

Appendix A

SANTA ROSA NUTRIENT OFFSET POLICY



**California Regional Water Quality Control Board
North Coast Region
Bob Anderson, Chairman**



Linda S. Adams
Secretary for
Environmental Protection

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Arnold
Schwarzenegger
Governor

July 30, 2008

RECEIVED
CITY OF SANTA ROSA
JUL 31 2008

UTILITIES DEPARTMENT

Mr. Miles Ferris
Director of Utilities
City of Santa Rosa
69 Stony Circle
Santa Rosa, CA 95401

Dear Mr. Ferris:

Subject: Transmittal of Resolution No. R1-2008-0061 Approving the Santa Rosa Nutrient Offset Program for the Santa Rosa Subregional Water Reclamation System

File: Santa Rosa Subregional Water Reclamation System

On July 24, 2008, the Regional Water Board adopted Resolution No. R1-2008-0063 Approving the Santa Rosa Nutrient Offset Program for the Santa Rosa Subregional Water Reclamation System, with staff revisions. Enclosed is a copy of the Resolution for your records.

You may e-mail staff engineer Charles Reed at creed@waterboards.ca.gov if you have questions.

Sincerely,

Catherine Kuhlman
Executive Officer

073008_CER_SROffsetProgramRes_AdoptedTrans

Enclosure

Certified Return Receipt Request

California Environmental Protection Agency

Recycled Paper

California Regional Water Quality Control Board
North Coast Region

RESOLUTION NO. R1-2008-0061
Approving
Santa Rosa Nutrient Offset Program
for the

City of Santa Rosa
Santa Rosa Subregional Water Reclamation Facility
Sonoma County

FINDINGS

The California Regional Water Quality Control Board, North Coast Region, (hereinafter Regional Water Board) finds that:

1. The City of Santa Rosa owns and operates the Santa Rosa Subregional Water Reclamation Facility (the "Facility"), a publicly owned treatment works. The Facility seasonally discharges into the Laguna de Santa Rosa and its tributaries. The Laguna de Santa Rosa is 303(d) listed for, among other constituents, low dissolved oxygen, nitrogen, and phosphorus.
2. The Regional Water Board adopted a renewed National Pollutant Discharge Elimination System ("NPDES") Permit for the City's Facility, Order No. R1-2006-0045, CA0022764, ("Permit") on September 20, 2006.
3. The Permit imposed the following final effluent limitations for nitrogen and phosphorous based on the Water Quality Control Plan's narrative water quality objective for biostimulatory substances:

"The Regional Board plans to develop and adopt total maximum daily loads (TMDLs) for nitrogen and phosphorus which will specify wasteload allocations (WLAs) for point sources and load allocations (LA) for non-point sources, as appropriate. Following the adoption of these TMDLs by the Regional Water Board, this Order will be issued with final WQBELs based on applicable WLAs. Alternatively, in the absence of a TMDL, at the end of the compliance schedule authorized by this Order, the final effluent limitation for nitrogen and phosphorus will be zero, or no net loading."

See Permit at Effluent Limitations section IV.A.1.g.

4. Footnote 5 to Effluent Limitations section IV.A.1.g.states:
"A 'no net loading' effluent limit may be met by: 1) reducing the effluent concentration below detectable levels through source control and/or treatment; 2) reducing loads through recycling/reclamation; and/or 3) reducing loads elsewhere in the watershed by an amount at least equal to the amount discharged (and of equivalent bioavailability) through an approved offset program."

5. Regional Water Board and City staff prepared the Santa Rosa Nutrient Offset Program ("Nutrient Offset Program"), attached hereto as Attachment 1, to qualify as the offset program referenced in footnote 5 to Effluent Limitations section IV.A.1.g. that the City can implement to comply with Effluent Limitations section IV.A.1.g. of the Permit.
6. The City of Santa Rosa has undertaken significant steps to reduce nitrogen concentrations in its effluent and to reduce nutrient loading to the Laguna de Santa Rosa. Activities currently underway or completed include improvements to its activated sludge treatment process to achieve partial denitrification, increased water recycling, increased diversion of effluent to the Geysers Steamfields, and development and implementation of programs involving source control, water conservation, biosolids application management and storm water control. The Nutrient Offset Program will provide a framework for achieving additional nutrient load reductions during the interim period before the nutrient TMDL for the Laguna de Santa Rosa is implemented.
7. The Nutrient Offset Program is designed to encourage the City to undertake nutrient reduction projects that improve habitat and ecosystem conditions, and to encourage the City to undertake nutrient reduction projects that reduce or eliminate non-point source or other discharges not currently subject to waste discharge requirements, waiver, or other permits. However, the Nutrient Offset Program prohibits the City from continuing to receive nutrient reduction credits for a project that later becomes subject to additional regulatory controls imposed by the Regional Water Board. The Offset Program shall in no way diminish the force and effect of any current or future controls on non-point source or other discharges imposed by the Regional Water Board. Non-point source or other discharges in violation of prohibitions or water quality standards remain subject to enforcement under the Water Code.
8. To ensure that no nutrient reduction project will overlap with best management practice activities required by the NPDES permit for the City's municipal separate storm water system ("MS4 Permit"), under the Nutrient Offset Program, the Executive Officer shall not approve project proposals for storm water best management practice activities that are required by the City's current MS4 Permit (Order No. R1-2003-0062, NPDES Permit CA0025054) or the renewed MS4 Permit (scheduled for adoption in late 2008).
9. The Nutrient Offset Program is consistent with the federal and state anti-degradation policies. The discharge to be offset is an existing point source, not a new discharge, and any source reduction efforts through the offset program most certainly will improve the receiving waters. To account for any uncertainties in granting reduction credits, all projects proposals must include an appropriate Margin of Safety (MOS), which can be described numerically, or by spatial and temporal aspects of a given proposal. The Executive Officer retains discretion to request reasonable modifications to the nutrient reduction credit ratio of a specific proposal or deny the proposal. In addition, the Executive Officer shall ensure

that any banked credits are distributed in a balanced manner to satisfy the no-net loading function, both spatially and temporally. In accepting credits proposed in the City's annual report, the first being submitted prior to the discharge season in 2011-2012, the Executive Officer shall ensure that the City's proposal distributes any banked credits in a manner that maximizes the benefit to water quality.

10. No CEQA documentation is required at this time. The program implements provisions of the NPDES permit, which are statutorily exempt from CEQA under Water Code section 13389. Individual proposals must comply with CEQA as explicitly provided for on page 3 of the Program. In the absence of specific proposals, any environmental analysis would be too remote and speculative to analyze. Moreover, because Regional Water Board staff maintains discretion to disapprove any proposal, the Program does not commit the Regional Water Board to any implementation. The Regional Water Board's approval of the Offset Program is a decision to establish procedural rules on how an individual proposal might be approved, and is independent of any proposal that might be approved and have an environmental effect. (See Cal. Code Regs., tit. 14, §15061(b)(3).)
11. Regional Water Board staff recommends Regional Water Board approval of the Santa Rosa Nutrient Offset Program.

RESOLUTION

THEREFORE, it is hereby resolved that:

The Regional Water Board approves the Santa Rosa Nutrient Offset Program, attached hereto as Attachment 1, as the approved offset program referenced in footnote 5 to Effluent Limitations section IV.A.1.g. of the Permit, that the City of Santa Rosa can implement to comply with Effluent Limitations section IV.A.1.g. of the Permit.

CERTIFICATION

I, Catherine E. Kuhlman, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, North Coast Region, on July 24, 2008.



Catherine E. Kuhlman
Executive Officer

ATTACHMENT 1

To

RESOLUTION NO. R1-2008-0061

Approving the Santa Rosa Nutrient Offset Program for the Santa Rosa Subregional
Water Reclamation System

SANTA ROSA NUTRIENT OFFSET PROGRAM

Program Framework

Key elements of the Santa Rosa Nutrient Offset Program include the following:

- **City's nutrient load to be offset.** The City would identify the anticipated total annual discharge and average total N and P concentrations to be offset when the load limit goes into effect (currently scheduled to take effect before the 2011-12 discharge season) as a basis for sizing initial nutrient control project(s). This would be calculated using the water balance model estimate of the average year recycled water discharge, which would be based on the most recent average dry weather flow estimate and average year reuse capacity at the time the estimate is complete. The actual load would be calculated using the actual discharge volume and the average nutrient concentration during discharge periods. The actual load would be used as described below to determine compliance with the no net loading provision.
- **Nutrient reduction credits to be gained by performance of selected removal/reduction actions.** The nutrient reduction quantity from removal/reduction actions implemented by the City to control source of nutrients to the Laguna other than its recycled water discharge shall be calculated using one of the two following approaches:
 - Direct measurement of nutrient reduction. The City shall receive 1 pound of nutrient reduction credit for each pound of nutrient reduced that would have been discharged to the Laguna de Santa Rosa resulting from nutrient removal/reduction actions amenable to direct measurement. A plan for measuring or estimating the nutrient quantity control would be proposed for each nutrient control project as described in the *Program Implementation* section below.
 - Estimated nutrient reduction. The effectiveness of some nutrient removal/reduction actions are not amenable to direct measurement. For nutrient removal/reduction actions not amenable to direct measurement, the City shall receive nutrient reduction credit calculated based on the median effectiveness estimate in literature or other lines of study or evidence for project most similar to the City's proposed actions. For example, if literature values from relevant studies indicate a particular pasture management method reduces nutrient loss

by 9, 10, 12, 20, and 25 percent respectively (as reported in five studies), the City would calculate and receive nutrient reduction credit using the 12 percent value.

- **Margin of Safety.** All project proposals shall include a technically supportable Margin of Safety (MOS) to address uncertainties associated with nutrient reduction ratios and to ensure that the project will result in demonstrable water quality benefits. In reviewing direct and estimated nutrient reduction ratios for each proposal, the Executive Officer shall have discretion to request modification of the ratio based on the characteristics of a given proposal.
- **Storm water management projects.** No nutrient reduction project will overlap with best management practice activities required by the NPDES permit for the City's municipal separate storm water system ("MS4 Permit"). Under the Nutrient Offset Program, the Executive Officer shall not approve project proposals for storm water best management practice activities that are required by the City's current MS4 Permit (Order No. R1-2003-0062, NPDES Permit CA0025054) or the renewed MS4 Permit (scheduled for adoption in late 2008).
- **Nutrient reduction credit accounting.** Compliance with the no net loading requirement shall be calculated using a three-year averaging period. Each year the City will strive to offset the full amount of each year's anticipated discharge and will implement the approved projects as described in the annual report. At the end of each year, the City shall subtract the nutrient load reduction (pounds) from the City's actual nutrient discharge load, and may average the difference in the past three years. The City shall be deemed in compliance if the City has offset the full amount of actual discharge for the three year period if the three-year average difference is less than or equal to zero mass units.
- The no net nutrient loading requirement is scheduled to take effect at the beginning of the 2011-2012 discharge seasons. The City may choose to implement nutrient removal/reduction actions prior to the 2011-2012 discharge season. Credit (in pounds) for any nutrient removal/reduction actions implemented after 2007 and prior to the 2011-2012 discharge season shall be available to apply to the City's first three years of nutrient reduction. Any "banked" credits shall be distributed in a balanced manner so that water quality benefits from the Program are maximized. Factors to consider in this regard include the proportion of credits to new or ongoing projects in any given year, and the spatial temporal qualities of each credit. This issue will be considered when reviewing the nutrient reduction ratio of a given project and/or the City's annual report describing how the City plans to offset its anticipated discharge.
- The City may need to invest in capital facilities to comply with the no net nutrient loading requirement. Load reduction benefits from any such long-term capital facilities will continue to accrue to the City for the full life of such capital facilities until or unless additional regulatory controls are imposed by the RWQCB (for example, waste discharge requirements, waiver of waste discharge requirements, NPDES permit requirements, or 401 certifications) to control the same nutrient discharges the capital facilities are designed to control.

Program Implementation

Program implementation would occur according to the following steps:

1. City identifies nutrient reduction project(s)
2. City submits description of nutrient reduction project(s) to RWQCB documenting consistency with adopted Santa Rosa Nutrient Offset Program
3. RWQCB accepts proposed nutrient reduction project(s)
4. City implements project(s)
5. City submits annual report documenting nutrient discharged and controlled

Each step is described below.

1. *City identifies nutrient reduction project(s)*

The City shall preliminarily estimate the mass of N and P that could be removed or prevented from discharging to the Laguna and its tributaries as needed to achieve no net loading (*i.e.* an amount equal to the annual N and P mass emission from the Laguna Plant).

After assessing the options, the City shall identify one or more preferred nutrient reduction projects for implementation. The City would contact other parties (*e.g.* land owners, RCD, etc.) with which the City would need to partner to implement the project(s) to determine interest, cost and feasibility.

2. *City submits description of nutrient reduction project(s) to RWQCB*

The City shall prepare a description of the project(s) identified in step 1 above that includes the following:

- Project location
- Description of N and P control facilities or practices
- Quantity of N and P removed or controlled to be calculated as described in the *Program Framework* section above.
- Expected life of facility or duration of practice. This description shall include a description of the facility and/or practice, plus any written agreements related to construction and maintenance of the facility or implementation of the practice.
- Monitoring and reporting plan to document continued N and P removal. N and P removal shall be measured or estimated according to the type of removal/reduction actions identified in the *Nutrient reduction credits to be gained by performance of selected removal/reduction actions* section above.
- Description of anticipated or actual CEQA documentation.

3. *RWQCB accepts proposed nutrient reduction project(s)*

The Executive Officer of the RWQCB shall accept or reject the nutrient reduction project(s) submitted by the City in writing within 60 days of submittal or the project(s) are deemed accepted. The actual load reduction shall be determined according to the monitoring and reporting plan. The Executive Officer shall provide notice and the opportunity for the public to comment on the project(s). After consideration of any public comments and all available information, the Executive Officer may suggest modifications to the project(s) as necessary for acceptance. The Executive Officer of the RWQCB shall maintain discretion over accepted projects to request reasonable modifications based upon significant new information.

4. *City implements load reduction project(s) as proposed and accepted*

The City, with any partners, shall implement the nutrient reduction project(s) as proposed and accepted.

5. *City submits annual report documenting nutrient discharged and controlled*

Beginning in 2011, by July 1st each year, the City shall provide a report to RWQCB documenting the following:

- Mass of N and P anticipated to be discharged to the Laguna de Santa Rosa (and tributaries) for the upcoming discharge season and a description of how the City plans to offset the anticipated discharge.
- Mass of N and P actually discharged to the Laguna de Santa Rosa (and tributaries) during the previous discharge season, and the two prior discharge seasons if applicable.
- Mass of N and P controlled during the previous twelve months (i.e., July 1st through June 30th, of the previous twelve months), and the two (2) prior twelve month periods years if applicable.
- Calculation of the two and three year averaging, if applicable.
- Detailed report for each of the accepted nutrient reduction projects according to projects' respective monitoring and reporting plan.
- The report shall be signed and certified in accordance with 40 CFR 122.22(d).

The annual report will be posted on the RWQCB website. A RWQCB staff contact will be listed for any questions or comments regarding the report.

Exhibit 1 below is an example where the City would be in compliance in all years (i.e., the Three-Year Average" value is less than 0 kg). The example in Exhibit 1 demonstrates that compliance with the requirement of the 0 kg three-year average requirement is achieved in 2013-14 by using some of the pre-2011 credit.

EXHIBIT 1

To

SANTA ROSA NUTRIENT OFFSET PROGRAM

	Kg Phosphorus					
	Pre-2011	2011-12	2012-13	2013-14	2014-15	2015-16
Anticipated City Discharge		4824	5400	5977	6554	7131
Actual City Discharge		4968	5238	7113	6030	8129
Control Project 1		3900	3950	3610	3290	4580
Control Project 2		900	1200	1200	1200	1200
Control Project 3			100	2000	2000	2200
Control Project 4						
Total Control		4800	5250	6810	6490	7980
Net Load		168	-12	303	-460	149
Pre-2011 credit available	500	500	332	332	0	0
Pre-2011 credit used		168	0	303		
Annual Load For Compliance		0	-12	0	-460	149
Three-Year Average				-4	-157	-104

Appendix B

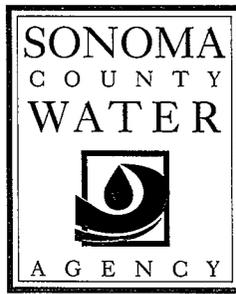
SEDIMENT SAMPLING AND ANALYSIS GUIDELINES

Appendix C

WATERSHED PARTNERSHIPS PROGRAM MEMORANDUM OF AGREEMENT

Appendix C-1

SAMPLE OF MEMORANDUM OF AGREEMENT



FILE:1-4131-21 SOTOYOME RESOURCE CONSERVATION
DISTRICT (AGREEMENT FOR FUNDING OF COOK CREEK
HEADWATERS EROSION CONTROL AND SEDIMENT
MANAGEMENT PROJECT) TW# 07-08-114

September 17, 2008

Valerie Sherron
Sotoyome Resource Conservation District
PO Box 11526
Santa Rosa, CA 95406

**RE: AGREEMENT FOR FUNDING OF COOK CREEK HEADWATERS EROSION
CONTROL AND SEDIMENT MANAGEMENT PROJECT**

Dear Ms. Sherron:

Enclosed is your fully signed copy of the subject agreement.

Sincerely,

A handwritten signature in cursive script that reads "Rochelle Mueller".

Rochelle Mueller
Technical Writing Specialist

Encs

c Jon Niehaus
Accounting/Auditor

RW: \\filesver\data\cl\pinks\week091508\0708-114 exec.doc

Agreement for Funding of Cook Creek Headwaters Erosion Control and Sediment Management Project

This agreement ("Agreement") is by and between Sonoma County Water Agency, a body corporate and politic of the State of California and Sotoyome Resource Conservation District, a special district organized under the State of California Public Resources Code (hereinafter "Recipient"). The Effective Date of this Agreement is the date the Agreement is last signed by the parties to the Agreement.

RECITALS

- A. Landslides in the upper Cook Creek Watershed contribute large volumes of sediment to Cook Creek and downstream creeks. Sediment loadings to downstream creeks impacts habitat and channel capacity in the downstream creeks.
- B. The Agency owns and maintains several flood control channels downstream from the project site.
- C. The Cook Creek Headwaters Erosion Control and Sedimentation Management Project ("Project"), described in Exhibit B, will act as partial mitigation for the Agency's 2008 stream maintenance activities on Copeland, Coleman, Todd, Hinebaugh, Steele, College, Airport, Ducker, Colgan, and Gossage Creeks.
- D. Agency will utilize funding from the Zone 1A Flood Control fund.

AGREEMENT

Agency and Recipient agree as follows:

1. RECITALS

- A. The above recitals are true and correct.

2. LIST OF EXHIBITS

- A. The following exhibits are attached hereto and incorporated herein:
 - 1. Exhibit A: Scope of Work
 - 2. Exhibit B: Project Description

3. COORDINATION

- A. Recipient shall coordinate with Agency's Project Manager. Contact information:

Agency	Recipient
Project Manager: Jon Niehaus	Contact: Valerie Sherron
PO Box 11628	PO Box 11526
Santa Rosa, CA 95406	Santa Rosa, CA 95406
Phone: 707-547-1947	Phone: 707-569-1448 x102
Cell: 707-975-3999	
Fax: 707-524-3782	Fax: 707-569-0434
Email: jon@scwa.ca.gov	Email: vsherron@sotoyomercd.org

4. **RECIPIENT'S RESPONSIBILITIES**

- A. **General:** Recipient agrees to perform all work in accordance with the requirements of applicable federal, state, and local laws.
- B. **Project:**
 - 1. Recipient agrees to perform all work described in Exhibit A.
- C. **Deliverables:** By December 31 of each year following completion of planting, Recipient shall submit to Agency:
 - 1. Monitoring Report
- D. **Indemnification:** Recipient agrees to accept all responsibility for loss or damage to any person or entity, including but not limited to Sonoma County Water Agency, and to defend, indemnify, hold harmless, reimburse and release Sonoma County Water Agency, its officers, agents, and employees, from and against any and all actions, claims, damages, disabilities, liabilities and expense, including but not limited to attorneys' fees and the cost of litigation incurred in the defense of claims as to which this indemnity applies or incurred in an action by Agency to enforce the indemnity provisions herein, whether arising from personal injury, property damage or economic loss of any type, that may be asserted by any person or entity, including Recipient, arising out of or in connection with the performance of Recipient hereunder, whether or not there is concurrent negligence on the part of Agency, but, to the extent required by law, excluding liability due to the sole or active negligence or due to the willful misconduct of Agency. If there is a possible obligation to indemnify, Recipient's duty to defend exists regardless of whether it is ultimately determined that there is not a duty to indemnify. Agency shall have the right to select its own legal counsel at the expense of Recipient, subject to Recipient's approval, which approval shall not be unreasonably withheld. This indemnification obligation is not limited in any way by any limitation on the amount or type of damages or compensation payable to or for Recipient or its agents under workers' compensation acts, disability benefit acts, or other employee benefit acts.

E. **Insurance:**

With respect to performance of work under this Agreement, Recipient shall maintain insurance as described below.

1. **Types of Insurance:**

- a) **Workers' Compensation Insurance.** Workers' compensation insurance with statutory limits as required by the Labor Code of the State of California. Said policy shall be endorsed with the following specific language:
 - (1) This policy shall not be cancelled or materially changed without first giving thirty (30) days prior written notice to the Sonoma County Water Agency.
- b) **General Liability Insurance.** Commercial general liability insurance covering bodily injury and property damage using an occurrence policy form, in an amount no less than one million dollars (\$1,000,000.00) combined single limit for each occurrence. In the event Recipient cannot provide an occurrence policy, Recipient shall provide insurance covering claims made as a result of performance of this Agreement and shall maintain such insurance in effect for not less than two (2) years following completion of performance of this Agreement. Said commercial general liability insurance policy shall either be endorsed with the following specific language or contain equivalent language in the policy:

- (1) Additional insured(s): The Sonoma County Water Agency, its officers, agents, and employees, are named as additional insured(s) for all liability arising out of the operations by or on behalf of the named insured in the performance of this Agreement.
 - (2) Separation of insured: The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, and the coverage afforded shall apply as though separate policies had been issued to each insured, but the inclusion of more than one insured shall not operate to increase the limits of the company's liability.
 - (3) Primary coverage: The insurance provided herein is primary coverage to the additional insured(s) with respect to any insurance or self-insurance programs maintained by the additional insured(s).
 - (4) Cancellation: This policy shall not be cancelled or materially changed without first giving thirty (30) days prior written notice to the Sonoma County Water Agency.
- c) Automobile Liability Insurance. Automobile liability insurance covering bodily injury and property damage in an amount no less than one million dollars (\$1,000,000.00) combined single limit for each occurrence. Said insurance shall include coverage for owned, hired, and non-owned vehicles. Said policy shall be endorsed with the following language:
- (1) This policy shall not be cancelled or materially changed without first giving thirty (30) days prior written notice to the Sonoma County Water Agency.
2. Documentation:
- a) Prior to execution of the Agreement by Agency, Recipient shall submit to Agency properly executed Certificates of Insurance clearly evidencing all coverages, limits, and endorsements required above.
 - b) Upon Agency's written request, certified copies of insurance policies shall be provided to Agency. Said policy copies shall be submitted within thirty (30) days of Agency's request.
 - c) Unless specifically noted otherwise, subconsultants and subcontractors are not required to submit insurance documentation to Agency.
3. Policy Obligations: Recipient's indemnity and other obligations shall not be limited by the foregoing insurance requirements.
4. Material Breach: If Recipient, for any reason, fails to maintain insurance coverage or fails to ensure that all subconsultants, subcontractors, and other agents maintain insurance coverage that is required pursuant to this Agreement, the same shall be deemed a material breach of contract. Agency, at its sole option, may terminate this Agreement and obtain damages from Recipient resulting from said breach. Alternatively, Agency may purchase such required insurance coverage, and without further notice to Recipient, Agency may deduct from sums due to Recipient any premium costs advanced by Agency for such insurance. These remedies shall be in addition to any other remedies available to Agency.
5. Subconsultants' Insurance: Recipient shall require all of its subcontractors, subconsultants, and other agents to maintain the same insurance coverage as specified above for Recipient.

F. Invoices: Invoice Agency as described under paragraph 6.

5. **AGENCY'S RESPONSIBILITIES**

A. **Payment:**

1. For all services and incidental costs required hereunder, Recipient shall be paid in accordance with the terms listed under paragraph 6.
2. The total amount paid by Agency under this Agreement shall not exceed **\$67,633.50**.

6. **PAYMENT**

A. Recipient shall be paid based on the following table:

	Hours	Hourly Rate	Total
Task 1: Installation of Erosion Control Measures			
Restoration Program Manager	125	\$57.00	\$7,125.00
Project Coordinator	40	\$58.00	\$2,320.00
Circuit Rider Productions Subcontract			\$25,000.00
Mileage	600	\$0.50	\$300.00
<i>Subtotal</i>			\$34,745.00
Task 2: Project Maintenance, Irrigation & Monitoring			
Restoration Program Manager	50	\$57.00	\$2,850.00
Project Coordinator	145	\$58.00	\$8,410.00
Watershed Biologist	30	\$59.00	\$1,770.00
Project Assistant	115	\$51.00	\$5,865.00
Mileage	1,050	\$0.50	\$525.00
<i>Subtotal</i>			\$19,420.00
Task 3: Contract Administration			
Executive Director	30	\$73.00	\$2,190.00
Project Coordinator	60	\$58.00	\$3,480.00
Bookkeeper	30	\$55.00	\$1,650.00
<i>Subtotal</i>			\$7,320.00
Overhead (billed at 10%)			\$6,148.50
Total			\$67,633.50

B. **Invoices:** Recipient shall submit its bills in arrears on a monthly basis, based on percentage of work complete and a justification for such percentage in a form approved by Agency's Project Manager. The bills shall show or include:

1. Recipient name
2. Name of Agreement
3. Agency's Project-Task number 7251-2 and Account number 673202-6180
4. Task performed with an itemized description of services rendered by date
5. Copies of receipts for reimbursable materials/expenses

7. **ADDITIONAL REQUIREMENTS**

A. **Term of Agreement:** This Agreement shall remain in effect until December 31, 2011, unless terminated earlier in accordance with the terms herein.

- B. Termination: At any time and without cause, Agency has the right, in its sole discretion, to terminate this Agreement by giving five calendar days' written notice to Recipient. In the event of such termination, Agency will pay Recipient for portions of the Project satisfactorily completed to the date of termination. In addition, should Recipient fail to perform any of its obligations hereunder, within the time and in the manner herein provided, or otherwise violate any of the terms of this Agreement, Agency may immediately terminate this Agreement by giving Recipient written notice of such termination, stating the reason for termination. In the event of such termination, Agency will pay Recipient for portions of the Project satisfactorily completed to the date of termination. However, Agency will deduct from such amount the amount of damage, if any, sustained by Agency by virtue of the breach of the Agreement by Recipient. Agency's right to terminate may be exercised by Agency's General Manager/Chief Engineer.
- C. Authority to Amend Agreement: Changes to the Agreement may be authorized only by written amendment to this Agreement, signed by both parties.
- D. No Waiver of Breach: The waiver by Agency of any breach of any term or promise contained in this Agreement shall not be deemed to be a waiver of such term or promise or any subsequent breach of the same or any other term or promise contained in this Agreement.
- E. Construction: To the fullest extent allowed by law, the provisions of this Agreement shall be construed and given effect in a manner that avoids any violation of statute, ordinance, regulation, or law. The parties covenant and agree that in the event that any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions hereof shall remain in full force and effect and shall in no way be affected, impaired, or invalidated thereby.
- Recipient and Agency acknowledge that they have each contributed to the making of this Agreement and that, in the event of a dispute over the interpretation of this Agreement, the language of the Agreement will not be construed against one party in favor of the other. Recipient and Agency acknowledge that they have each had an adequate opportunity to consult with counsel in the negotiation and preparation of this Agreement.
- F. No Third-Party Beneficiaries: Nothing contained in this Agreement shall be construed to create and the parties do not intend to create any rights in third parties.
- G. Applicable Law and Forum: This Agreement shall be construed and interpreted according to the substantive law of California excluding the law of conflicts. Any action to enforce the terms of this Agreement or for the breach thereof shall be brought and tried in the County of Sonoma.
- H. Captions: The captions in this Agreement are solely for convenience of reference. They are not a part of this Agreement and shall have no effect on its construction or interpretation.
- I. Merger: This writing is intended both as the final expression of the agreement between the parties hereto with respect to the included terms and as a complete and exclusive statement of the terms of the agreement, pursuant to Code of Civil Procedure Section 1856. No modification of this Agreement shall be effective unless and until such modification is evidenced by a writing signed by both parties.
- J. Time of Essence: Time is and shall be of the essence of this Agreement and every provision hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as set forth below.

Reviewed as to substance:


Agency's Department Head

Reviewed as to funds:


Agency's Division Manager - Administrative Services

Reviewed as to form:


County Counsel

Sotoyome Resource Conservation District

By: 

Kara Heckert
(Please print name here)

Title: Executive Director

Date: August 14, 2008

Insurance Documentation is on file with Agency

8/19/08 RLM
(Date)

Sonoma County Water Agency

By: 
Chair, Board of Directors

Date: 9/9/08

Attest: 
Clerk of the Board of Directors

Exhibit A

Scope of Work

Recipient agrees to perform work to control erosion and sediment on landslides in the headwaters of Cook Creek. Specific tasks include:

Task 1: Installation of Erosion Control Measures

Recipient shall contract with Circuit Rider Productions, Inc. (CRP) for installation of jute netting and straw waddles, erosion control seeding, and re-establishment of woody vegetation on the landslides. Recipient shall also have CRP install an irrigation system to support the re-establishment of vegetation. Numbers of plants for woody vegetation re-establishment are as follows:

- Site #1: Landslide closest to house:
 - 90 direct seed acorns & buckeye
 - 120 container plants w/ irrigation
- Site #2: Across the channel from site #1:
 - 315 direct seed acorns & buckeye
 - No container plants or irrigation

Recipient shall coordinate with the landowner and shall oversee the work performed by CRP. Installation shall take place during the Fall and Winter months of 2008/2009 and shall be completed by March 2009.

Task 2: Project Maintenance, Irrigation & Monitoring

Recipient shall visit the project site every 10 to 14 days from April through October for 2 to 3 years to check the irrigation system and make repairs where necessary. Recipient shall perform weed removal around each plant 3 times per year for 3 years following plant installation. Recipient shall monitor plant survival during each year of maintenance, and shall submit a report to Agency By December 31 of each monitoring year. Maintenance activities shall begin in April 2009 and conclude in October 2011. Monitoring shall begin in Fall 2009 and conclude in Fall 2011, with the final monitoring report delivered to Agency by December 31, 2011.

Task 3: Contract Administration

Recipient shall perform activities necessary to the administration of this contract, including preparation and submission of monthly invoices and quarterly progress reports to Agency. These activities shall be ongoing throughout the contract term.

Exhibit B

Project Description

A. Background

A landslide developed in the headwater area of the Cook Creek subbasin in 2007, and has continued settling during the winter of 2008. The landslide (~9,000 sq ft.) has resulted in the mass movement downslope of soil and earth materials. The landslide has also exposed a barren steep slope that is susceptible to continued surface erosion. Currently, the landslide is on a slope above the Cook Creek stream channel, outside of Waters of the State/U.S., but adjacent to the stream zone. However, without treatment the slumping area will contribute large amounts of sediment directly to Cook Creek and continue eroding materials into Cook Creek.

This project will stabilize the active landslide and thereby reduce abundant sediment loading to Cook Creek.

B. Overview

Key actions of this project include slope grading and vegetation planting to stabilize the soil mass, arrest movement, reduce further erosion and prevent a large volume of sediment from being discharged to Cook Creek and downstream areas. The slope face will be regraded and compacted, and covered with erosion control fabric. The toe of the slope will be anchored with rip rap and include a rock/soil mix that will enable tree plantings at the base of the slope. The grading design is integrated with upslope drainage improvements to keep the slope face well drained. Because of the steepness of the slope and the proximity to the creek, use of heavy equipment is difficult and will be minimized. All work will occur upslope and outside of Waters of the State/U.S., with appropriate BMPs implemented to prevent any construction related water, sediment, or other materials from entering the creek zone.

C. Planting Plan

The vegetation plan includes planting of shrubs, trees, emergent transplants, and dormant cuttings. These target planting numbers are based on the current site evaluation. The placement of emergents and dormant cuttings is contingent on local conditions. Slope stabilization grading and rock placement may impact the amount and type of species in a given zone. Best efforts have been made to avoid plants with high water demands that would require irrigation.

Plant stock shall include dormant cuttings, on-site transplants, liner-sized seedlings (supercell or depot), or one gallon tree pots. Plants will receive protective hardware and weed control fabric. Plant hardware will be either collar and screen or Tubex. This hardware and weed control fabric should remain in place for 5 years at which time it should be removed and disposed of off-site.

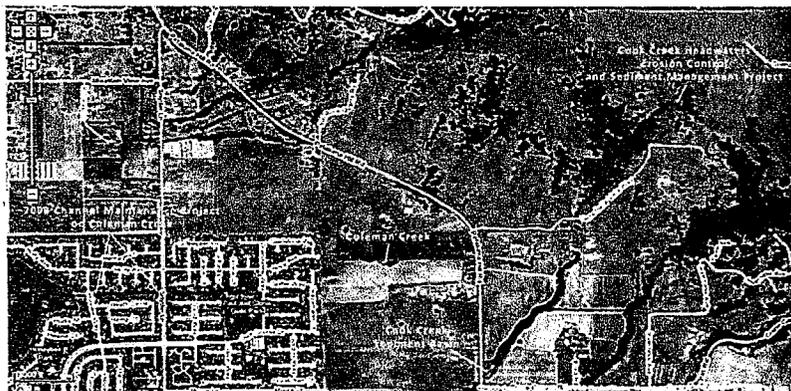
D. Project Maintenance, Irrigation, and Monitoring

Plants in all areas will be irrigated with an above ground temporary drip system, which will be designed to operate for 2-3 years. Irrigation water will be delivered to the area immediately surrounding the plant via drip emitters. To meet the goals of this project, irrigation amounts will likely be limited to the lowest possible amount so as to minimize inundation of the unstable slope.

E. Project Benefits

This project provides several direct and indirect benefits that occur both on-site and are beneficial to the watershed as a whole. Direct benefits occurring on-site include erosion control and the prevention of a stream section from being buried and inundated with accumulated landslide material. This is particularly important in headwater first-order streams where the transition from the defined channel network to the hillside catchment areas is an important ecotone.

Downstream benefits include reduced sediment loading to the Cook Creek sediment basin and to the Cook Creek and Coleman Creek flood control channels. The reduction in downstream sediment loading to these flood control channels reduces the need for in-channel maintenance activities, which in turn, reduces potential maintenance impacts to the channel. Erosion control and sediment reduction from the watershed headwaters will also help areas further downstream including the Laguna de Santa Rosa which is currently impaired for sediment. The reduction of sediment loading to the Laguna enhances aquatic habitat for fish and other aquatic organisms. Increased sedimentation is also known to create an ideal habitat for invasive *Ludwigia* sp. in the Laguna de Santa Rosa. The reduction of sediment loading to the Laguna helps reduce and avoid invasive *Ludwigia* colonization.



Issue Date (MM/DD/YYYY)
08/19/2008

CERTIFICATE OF COVERAGE



This is to certify that coverages listed below have been issued to the member named below for the period indicated. Notwithstanding any requirement, term, or condition of any contract or other document with respect to which this certificate may be issued or may pertain; the coverage described herein is subject to all the terms, exclusions, and conditions of the specific coverage document; limits shown may have been reduced by paid claims.

This certificate of insurance or binder evidences the limits of liability in effect at the inception of the policies shown. This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies listed below.

Participating Member: Sotoyome Resource Conservation District Post Office Box 11526 Santa Rosa, CA 95406	Member Number: BOP-7213	Company Affording Coverage: Special District Risk Management Authority 1112 I Street, Suite 300 Sacramento, California 95814 Toll-Free 800.537.7790 www.sdrma.org
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Type of Coverage	Policy Number	Effective Date	Expiration Date	Limits	
General Liability Personal Injury Liability - Auto Personal Injury Liability - General	LCA-SDRMA-200809	07/01/2008	07/01/2009	Per Accident	\$1,000,000
				Per Occurrence	\$1,000,000
Auto Liability Personal Injury and Property Damage	LCA-SDRMA-200809	07/01/2008	07/01/2009	Per Occurrence	\$1,000,000
				Property Damage Deductible	\$1,000
Workers' Comp. A. Statutory Workers' Comp. B. Employers' Liability Coverage	WCP-SDRMA-200809	07/01/2008	07/01/2009	Each Occurrence	\$200,000,000
				Each Occurrence	\$5,000,000

Description; All listed coverage is in effect only for the time period specified.

The Sonoma County Water Agency, its officers, and employees are named as primary additionally insured members for liability arising out of the operations by or on behalf of the named insured in the performance of this contract.

Cancellation: Should any of the above-described policies be cancelled before the expiration dates thereof, the issuing company will endeavor to mail 30 days written notice to the above-named certificate holder, but failure to mail such notice shall impose no obligation or liability of any kind upon the company.

Certificate Dates:	Effective Date 07/01/2008	Expiration Date 07/01/2009	Certificate Type:	<input checked="" type="checkbox"/> Additional Insured <input type="checkbox"/> Evidence of Coverage	<input type="checkbox"/> Loss Payee
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CERTIFICATE HOLDER

Sonoma County Water Agency, Attn: Joan Hultberg
P O Box 11628
Santa Rosa, CA 95406

Authorized Signature

Appendix C-2

GRANT FUNDING APPLICATION FORM

[INSERT SCWA LOGO]

Watershed Partnership Program Project Funding Application

APPLICANT INFORMATION

Applicant/Lead Agency (organization) _____

Address _____

Contact name and title _____

Telephone () _____ Fax () _____

E-mail _____

Signature _____ Date _____

For nonprofit organizations, Federal Tax ID# _____

PROJECT INFORMATION

Project title _____

Project location: _____

Proposed starting date _____ Estimated completion date _____

Total budget: \$ _____ Available matching funds: \$ _____

Total requested through WPP: \$ _____

Project Readiness (e.g., in design, permitted, in progress, etc.): _____

Project Activities: Rate level of activity in each area from 0-3
(0=no activity, 1=minimal, 2=moderate, 3=primary purpose of project)

- | | |
|--|-------------------------------------|
| _____ Water Quality Enhancement | _____ Project Development /Planning |
| _____ Habitat Restoration/Invasive Species Control | _____ Education / Interpretation |
| _____ Protection/Habitat for Endangered Species | _____ Research Data Collection |
| _____ Flood protection/storm event attenuation | _____ Other |

Proposal Narrative (maximum 5 pages single spaced, 12-point text, 1" margins all around). Respond in each of the following areas:

1. Needs Assessment or Opportunity Statement
2. Project Description
3. Deliverables/Outcomes
4. How does this project advance goals for the Laguna watershed identified in the Sonoma County General Plan, SCWA plans, previous watershed assessments or the Laguna watershed Restoration and Management Plan?
5. (Implementation projects only): indicate whether project will take place along channels managed by the Sonoma County Water Agency, and if so, whether the project will reduce the frequency of required maintenance in the project area after project is completed.
6. Indicators and Evaluation Methods
7. Timeline, showing Tasks
8. Maintenance and Monitoring (if appropriate, as for restoration projects: indicate how long project will be maintained after completion, and how outcomes will be monitored)

Budget. Provide a project budget arranged by tasks shown in Narrative item #7. Show columns for proposed use of WPP funds, matching funds, and total project budget. Indirect expenses (administration and overhead) limited to XX% of total project budget.

Supporting documents. Provide project maps and site photographs if applicable, landowner agreement letters from participating landowners, commitment letters by collaborating agencies, and documentation of status as a federally recognized nonprofit organization, a Resource Conservation District, or an organization with either of these serving as its fiscal sponsor.

Supplemental attachments (optional). Brochures or other materials relating to educational or outreach programs, CD with audio or video material for proposed public education campaigns (if available), etc.

Sustainability. Please make an effort to minimize paper consumption by printing two-sided and providing only the materials necessary to fully explain your project and its effects.

Appendix D

WATERSHED MITIGATION PROJECT DESCRIPTIONS

Appendix D-1

2006 COOK CREEK HEADWATERS EROSION CONTROL AND SEDIMENT MANAGEMENT PROJECT



Photo a. Overview of landslide scar in headwaters of Cook Creek (Feb. 2006), slide debris moves downslope directly into Cook Creek.



Photo b. Toe of active slide pushes eroded material directly into creek (Feb. 2006).



Photo c. Active slide face graded, drain pipes used to dewater surface drainage away from slide; drain, manhole cover, and detention area seen in mid-ground (Feb. 2006).



Photo d. Active lower slide face transports sediment directly to Cook Creek, this is below the area shown in Photo (c), plastics and wattles used to reduce slide saturation and erosion (Feb. 2006).



Photo e. Cook Creek Sediment Basin downstream of the landslide (July 2005), prior to landslide treatments sediment basin required frequent excavation.



Photo f. Cook Creek Sediment Basin (July 2007), following erosion control treatments upstream, frequency and need for sediment removal at basin is diminished.

Appendix D-2

WASHINGTON CREEK (BARBONI RANCH) HEADWATERS GRAZING AND
EROSION CONTROL PROJECT

Watershed Partnerships Program: 2007

Washington Creek (Barboni Ranch) Headwaters Grazing and Erosion Control Project, with Watershed Partner the Natural Resources Conservation Service (NRCS)



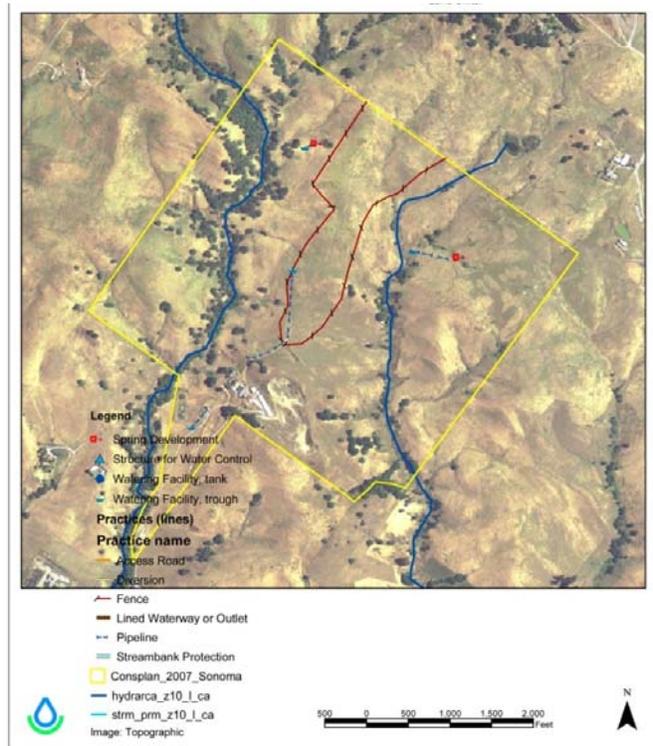
Barboni Ranch in the upper Washington Creek watershed was historically grazed year-round. This resulted in surface water quality impairments from pathogen, nutrient, and sediment loading, as well as streambank instability and degraded riparian habitat.

This project provided watershed based mitigation (Tier 3) for the 2007 East Washington Creek Sediment Removal Project. SCWA provided \$15,000 for conservation and erosion control activities with watershed partner NRCS.

Project activities included fencing to keep cattle out of the creek zones, and developing gravity-fed springs and planned livestock watering areas to replace the need for livestock to enter the creek. The project also involved developing long-term grazing management approaches.

Benefits of this project include reducing stream and hillslope erosion from upland areas and protecting water quality. Over the longer-term, reducing grazing impacts will improve soil quality, and foster vegetation growth, health, and recruitment.

This project provides a sustainable solution and mitigation approach to stream maintenance. Over time, reducing sediment sources from grazing areas in the headwaters of Washington Creek reduces the need for instream sediment removal activities downstream in the flood control channels. This mitigation project occurred in the headwaters directly upstream of where SCWA removed channel sediments at Washington Creek in 2007, demonstrating the close spatial relationship between maintenance activities and watershed mitigation.



Appendix D-3

COTATI CREEK CRITTERS: LAGUNA RESTORATION PROJECT

Cotati Creek Critters: Laguna Restoration Project

Cotati Creek Critters

~ enhancing and enjoying Cotati's creeks ~



Contact Information: Jenny Blaker and Wade Belew
Cotati Creek Critters
Cotati City Hall, 201 West Sierra Avenue
Cotati, CA 94931
(707) 792-4422; jenny@creeks.cotati.info
www.cotaticreekcritters.info



Organization Description: Cotati Creek Critters (CCC) is a grassroots habitat restoration group that has conducted restoration activities along the Laguna de Santa Rosa in Cotati since 1999. Their mission is to enhance natural habitat for native species; organize community workdays to plant native species and remove invasives; encourage an appreciation of Cotati's creeks; raise awareness that Cotati's creeks are part of the larger Laguna de Santa Rosa and Russian River watersheds; and enjoy the natural resources with the community. CCC is fiscally sponsored by Laguna de Santa Rosa Foundation - a 501(c)(3) non-profit organization.



Project Description: CCC proposes to implement a restoration plan on a 5,000 ft. long reach of the Laguna channel in Cotati through community planting events. The project will establish an understory layer of native plants including grasses, sedges, rushes, vines and other appropriate herbaceous perennials. CCC plans to install 1000 plants under 250 previously planted trees. They predict the understory plants will be viably reproducing and spreading by seed, roots and rhizomes within one to two years. The project also includes treating eroded banks and bare soil with a combination of willow sprigging, erosion control fabrics, and straw mulch. To reduce non-native grass encroachment they will selectively mow the site, and distribute native seed in its place.

Cotati Creek Critters: Laguna Restoration Project



Objectives:

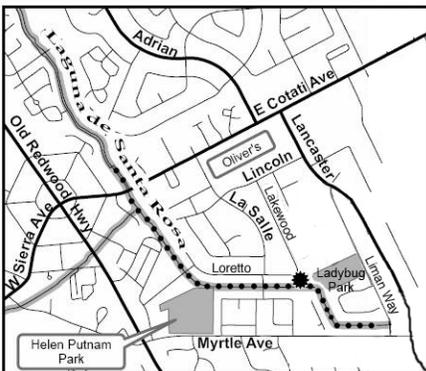
1. Stabilize channel banks to reduce soil erosion and sediment delivery to the Laguna de Santa Rosa, as well as damage to important infrastructure like the bike path/service road. A native understory at maturity is much lower and compact to the ground. Most vegetative growth will be less than 2 feet high. This should result in less resistance and trapping of sediment.
2. Increase ecological values of the stream with a diverse native understory. Native plants often have symbiotic relationships with native wildlife.
3. Promote community outreach by encouraging citizens and service groups to invest volunteer time in the Laguna and engage in the broader discussion of reducing non-point source pollution from urban watersheds.
4. Increase environmental education opportunities for people using the bike and pedestrian path and for the general Laguna watershed community.

Budget:

Potential WPP Supported Tasks

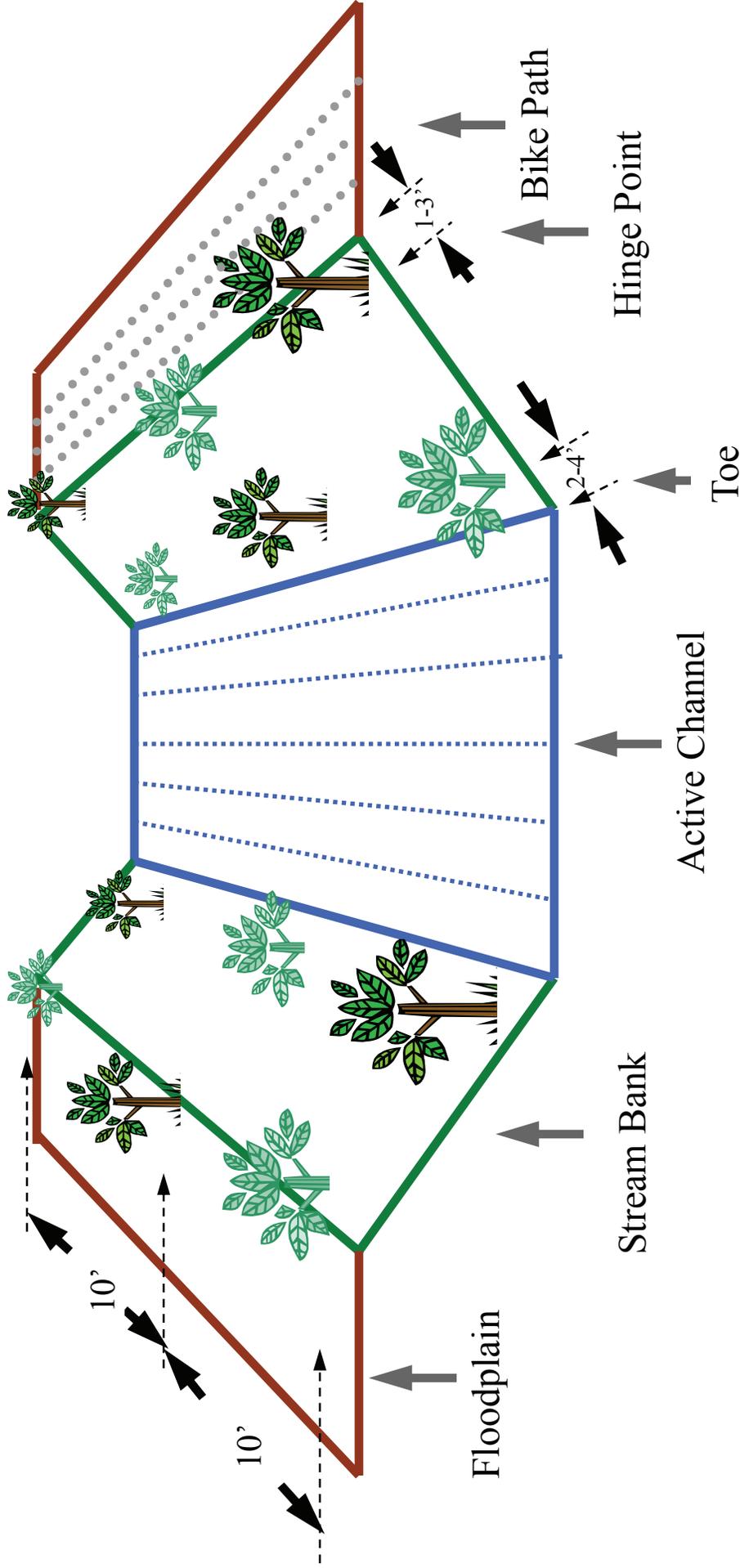
Materials and equipment (including plants, tools, jute netting, straw, stakes):	\$9,000
Community restoration days (organize and implement 16 volunteer workdays):	\$14,000
Community outreach and volunteer recruitment :	\$7,500
Irrigation and maintenance (including mowing and weed removal):	\$6,000
Monitoring activities	\$5,000
Project communications:	<u>\$3,200</u>
Subtotal	\$43,700

Project Location:



Planting Diagram
for Laguna Channel
Revegetation Project
(not to scale)

COTATI CREEK CRITTERS



Notes: Plant alternate from trees to shrubs on approximately 10 foot intervals. South Bank of "Park Reach" (between Ladybug and Putnam Parks) has to additional rows of plantings on a wider right-of-way. Plan modified to account for existing plants and conditions. Due to availability of appropriate species and maintenance/flood control concerns, shrub density may be less at toe.

Appendix D-4

2008 COOK CREEK HEADWATERS EROSION CONTROL AND
SEDIMENT MANAGEMENT PROJECT

Watershed Partnerships Program: 2008

2008 Cook Creek Headwaters Erosion Control and Sediment Management Project



Upper Cook Creek watershed looking south. Landslide and erosion area seen with plastic cover in mid ground. Rohnert Park plain seen in distance to right.

WPP Partner:	Sotoyome Resource Conservation District
Watershed:	Upper Laguna Subbasin, Cook Creek and Coleman Creek headwaters
Stream:	Cook Creek
Project Location:	Northeast from Terra Bella Vista Way
Project Size:	9,000 sq. ft.
Project Budget:	\$51,700

Key Restoration Actions:

- 9,000 sq. ft. of erosion control and slope stabilization
- tree planting throughout site

Project Schedule:

Summer 2008, earthwork and grading activities are initiated. In fall 2008, slope planting begins following the earthwork. Planting continues into the winter of 2009 and should be complete by March 2009.

Project Goals and Benefits:

The goal of this project is to prevent movement of sediment into Cook Creek by:

- stabilizing the slope through grading and vegetation planting; and
- improving drainage away from the slide face, underneath soil, or slide toe.

Benefits of this project include:

- on-site erosion control and protection of headwater area;
- reduced sediment loading to downstream areas; and
- reduced downstream channel maintenance needs.

Project Costs:

\$26,000	earthwork grading and compaction
\$2,000	plant materials and hardware
\$2,500	plant installation labor
\$2,000	irrigation system materials and labor
\$3,200	weed maintenance (9 visits)
\$8,000	irrigation maintenance (36 visits)
\$8,000	monitoring (3 annual reports)
<hr/>	
\$51,700	Total

Watershed Partnerships Program: 2008

2008 Cook Creek Headwaters Erosion Control and Sediment Management Project

Key Notes on the Slope Stabilization Plan:

- All work will occur upslope and outside of waters of the U.S./state
- The slope face will be regraded, compacted, and covered with erosion control fabric
- The base of the slope will be anchored with rip rap and soil and planted with trees
- Drainage improvements will be installed to keep the slope face well drained
- Use of heavy equipment will be minimized, especially near channel zone
- Appropriate BMPs will be used to prevent construction-related impacts to water quality

Planting Plan:

- 164 shrubs (coyote brush, toyon, coffeeberry, Western spicebush, oceanspray, and California wild rose)
- 50 trees (California bay laurel, big leaf maple, Coast live oak, Oregon white oak, blue oak, and California buckeye)
- 40 emergent Santa Barbara sedge transplants
- 40 dormant willow cuttings
- Plants will be treated with protective hardware and weed control fabric (remaining in place for 3 to 5 years)
- Planting locations will be identified by a qualified botanist



Direct view of slide face from vicinity of creek bank area below slide.



Nearer view of slide area showing head scarp adjacent to road, slide face, and base of slide in upland zone above creek.



View of slide zone showing arcuate slide face in profile. Project treatments would include grading of slide face and strengthening toe of slide area with earthwork and tree plantings.

Project Irrigation:

- Irrigation begins in the first April following plant installation
- Plants will be irrigated with above-ground drip system for 2 to 3 years
- Plants will likely receive 1-2 gallons of water per week, depending on local climate conditions and consideration for soil moisture and
- slope protection.
- The irrigation system will be inspected and maintained every 10 to 14 days through the summer months.

2008 Cook Creek Headwaters Erosion Control and Sediment Management Project

Project Maintenance and Monitoring:

- Plants will be inspected and maintained for three years following installation.
- Weeds will be removed from a two-inch radius around plant stems three times each year during late winter and early spring.
- Plant survival will be monitored and documented annually for three years starting at the end of the first growing season (September – November 2009).
- Monitoring reports will be submitted to appropriate regulatory agencies. The reports will include the survival, percent cover, and height of both tree and shrub species. The number by species of plants replaced, the methods used to assess these parameters, and photos will also be included in the monitoring report.
- Reports will be submitted to relevant agencies by December 31 of each year during the three year monitoring period.
- All plants, with the exception of the willow sprigs and *Carex* transplants, shall have a minimum of 70% survival at the end of the monitoring period. If the survival percentage is below 70%, the Agency will replant, provide additional watering, weeding, and eradication of invasive and exotic species to achieve the 70% survival requirement. Replacement plants will be monitored with the same survival and growth requirements specified for three years after planting.



**Cook Creek Headwaters Erosion Control and Sediment Management Project
Project Locator Map**

