boyes	54000	0	54000	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$550,000
1/31/2008	2/1/2008	599 Bokman Place, Boyes	50000	0	50000	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$510,000
1/31/2008	2/1/2008	SV 18579 Happy Ln	48000	0	48000	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$490,000

1/25/2008	1/26/2008	SV- 17350 Sonoma Hwy	14400	0	14400	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$154,000
1/25/2008	1/26/2008	SV 18579 Happy Ln	28500	0	28500	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$295,000
1/25/2008	1/26/2008	SV- 17450 Vailletti Dr	10500	0	10500	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$115,000
1/25/2008	1/26/2008	18715 Meadowbrook Ave	4800	0	4800	Storm drain;Street/curb and gutter;Surface water	Agua Caliente Creek	Rainfall exceeded design	\$58,000
1/25/2008	1/26/2008	392 4th St East	18750	0	18750	Storm drain;Street/curb and gutter;Surface water	Nathanson Creek	Rainfall exceeded design	\$197,500
1/25/2008	2/26/2007	599 Bokman Place, Boyes	70680	0	70680	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$716,800
1/8/2008	1/8/2008	402 4th St East	200	0	200	Storm drain;Street/curb and gutter;Surface water	Nathanson Creek	Flow exceeded capacity	\$10,000
1/4/2008	1/4/2008	18579 Happy Ln	18630	0	18630	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Flow exceeded capacity	\$186,300
1/4/2008	1/6/2008	400 E Watmaugh Rd	276000	0	276000	Storm drain;Street/curb and gutter;Surface water;Unpaved surface	Nathanson Creek	Flow exceeded capacity	\$2,780,000
1/4/2008	1/6/2008	255 Specht Rd	82800	0	82800	Storm drain;Street/curb and gutter;Surface water;Unpaved surface	Nathanson Creek	Flow exceeded capacity	\$848,000
1/4/2008	1/4/2008	599 Bokman Place, Boyes	46800	0	46800	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Flow exceeded capacity	\$468,000
1/4/2008	1/4/2008	17350 Sonoma Highway	40500	0	40500	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Rainfall exceeded design	\$405,000
1/4/2008	1/4/2008	402-4th St East	13200	0	13200	Storm drain;Street/curb and gutter;Surface water	Nathanson Creek	Flow exceeded capacity	\$132,000
1/4/2008	1/4/2008	15577 Brookview	1170	0	1170	Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Flow exceeded capacity	\$11,700
1/4/2008	1/5/2008	17450 Vailletti Dr	42000	0	42000	Building or structure;Storm drain;Street/curb and gutter;Surface water	Sonoma Creek	Flow exceeded capacity	\$430,000
11/8/2007	11/8/2007	275 Fifth St West	5			Street/curb and gutter		Debris	\$10,000
10/21/2007	10/21/2007	SV-627 Princeton Ave-Boyes	270	40	230	Storm drain;Street/curb and gutter;Surface water;Unpaved surface	Sonoma Creek	Grease deposition (FOG)	\$10,000
8/22/2007	8/22/2007	522 Joaquin Dr	120	110	0	Storm drain;Street/curb and gutter	N/A	Grease deposition (FOG)	\$10,000
3/10/2007		19275 Sonoma Highway	600	0	0	yard/land		root blockage	\$10,000
		Total Gallons Discharged	958785		956477			Maximum Penalty	\$9,931,650

Fryer Creek Habitat Enhancement Project
Supplemental Environmental Project

Project Developed by: Sonoma Valley County Sanitation District

Revised 1/20/2011

Project Name: Fryer Creek Habitat Enhancement Project

Project Developed by: Sonoma Valley County Sanitation District

Project to be performed by: Sonoma Valley County Sanitation District (District), Sonoma County Water Agency (Water Agency) and the Sonoma Ecology Center (SEC)

Contact: Kevin Booker

Compliance with SEP Criteria:

The Sonoma Creek Watershed Sediment TMDL and Habitat Enhancement Plan states “*The primary goals of the Sonoma Creek Watershed Sediment TMDL and Habitat Enhancement Plan are to: a) attain water quality objectives for sediment, settleable material, and population and community ecology; and b) support a broader suite of actions, also needed to conserve steelhead and other native fish and wildlife populations. Based on evidence of excessive erosion, and concerns regarding decline of native fishes, Sonoma Creek has been officially designated as impaired by sediment since 1996. Staff of the San Francisco Bay Regional Water Quality Control Board (Water Board) propose to address this impairment, and the larger goal of conservation of steelhead and other native fish populations, by amending the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) to incorporate a Total Maximum Daily Load (TMDL) for sediment, and a Habitat Enhancement Plan. A key aspect of the Basin Plan amendment is its implementation plan, which in this case specifies both the required actions to achieve water quality objectives for sediment, and recommended actions to enhance other habitat attributes including baseflow, fish passage, and habitat complexity*”.

The goals of the Sonoma Creek Watershed Sediment TMDL and Habitat Enhancement Plan are to:

- *Conserve the steelhead trout population*
- *Restore water quality to meet water quality standards, including attaining beneficial uses*
- *Enhance the overall health of the native fish community*
- *Protect and enhance habitat for native aquatic species*
- *Enhance the aesthetic and recreational values of the river and its tributaries*

The Supplemental Environmental Project (SEP) being proposed will address issues identified in the TMDL such as: creation of upland and aquatic wildlife habitat improvement of the native fisheries conditions, and preservation of special-status -species, such as Western pond turtle and possibly steelhead. In addition, planting of native species to stabilize the channel and banks will reduce erosion and sediment inputs to the stream channel.

The restoration work will be coordinated with and follow Water Agency planned sediment removal implementation in the Fryer Creek Flood control Channels. Restoration planting is also intended to filter and slow adjacent surface storm water runoff to prevent sediment build up and decrease the frequency of intrusive sediment removal projects. Combined, the benefits include improvements to water quality, fish and wildlife habitat, flood conveyance, and appearances.

The proposed SEP, Fryer Creek Habitat Enhancement Project, will “directly benefit the beneficial uses of the waters of the State” in the following categories: habitat restoration or enhancement; pollution prevention or reduction; and wetland, stream, or other water body protection, restoration or creation. The SEP proposes to plant vegetation, improve water quality, enhance habitat for wildlife and monitor water quality indicators. Additionally, this SEP will implement planting strategies that assist in the reduction of the occurrence of non-native species. This SEP goes above and beyond the Sonoma Valley County Sanitation District’s (District) responsibilities as the District has no flood control responsibilities and the project benefits the entire Sonoma Valley community and visitors. The Project is within the same watershed in which the District’s violations occurred. Though this project will assist with some of the goals in the Sonoma Creek TMDL, this project is not included in the Water Board’s staff report for the Sonoma Creek TMDL.

The District understands the importance of this project to the community of Sonoma Valley and intends to cooperate with Water Agency and SEC to implement this SEP.

Description of Project:

The Sonoma Creek watershed is located in the southeastern corner of Sonoma County. The watershed encompasses approximately 170 square miles. Elevations in the watershed range from sea level at San Pablo Bay to approximately 2,700 feet MSL at Bald Mountain. Approximately 54 percent of the watershed is in agricultural use, 30 percent is rural and about 11 percent is recreational. Urbanized areas are located in the center of the watershed, within the alluvial plain area. Where not converted to vineyards, the hill slopes surrounding the valley contain oak woodland and Douglas fir forests, interspersed with brushy chaparral areas. Fryer Creek flows north to south through the southern edge of downtown Sonoma and then through the residential neighborhoods south of downtown. The Fryer Creek system consists of engineered trapezoidal shaped earthen channels. The five reaches of Fryer Creek maintained by the Water Agency are located in the lower alluvial plain portion of the Sonoma Creek watershed, just upstream from tidal marsh areas (Figure 1). These reaches are displayed in Figure 1 and include Fryer 1, 2, 3, 4, and East Fork Fryer 1. The Fryer Creek system is largely disconnected from the upstream watershed, as upstream of Reach 4 the channel quickly turns to a small swale and then ends at W. Napa Street. Despite this, the size and length of this system provides important perennial aquatic habitat through a largely urbanized portion of the watershed.

Project Goals and Benefits

Urban wetlands and riparian corridors are extremely important to regional ecosystem function as well as for providing flood control and recreational opportunities (trail systems). The value of the wetland and riparian habitat lies in the benefits that its habitat, water-quality, and hydrologic functions provide to the environment and to the people who live in the region. With increasing urbanization in California coastal watersheds, requirements for control of runoff quantity and

quality have created a need for these areas to function as effective water filters that help improve surface water quality and attenuate storm flows. Restoring and enhancing the natural functions of these corridors provides multiple biological benefits, including protecting water quality and providing habitat and migration routes for terrestrial and aquatic wildlife. Restoration of native plants and trees will help shade out typical problem species (sediment accumulators in flood control channels - typically cattails and Himalayan blackberry). Planting is expected to improve needed flood control boundary conditions that set basic stream dimension and function, thereby improving stream stability as well as adding additional habitat complexity and resultant biodiversity.

Planting trees, shrubs, and grasses will help sequester carbon and enhance habitat for red-legged frog, western pond turtle, existing warm water fisheries, and possibly Chinook salmon or steelhead. (Chinook salmon have been seen spawning in at least 2 sites on Fryer Creek). Additionally, this project will implement planting strategies that reduce the occurrence of aquatic weeds including the non-native water primrose (*Ludwigia hexpetala*) which is an exotic weed from South America that has colonized significant wetland, pond, river, and stream and irrigation channel habitat across the nation. Native competitors will be introduced that can displace or reduce the prevalence of the species (as well as cattails and Himalayan blackberry) along this stream segment

Water quality monitoring and comparison of data from other tributaries in the watershed will provide critical indicators of stream health and help steer watershed management practices. Combined with vegetation success monitoring, the water quality monitoring will also gauge the success of the project and the goal of decreasing pollutants and improving water quality.

Restoration Approach

The Fryer Creek system (for the purposes of this proposal includes SMP Reaches 1, 2, 3 and East Fork Fryer Creek 1) (Attached Figure 1) provides some significant restoration and enhancement opportunities. Essentially, the upper portions of the creek needs removal of exotic problematic species (Himalayan blackberry, and escaped landscape species) and the initial establishment of riparian trees, shrubs, grasses, and aquatic plantings to even begin development of a riparian functioning corridor, while the lower portion could use additional complexity (mid-story shrub and small tree canopy) and native graminoids (sedges, rushes, grasses) installed along the side banks and in-channel areas. These sections are shown in Figure 2. The creek near Leveroni Road has a moderately well developed oak canopy, but lacks a multi-layered canopy and a consistent wetland fringe. Restoration and enhancement for the lower section would include installation of small trees, shrubs, and both instream and upland graminoids in suitable locations (based on inundation, available soil moisture, existing competitors, etc). Restoration of the upper section is anticipated to involve limited sediment reduction to develop a low flow channel through some sections (and improve hydrogeomorphic function), blackberry removal, where appropriate removal of exotic weedy species, and focused planting of upland and riparian trees,

shrubs and graminoids following the Water Agency's planting standards identified in the Stream Maintenance Program (SMP) Manual as well as implementing specific RWQCB recommendations (strategically installing riparian trees instream) in suitable locations. All applicable best management practices detailed in the SMP Manual (<http://www.scwa.ca.gov/stream-maintenance-program/>) will be applied to project development and implementation.

Project Coordination

SEC will coordinate all tasks, subcontractors and communications with stakeholders in the project area, including the District, Water Agency, Water Board, City of Sonoma, Sonoma Valley Unified School District, and private property owners adjacent to project location. Coordination will also include informational outreach and education. Project information will be disseminated to all stakeholders in the project area, and will include project scope of work, benefits, timeline, and opportunities for the community to get involved. A project site tour will be provided to the public.

Planning

SEC will work with Water Agency staff to develop reach based revegetation and sediment prevention plans. SEC will consult with Water Agency on an as needed basis to maintain compliance with permit requirements and management plan BMPs. Vegetation management and monitoring plans will be submitted for review and approval before implementation.

Vegetation Management

Exotic plant control will be conducted using physical, chemical, mechanical, and cultural treatment methods. Treatments will be implemented using approved BMPs according to the SMP and in compliance with the California Department of Fish and Game and Department of Pesticide Regulation requirements. SEC will use an integrated pest management approach that includes the judicious use of aquatically approved herbicide and surfactant for controlling weeds. Herbicides are generally used for initial control over persistent weeds and then as spot treatments in combination with mowing, hand pulling, hoeing, flaming, and mulching. Cut stump herbicide applications are used for woody weed species and foliar spot treatments are applied strategically to avoid harm to desirable species. Herbicide applications will be made under the direct supervision of a licensed pest control applicator.

Planting for the SMP typically occurs from November to January depending on planting locations and water availability (toe plantings in channels that support perennial water can be planted all year). This is scheduled during the typically wetter months of the year so that newly planted trees have the opportunity to establish before the hotter and drier summer months. Planted nursery stock for riparian restoration is generally grown in narrow, deep containers to minimize soil disturbance, prevent plant wash-out, and ensure successful establishment of plants in wild land settings.

Trees are planted in single rows just up from the toe-of-slope and along the top of the bank slope. The conceptual arrangement of upland, riparian, and wetland species is displayed in Figure 3. Shrubs are planted in natural groupings in locations associated with the trees. Trees planted along the top-of-bank may include oaks, box elder, California bay, buckeye, and (depending on channel size) Fremont poplar. Trees planted at the ordinary high water mark, slightly above the toe-of-slope may include alders, ash, maples, and red or yellow willows. Trees are spaced appropriately to allow room for a mature tree canopy to develop (typically 30 ft. on center) and thinned later as necessary to maximize canopy yet retain capacity and provide access to the channel. At the recommendation of the RWQCB, in suitable locations (where the hydrology of the channel allows, or where sediment removal and installation of a low flow “bankfull” channel has been implemented), riparian trees will be installed strategically in the channel bottom. Trees will be installed in arrangements that direct water toward the center of the flood channel and through these sections riparian tree toe plantings will not be installed, but additional armoring may be accomplished through heavy side bank plantings of invasive, soil-binding native graminoids including Santa Barbara sedge, slough sedge, creeping wild blue rye, and red fescue. Understory shrubs are planted (on 10-foot centers) along the top of bank and occasionally depending on channel capacity along the toe. Native grasses and sedges are used instream, at the toe of slope and along the side banks (on 5-foot centers). In areas where irrigation is not available upper plantings will be installed with Broadleaf® P4 in the root zone to help retain moisture. Generally upper plantings are heavily mulched with arbor mulch to retain water and help reduce weed growth.

Vegetation Monitoring and Maintenance

Once planted, trees will be monitored and automatically drip irrigated or hand watered as necessary during the dry season for approximately 2 to 3 years or until established. Trees and shrubs planted on the upper bank will require irrigation longer than those located closer to the toe-of-slope. Some trees and shrubs planted near the toe-of-slope may not require irrigation (although all planted trees will be monitored for watering needs). Weeding and additional mulching will be conducted as needed during maintenance.

Trees and shrubs will be tallied and assessed annually to determine survival and relative health. Grasses and sedges (where feasible) will be counted as well. Percent understory cover will be measured with the object to achieve 75% cover.

Plant Palette

The SMP Manual includes recommended plant palettes according to channel geomorphic form. These are shown in SMP Manual Table 8-3 and Figures 8-2 and 8-3 (These are included here for convenient reference). All listed plants are native riparian species found in Sonoma County waterways. Not all species will be equally appropriate for all sites. The planting list for any given site should be developed in consideration of the current and known historic native flora of the site and the local sub-watershed area. Planting is expected to improve boundary conditions

that set basic stream dimension and function, thereby improving stream stability as well as adding complexity.

Anticipated Planting Needs

Based on site conditions, and standard planting densities from the SMP Manual, the number of plants indicated below in Table 1. would be anticipated to be needed for this proposed project. Precise species allocation and placement would be decided on-site considering existing planting conditions but would follow species selection from Table 8.3 of the SMP manual (included below as Table 2).

Table 1 Anticipated Planting Needs Fryer Creek Habitat Enhancement Plan

Lower Section Fryer Creek (SMP reach Fryer 1):

Riparian Trees (side bank and toe plantings) (willows, alder, ash)	- 140
Riparian Shrubs (side bank and toe plantings)	-270
Upland Understory Shrubs (upper bank groupings)	- 270
Upland Grasses (evenly dispersed)	- 1080
Instream Graminoids (evenly dispersed toe and in-channel)	- 1080

Upper Section Fryer Creek (SMP Reaches 2, 3, and East Fork Fryer 1:

Upland Trees (upper bank plantings)	-140
Riparian Trees (side bank and toe plantings)	- 140
Upland Shrubs (upper bank plantings in natural groupings)	-410
Riparian Shrubs (side bank and toe plantings)	-410
Upland Grasses (evenly dispersed)	-820
Instream Graminoids (evenly dispersed toe and in-channel)	-820

Table 2 Species Selection from Table 8.3 of the SMP manual

Common Name	Scientific Name	Planting Area/Zone	Habit and Suitability for Flood Control Channels
Trees			
Big leaf maple	<i>Acer macrophyllum</i>	Mid to Upper Bank	Preferred species, relatively upright growth, wide spreading, well adapted to toe and mid bank plantings
Box elder	<i>Acer negundo</i>	Mid to Upper Bank	Spreading, well adapted to heavy soils
California buckeye	<i>Aesculus californica</i>	Upper Bank	Adds diversity
White alder	<i>Alnus rhombifolia</i>	Toe to Mid Bank	Preferred species, relatively upright growth, wide spreading, well adapted to toe and mid

Common Name	Scientific Name	Planting Area/Zone	Habit and Suitability for Flood Control Channels
			bank plantings
Oregon ash	<i>Fraxinus latifolia</i>	Toe to Mid Bank	Preferred species, relatively upright growth, wide spreading, well adapted to toe and mid bank plantings
N. California black walnut	<i>Juglans californica</i>	Mid to Upper Bank	Adds diversity
Fremont cottonwood	<i>Populus fremontii fremontii</i>	Toe to Mid Bank	Relatively upright growth, wide spreading, well adapted to mid and upper bank plantings
Coast live oak	<i>Quercus agrifolia</i>	Upper Bank	Relatively upright growth, wide spreading, well adapted to mid and upper bank plantings
Valley oak	<i>Quercus lobata</i>	Upper Bank	Relatively upright growth, wide spreading, well adapted to mid and upper bank plantings
Red willow	<i>Salix laevigata</i>	Toe to Mid Bank	Preferred species, relatively upright growth, wide spreading, well adapted to toe and mid bank plantings
Arroyo willow	<i>Salix lasiolepis</i> (not preferred but may be used on a case by case basis at the discretion of environmental staff)	Toe to Mid Bank	Fast growth, spreading, use only along upper banks to offset vigorous branching
Pacific willow	<i>Salix lucida lasiandra</i>	Toe to Mid Bank	Preferred species, relatively upright growth, wide spreading, well adapted to toe and mid bank plantings
Coast redwood	<i>Sequoia sempervirens</i>	Mid to Upper Bank	Only used in areas redwoods occur naturally
California bay laurel	<i>Umbellularia californica</i>	Upper Bank	Relatively upright growth, wide spreading, well adapted to mid and upper bank plantings
Shrubs			

Common Name	Scientific Name	Planting Area/Zone	Habit and Suitability for Flood Control Channels
Marsh baccharis	<i>Baccharis douglasii</i>	Toe to Mid Bank	Suitable, may need to control stem density over time
Mulefat	<i>Baccharis salicifolia</i>	Toe to Mid Bank	Suitable, may need to control stem density over time
Western spicebush	<i>Calycanthus occidentalis</i>	Toe to Upper Bank	Suitable, may need to control stem density over time
Stream dogwood	<i>Cornus sericea</i>	Toe to Mid Bank	Suitable, may need to control stem density over time
California hazelnut	<i>Corylus cornuta californica</i>	Mid to Upper Bank	Suitable, adds diversity and forage
Toyon	<i>Heteromeles arbutifolia</i>	Upper Bank	Suitable, adds diversity and forage
Ocean spray	<i>Holodiscusicolor</i>	Mid to Upper Bank	Suitable
Twinberry	<i>Lonicera involucrata</i>	Toe to Upper Bank	Suitable, adds diversity and forage
Coffeeberry	<i>Rhamnus californica</i>	Upper Bank	Suitable, adds diversity and forage
California wild rose	<i>Rosa californica</i>	Toe to Upper Bank	Suitable, relatively small, bends over in high flows
Blue elderberry	<i>Sambucus mexicana</i>	Upper Bank	Suitable, adds diversity and forage, may need to control stem density over time
Snowberry	<i>Symphoricarpos albus laevigatus</i>	Mid to Upper Bank	Suitable, adds diversity and forage
Grasses/Sedges			
All the species of grasses and sedges below are perennial and were selected based on soil, moisture tolerance, growth habit, performance in high flows (flexibility, minimal sediment entrainment), and ability to recolonize after being buried. Rhizomatous, spreading and invasive species are preferred.			
Spike bent	<i>Agrostis exharta</i>	In Channel to Mid Bank	Rhizomatous, invasive, excellent soil binder
Sloughgrass	<i>Beckmannia syzqachne</i>	In Channel to Mid Bank	Rhizomatous, invasive

Common Name	Scientific Name	Planting Area/Zone	Habit and Suitability for Flood Control Channels
Santa Barbara sedge (or equivalent)	<i>Carex barbarae</i> , <i>C. obnupta</i> , <i>C. bolanderi</i>	Toe to Upper Bank	Rhizomatous, invasive, excellent soil binder
Dense sedge	<i>Carex densa</i>	Toe	Tufted, heavy seeder
Torrent Sedge	<i>Carex nudata</i>	Toe to In-Channel	Use in higher gradient gravel and cobble substrate
Pale Spikerush	<i>Eleocharis macrostachya</i>	Toe to In-Channel	Rhizomatous, invasive
Blue wild rye	<i>Elymus glaucus</i>	Mid to Upper Bank	Clumping heavy seeder
California fescue	<i>Festuca californica</i>	Mid to Upper Bank	Excellent understory grass for oaks
Red fescue	<i>Festuca rubra</i>	Toe	Rhizomatous, invasive, excellent soil binder
Meadow barley	<i>Hordeum brachyantherum</i>	Toe to Mid Bank	Tufted, heavy seeder
Wire Rush	<i>Juncus balticus</i>	Toe to In-Channel	Rhizomatous, invasive, excellent soil binder
Pacific Rush	<i>Juncus effusus</i>	Toe to In-Channel	Clumping heavy seeder
Common Rush	<i>Juncus patens</i>	Toe to In-Channel	Clumping heavy seeder
Brown-headed rush	<i>Juncus phaeocephalus</i>	Toe to In-Channel	Rhizomatous, invasive, excellent soil binder
Iris leaved rush	<i>Juncus xiphioides</i>	Toe to In-Channel	Rhizomatous, invasive, excellent soil binder
Creeping wild rye	<i>Leymus triticoides</i>	Toe to Upper Bank	Rhizomatous, invasive, excellent soil binder
Rice cut grass	<i>Leersia oryzoides</i>	In-Channel	Rizomatous, possible cattail competitor
Knot Grass	<i>Paspalum distichum</i>	Toe to Mid Bank	Rhizomatous, invasive, excellent soil binder
Bulrush, Tule	<i>Scirpus acutus occidentalis</i> , <i>S. californicus</i>	Toe to Mid Bank	Rizomatous, possible cattail competitor
Small fruited bulrush	<i>Scirpus microcarpus</i>	Toe to Mid Bank	Rizomatous, possible cattail competitor

Common Name	Scientific Name	Planting Area/Zone	Habit and Suitability for Flood Control Channels
Vines			
Clematis	<i>Clematis lasiantha, C. ligusticifolia</i>	Toe to Mid Bank	Suitable, adds diversity and forage
Honeysuckle	<i>Lonicera hispidula vacillans</i>	Toe to Mid Bank	Suitable, adds diversity and forage
California blackberry	<i>Rubus ursinus</i>	Toe to Mid Bank	Possible Himalayan blackberry competitor
California grape	<i>Vitus californica</i>	Mid to Upper Bank	Possible Himalayan blackberry competitor
Ferns/Other			
Horsetail	<i>Equisetum arvense, E. hyemale affinae, E. telmatieia braunii</i>	Toe	Rhizomatous, invasive, excellent soil binder
Sword fern	<i>Polystichum californicum</i>	Toe	Suitable, adds diversity and forage
Western Chain Fern (in forested locations)	<i>Woodwardia fimbriata</i>	Toe	Suitable, adds diversity and forage
Notes			
1. Species for each project should be chosen based on native flora (current and historic) of project area.			
2. Seeds, cuttings, seedlings and saplings used for revegetation should be obtained from local (Russian River Watershed or North Coast Floristic Province as defined in Jepson 1993) stock (local native plant nurseries should be used, or plants can be collected using appropriate collection techniques from adjacent sites - willow sprigs should be collected from adjacent sites and planted on the same day as collection).			
3. Timing of planting should be appropriate for species and source (e.g. broadcast seeding of herbs and grasses in fall before first rains, cuttings planted when soil moist to at least 10 inches from rainfall, etc.).			

Seeding

If the project results in exposed upland and/or wetland transitional areas resulting from sediment removal and or exotic removal these areas will be seeded to establish a native grass understory. Generally, steeper slopes are hydroseeded and gentler slopes are hand seeded and covered with landscape fabric to discourage erosion and encourage a native herbaceous understory. Seed mix and application rates are indicated in Table 3 below.

Table 3 Seed mix and Application Rates

<i>Scientific Name</i>	Common Name	Application Rate (lbs/acre)
<i>Leymus triticoides</i>	beardless ryegrass	10
<i>Hordeum brachyantherum</i>	meadow barley	20
<i>Festuca californica</i>	California fescue	10
<i>Festuca rubra</i>	red fescue	10
<i>Lupinus bicolor</i>	bicolor lupine	5
<i>Vulpia microstachys</i>	Nuttall’s fescue	5
Total lbs/acre		60

Sediment Prevention BMP Implementation

Sediment Prevention best management practices (BMPs) include the installation of erosion control fabrics, rice straw, straw wattles, brush mats, and other materials as necessary to prevent sediment delivery to the stream. Permanent erosion control materials will be biodegradable and selected for slope, substrate, and water velocity. All bare soils will be seeded and protected with the appropriate erosion control material. Appropriate hold-downs, including landscape staples and pins will be used to secure materials to the ground. Where appropriate and approved by the Water Agency, an energy dissipater at a storm drain outfall or other erosion control remediation BMP will be installed to demonstrate a storm water management feature.

Water Quality Monitoring and Analysis

Water quality will be conducted throughout the duration of the project. Both biological and physical measurements will be collected for analysis. Benthic macro-invertebrates (BMIs) and physical habitat quality will be used as biological indicators of water quality and overall stream health. Physical parameters used to measure water quality include temperature, dissolved oxygen, conductivity, pH, and sediment load. Sediment load will be quantified using a combination of turbidity and suspend sediment samples. Water quality monitoring and methodology will be developed and submitted for review and adoption prior to implementation.

Data will be collected at several locations in the proposed restoration project area and in selected reaches throughout the Sonoma Creek watershed. Data between the several collection sites will be compared over the three-year project period to indicate project success. Data will also be

compared to earlier data collected by SEC in years 2004-2006 and 2000-2002. The data comparisons are intended to reveal over all watershed stream health and relative stream health and trends by sub-watershed or stream reach.

Project Performance Measures:

The performance criteria for vegetation tree and shrub planting shall be 75% survival, for each species planted, over 3 years. For herbaceous species installed and for reasons described above estimates of cover by target species will be provided. Given the extent of non-native understory throughout the project reach, the rhizomatous nature of many of the target plantings, and the planned installation spacing, exact counts and percent cover prescriptions are likely infeasible. Success would be better judged by presence-absence determinations, density calculations, and measured cover increases by the target species. The understory enhancement should be determined successful if installed species are persisting and spreading along the project site after 3 years.

The performance measures for coordination and outreach shall be successful contact and information dissemination to stakeholders and property owners adjacent to the project area. SEC will log and report the number of stakeholders contacted; information packets disseminated; and number of participants attending project site tour.

The performance measures for sediment prevention shall be the proper installation of erosion control materials and a reduction in sediment delivery to the stream as measured by the water quality monitoring. It is predicted that over the course of a three year project that includes initial disturbance through weed control and planting, that sediment levels may temporarily increase before tapering off after installed vegetation becomes established and effectively holds and filters sediment.

The performance measures for water quality monitoring shall be a monitoring plan and complete reports on data collected over the duration of the project. Reports shall include data, data analysis, and comparisons of data from the several sites identified in the monitoring plan. Permanent photo points will be established and recorded on the final design plans.

Reports to the Water Board:

The District will report its progress for the first 2 years on a quarterly basis (a total of 8 progress reports). After the first 2 years, reporting will be done on an annual basis until the completion of the program. Quarterly progress reports are due on the 15th of the month following the end of each calendar quarter. The annual reports will be due on January 31st.

An annual report will be prepared that documents site conditions, survival, and project attainment of performance measures. These annual reports shall be submitted to the Water Board by January 31, 2012 and 2013, respectively. The last annual report (due January 30,

2014) will constitute the final report for the SEP. This final report will document completion of the SEP, address how performance measures were met, and include a copy of accounting records of expenditures and will be submitted to the Water Board and the State Water Resources Control Board, Division of Financial Assistance.

Project Milestones and Budget:

Project Schedule and Milestones

Year	Date	Task
2011	1-May	Develop NGO Agreement
	16-May	Plant Propagule Collection
	1-Jun	Preliminary site assessments
	14-Jun	Develop Restoration/Sediment/Monitoring prevention plans
	17-Jun	BMI Monitoring
	30-Jul	Draft Detail Plans submitted to Water Board
	15-Jul	Quarterly Report
	15-Aug	Detail Plans Approved by Water Board
	26-Aug	Implement Restoration/Sediment Prevention Project
	22-Sep	Exotic Species Reduction
	14-Oct	Implement Planting
	15-Oct	Quarterly Report
	October	Turbidity/Suspended sediment sampling
	18-Nov	Implement Planting
2012	31-Jan	Quarterly/Annual Monitoring Report for 2011
	March	Irrigation installation
	15-Apr	Quarterly Report
	20-Apr	Plant survival Monitoring/weed control
	29-Jun	Plant survival Monitoring report
	15-Jul	Quarterly Report
	12-Oct	Planting/Replanting
	15-Oct	Quarterly Report
	October	Turbidity/Suspended sediment sampling
	16-Nov	Complete winter prep for restoration sites
2013	31-Jan	Annual Monitoring Report for 2012
	26-Apr	Plant survival Monitoring/weed control
	1-Jun	BMI Monitoring
	28-Jun	Plant survival Monitoring report
	18-Oct	Site Monitoring
	October	Turbidity/Suspended sediment sampling

	15-Nov	Confirmation of 75% Plant Survival for each species planted
2014	31-Jan	Final Monitoring Report for 2013

Budget

Following is an estimated budget to complete each task followed by an overall budget

Year One - Estimated expenditures by task		
1.	Develop Restoration/Planting and Monitoring Plans	\$ 7,858
2.	Project Coordination/Outreach	\$ 9,106
3.	Invasive Removal	\$ 7,500
4.	Sediment Prevention BMP Implementation	\$ 21,500
5.	Restoration Planting	\$ 19,900
6.	Maintenance/Vegetation Monitoring	\$ 4,700
7.	Water Quality Monitoring	\$ 8,500
8.	Reporting	\$ 4,500
Year 1 total		\$ 83,564

Year Two - Estimated expenditures by task		
1.	Develop Restoration/Planting and Monitoring Plans	\$ 2,000
2.	Project Coordination/Outreach	\$ 2,000
3.	Invasive Removal	\$ 8,500
4.	Sediment Prevention BMP Implementation	\$ 5,147
5.	Restoration Planting	\$ 24,000
6.	Maintenance/Vegetation Monitoring	\$ 8,596
7.	Water Quality Monitoring	\$ 6,413
8.	Reporting	\$ 5,000
Year 2 total		\$ 61,656

Year Three - Estimated expenditures by task		
1.	Develop Restoration/Planting and Monitoring Plans	\$ -
2.	Project Coordination/Outreach	\$ 2,000
3.	Invasive Removal	\$ 4,955
4.	Sediment Prevention BMP Implementation	\$ 1,500
5.	Restoration Planting	\$ 8,245
6.	Maintenance/Vegetation Monitoring	\$ 8,600
7.	Water Quality Monitoring	\$ 7,500
8.	Reporting	\$ 1,982
Year 3 total		\$ 34,782

Total - Estimated expenditures by task		
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1. Develop Restoration/Planting and Monitoring Plans	\$ 9,858
2. Project Coordination/Outreach	\$ 13,106
3. Invasive Removal	\$ 20,955
4. Sediment Prevention BMP Implementation	\$ 28,147
5. Restoration Planting	\$ 52,145
6. Maintenance/Vegetation Monitoring	\$ 21,896
7. Water Quality Monitoring	\$ 22,413
8. Reporting	\$ 15,482
Total	\$ 184,002

Overall Budget

1. Develop Restoration/Planting and Monitoring Plans: \$9,858
 - a. Complete vegetation surveys (existing weeds and native plants)
 - b. Complete erosion/sediment source surveys (identify and map potential sources in project area)
 - c. Develop planting plans for each reach based restoration site
 - d. Develop water quality monitoring plan
 - e. Submit all plans to Water Agency for review and approval
2. Project Coordination/Outreach : \$13,106
 - a. Coordinate project tasks with District, Water Agency/other stakeholders and agencies
 - b. Conduct storm water management outreach/education to adjacent residents
 - c. Develop/customize outreach materials
 - d. Public presentations/reports
3. Invasive Removal: \$20,955
 - a. Implement exotic species control
4. Sediment Prevention BMP Implementation \$28,147
 - a. Install Erosion/sediment Control
 - b. Storm water management demonstration feature
 - c. Biological monitoring
5. Restoration Planting: \$52,145
 - a. Plant propagule collection/ nursery production
 - b. Implement planting
 - c. Re-planting
6. Maintenance/Vegetation Monitoring: \$21,896
 - a. Vegetation surveys
 - b. Monitoring report preparation
7. Water Quality Monitoring: \$22,413
 - a. Collect BMI, temperature, turbidity, DO, conductivity, physical habitat characteristic, and pH.
 - b. Analyze and compare data between sites and over time.

- c. Prepare water quality monitoring report
- 8. Project Reporting: \$15,482
 - a. Quarterly and Annual Reports

A specific project number will be established for the SEP within the District's project cost accounting system in order to track all costs and tasks associated with SEP implementation. All costs and expenses (outside partner costs, materials, etc.) associated with the SEP will be coded to the established project number in order to easily account for expenditures.

Key Personnel and Subcontractor

The District will lead the proposed SEP. Key staff from the Water Agency that will be involved in the SEP include: Jon Niehaus and Keenan Foster. The Water Agency's flood control maintenance personnel and biologists will continue to monitor the site after the SEP has concluded. Funding sources such as Zone 3a, grants, and loans will be used to maintain the SEP once restoration planting and monitoring has ceased. This project meets goals identified in the Sonoma Creek TMDL.

SEC will perform pre-project monitoring, complete vegetation surveys, weed control, native plant container stock production, plant installation, irrigation installation, erosion control fabric installation, and follow up monitoring. Key staff from SEC include: Mark Newhouser, Restoration Program Manager, Cassandra Liu, Restoration Ecologist/Project Manager, Joel Grogan, Irrigation Specialist/Nursery manager. Restoration staff is experienced in all phases of riparian restoration, vegetation management, and monitoring.

SEC will consult with Sonoma Valley Engineering and Prunuske Chatham, Inc. for needed engineering and biological requirements, respectively. With the oversight of SEC staff, AmeriCorps members will assist with implementation and monitoring tasks.

Permitting

SEC will coordinate with the District and Water Agency on all permitting requirements, and as a subcontractor working on Water Agency easements, is allowed to conduct this work under Water Agency's existing programmatic permits to conduct stream maintenance work. All applicable best management practices detailed in the SMP Manual (<http://www.scwa.ca.gov/stream-maintenance-program/>) will be applied to project development and implementation. SEC has agreed to abide by all Water Agency permit requirements and BMPs established in the SMP.

California Environmental Quality Act Compliance:

The Water Agency's Stream Maintenance Program Environmental Impact Report was certified by the Water Agency's Board of Directors in June 2009.

Current Active Permits

**California Department of Fish and Game
Streambed Alteration Agreement**

Notification Number 1600-2006-0254-3
Start Date 6/15/2010
End date 10/31/2025
Consistency Determination
Number 2080-2010-029-03, 8/6/10

401 Water Quality Certification, dredge and fill activities, expires July 23, 2014

National Marine Fisheries Service

Petaluma River and Sonoma Creek Watersheds Biological Opinion, Zones 2A, 3A.
Issued April 5, 2010, Tracking No. 2009/03082, Corps File No. 2009-00136N,

Sonoma County Agricultural Commissioner's Office (Herbicide)

Pesticide Operator Identification Number 49-11-490909
Private Applicator Permit for Jon Niehaus
Effective Date 12/11/2008
Expiration Date 12/31/2011

US Army Corps of Engineers

Permit No. 2009-00079N, Zone 1A
Authorization expires May 15, 2020

US Fish and Wildlife Service

Programmatic Biological Opinion for SMP, USFWS PBO
Received October 29, 2009
Reference No. 81420-2009-F-0788-1

Department of Pesticide Regulation

Qualified Applicator License # 124144 for Mark Newhouser (SEC)
Expiration date: 12/31/2011

State of California

Contractors License # 949645 (SEC)
C-27 Classification
Mark Newhouser, Licensee
Expiration date: 7/31/2012

Currently, the only outstanding permits for the Water Agency's Stream Maintenance Program are an Individual Permit from the U.S. Army Corps of Engineers and associated 401 water certification waiver/waste discharge order from the Water Board. These permits are anticipated to be approved in November-December 2010. Implementation of the separately funded sediment removal portion of this project is contingent on obtaining these permits.

Third Party Oversight Organization:

The District will contract with the San Francisco Estuary Partnership or other non-governmental organization, as approved by the Water Board, who is qualified to perform oversight services.

