

State of California  
North Coast Regional Water Quality Control Board

---

---

REGIONAL WATER BOARD STAFF

# WORK PLAN

TO CONTROL EXCESS SEDIMENT  
IN SEDIMENT-IMPAIRED WATERSHEDS

Fulfilling requirements of the  
Sediment TMDL Implementation Policy, Resolution No. R1-2004-0087

---

---

April 8, 2008



California Regional Water Quality Control Board  
North Coast Region  
5550 Skylane Boulevard, Suite A  
Santa Rosa, California 95403  
707-576-2220



# TABLE OF CONTENTS

---

<b>Chapter 1. Introduction.....</b>	<b>5</b>
<b>Chapter 2. Region-wide Sediment Control Tasks.....</b>	<b>8</b>
<b>Chapter 3. Watershed-Specific Sediment Control Tasks.....</b>	<b>36</b>
Albion River Watershed .....	37
Big River Watershed.....	43
Eel River Watershed .....	50
North Fork Eel River Watershed .....	51
Middle Fork Eel River Watershed .....	57
South Fork Eel River Watershed .....	64
Upper Mainstem Eel River Watershed .....	73
Middle Mainstem Eel River Watershed.....	81
Lower Mainstem Eel River Watershed.....	88
Van Duzen River Watershed .....	98
Elk River Watershed.....	105
Estero Americano Watershed .....	109
Freshwater Creek Watershed .....	116
Garcia River Watershed.....	120
Gualala River Watershed .....	123
Jacoby Creek Watershed.....	131
Klamath River Watershed (downstream of Weitchpec) .....	136
Mad River Watershed .....	141
Mattole River Watershed .....	149
Navarro River Watershed .....	156
Noyo River Watershed.....	162
Redwood Creek Watershed.....	170
Russian River Watershed.....	179
Scott River Watershed .....	193
Stemple Creek Watershed & Estero de San Antonio.....	202
Ten Mile River Watershed.....	209
Trinity River Watershed .....	215
Mainstem Trinity River Watershed .....	216
South Fork Trinity River Watershed.....	223

**Chapter 4. Priorities .....229**

**Chapter 5. Funding.....239**

**Chapter 6. Staff Actions .....240**

**Reference List.....242**

**Appendix A: Task Lists with Priority Rankings and Estimated Funding Needs ..... A-1**

### List of Acronyms & Short Hand Names

ACL.....	Administrative Civil Liability
Basin Plan .....	Water Quality Control Plan for the North Coast Region
BLM.....	United States Bureau of Land Management
BOS.....	County Board of Supervisors
Cal FIRE .....	California Department of Forestry and Fire Protection
Caltrans .....	California Department of Transportation
CAO .....	Cleanup and Abatement Order
CDFG.....	California Department of Fish and Game
DTSC .....	California Department of Toxic Substance Control
EIR.....	Environmental Impact Report
ERWIG .....	Eel River Watershed Improvement Group
FFF.....	Fish Friendly Farming
HCP/NCCP .....	Habitat Conservation Plan / Natural Community Conservation Plan
ITP.....	Incidental Take Permit
KRIS .....	Klamath Resources Information System
LWD .....	Large Woody Debris
MRC.....	Mattole Restoration Council
MRC.....	Mendocino Redwood Company
MS4.....	Municipal Separate Storm Sewer Systems
NF .....	National Forest
NOAA Fisheries.....	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NPS .....	Non-point Source
NRCS .....	Natural Resources Conservation Service
PALCO .....	Pacific Lumber Company
PTEIR .....	Program Timberland Environmental Impact Report
Regional Water Board.....	North Coast Regional Water Quality Control Board
RCD .....	Resource Conservation District
ROWD .....	Report of Waste Discharge
RRWC.....	Russian River Watershed Council
SPI.....	Sierra Pacific Industries
State Water Board.....	State Water Resources Control Board
TMDL .....	Total Maximum Daily Load
TRRP.....	Trinity River Restoration Program
UCCE.....	University of California Cooperative Extension
U.S. EPA.....	United States Environmental Protection Agency
USFS.....	United States Forest Service
USFWS .....	United States Fish and Wildlife Service
WDR .....	Waste Discharge Requirements
YES.....	Yager/Van Duzen Environmental Stewards

## CHAPTER 1 INTRODUCTION

---

### **The Problem**

Excess sediment is defined as soil, rock, and/or sediments (e.g., sand, silt, or clay) from human related activities that is discharged to waters of the state in an amount that could be deleterious to beneficial uses or cause a nuisance.

Some of the most sensitive beneficial uses to high sediment loads are associated with the migration, spawning, reproduction, and early development of cold water fish such as coho salmon, Chinook salmon, and steelhead trout. Besides harming aquatic life, excess sediment can limit the use of water for domestic consumption, agriculture, industry, wildlife, fishing, and recreation, and can cause or contribute to flooding. Excess sediment can also result in the exceedence of water quality objectives for suspended material, settleable material, sediment, and turbidity.

### **The Extent of the Problem**

Ten out of the Region's fourteen hydrologic units include water bodies that are impaired by excess sediment, or approximately 61% of the area of the Region. A sediment impaired water body is one that does not meet sediment-related water quality objectives or does not support beneficial uses because of too much sediment. Such water bodies are listed on the Clean Water Act Section 303(d) List of Impaired Water Bodies.

The following 27 water bodies are sediment impaired per the 2006 303(d) List. See Figure 1 for a map of these water bodies and their watersheds. Each of these water bodies is discussed in this Work Plan.

Albion River	Gualala River
Big River	Jacoby Creek
Eel River, North Fork	Klamath River (downstream of Weitchpec)
Eel River, Middle Fork	Mad River
Eel River, South Fork	Mattole River
Eel River, Upper Mainstem	Navarro River
Eel River, Middle Mainstem	Noyo River
Eel River, Lower Mainstem	Redwood Creek
Eel River, Van Duzen River	Russian River
Elk River	Scott River
Estero Americano	Stemple Creek & Estero de San Antonio
Freshwater Creek	Ten Mile River
Garcia River	Trinity River, Mainstem
	Trinity River, South Fork

## **The Work Plan**

This document describes the actions and tasks staff of the North Coast Regional Water Quality Control Board (Regional Water Board) are currently taking or intend to take over the next ten years, as resources allow, to control human-caused excess sediment in the sediment-impaired water bodies of the North Coast Region. A ten year time frame is used for planning purposed and in acknowledgment of the scope of the proposed work. This Work Plan is a staff-level planning document that will help prioritize work associated with excess sediment control.

In November 2004, the Regional Water Board directed the Executive Officer to develop a work plan as part of the *Total Maximum Daily Load Implementation Policy Statement for Sediment Impaired Receiving Waters in the North Coast Region* (Resolution R1-2004-0087), which is also known as the Sediment TMDL Implementation Policy. This Work Plan was developed by Regional Water Board staff to fulfill the Board's direction.

This Work Plan describes thirty-five regional tasks and many watershed-specific tasks staff of the Regional Water Board intend to execute to reduce and control excess sediment. This Work Plan includes priority rankings for each regional task and for each of the watersheds listed as impaired due to excess sediment. This Work Plan also identifies the year in which Regional Water Board staff expect to commence work should funding be available, and an estimate of staff resources needed for on each regional task and the tasks for each watershed. Under this schedule and with adequate funding, staff will be working on all the regional tasks and in all the sediment-impaired watersheds in ten years. This schedule is dependent upon securing additional staff resources as estimated in this Work Plan.

This Work Plan identifies the need for an estimated twenty additional permanent technical staff, plus more support (e.g., clerical) staff, to execute all of the tasks listed in this Work Plan and thereby reduce excess sediment and improve water quality.

## **Monitoring**

This Work Plan does not address monitoring, although Regional Water Board staff are acutely aware of the need to monitor instream and upslope conditions to be effective at controlling excess sediment. A sediment TMDL implementation monitoring strategy will be developed separately by Regional Water Board staff, as directed by the Regional Water Board in the Sediment TMDL Implementation Policy.

## **Temperature, Nutrients, and Other Impairments**

This Work Plan does not directly address non-sediment impairments, such as elevated water temperatures or nutrient loads. These issues will be addressed at a future time when resources are available. However, when Regional Water Board staff work with landowners and other stakeholders to address excess sediment concerns, staff anticipate that other water quality issues will also be raised. For example, when working on dairies, staff will likely also address nutrient and temperature issues, in addition to excess sediment control practices.

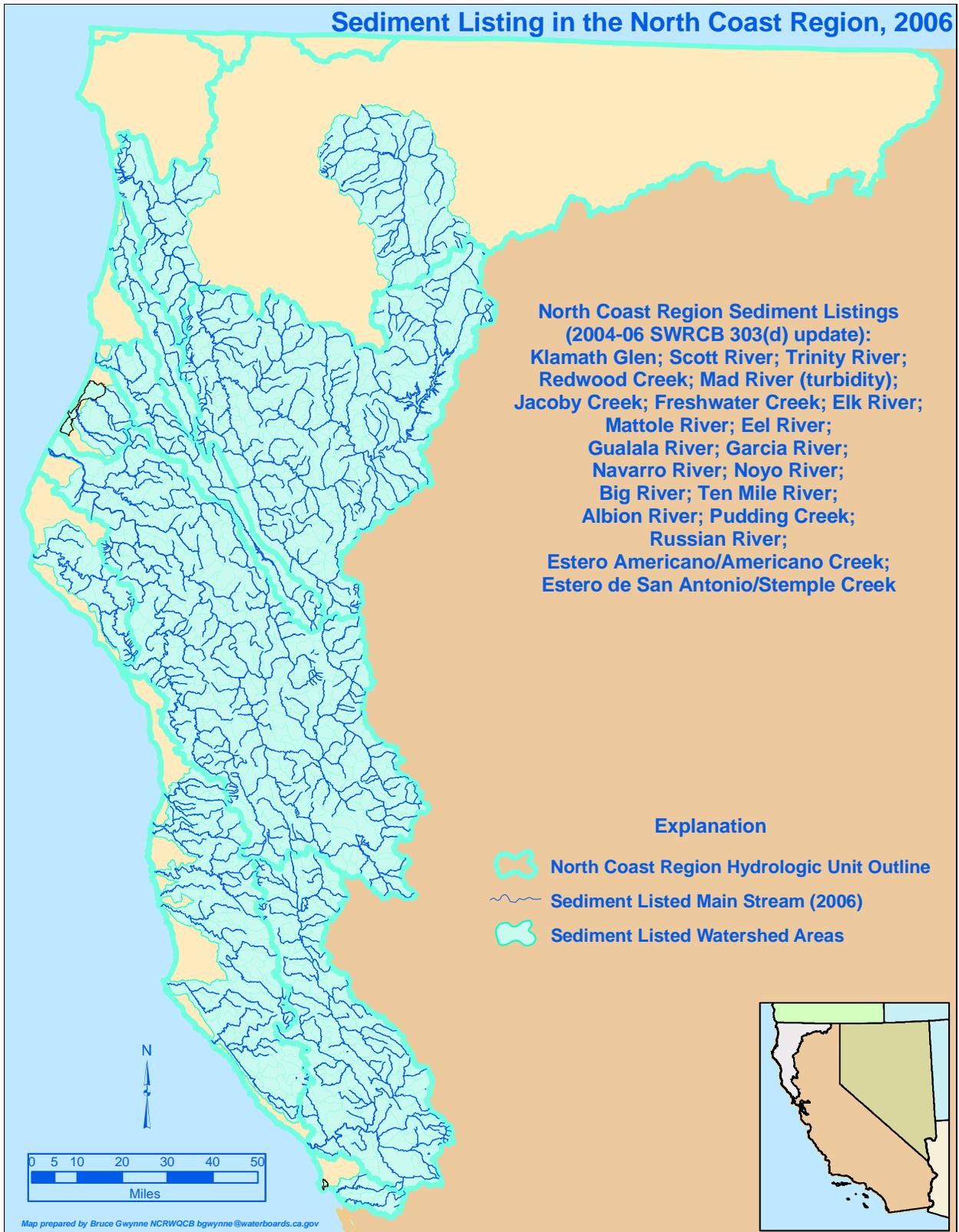


Figure 1. Sediment Impaired Watersheds in the North Coast Region.

**CHAPTER 2**  
**REGION-WIDE**  
**SEDIMENT CONTROL TASKS**

---

This chapter describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the North Coast Region. Regional Water Board staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks include estimates of the work that needs to be done, and are based on current information and staff's best professional judgement.

**Table 1**  
**Regional Tasks**

**Proposed Basin Plan Amendments**

- 1 Develop the Measures to Control Excess Sediment Amendment and bring it to the Board for their consideration.
- 2 Develop the Stream and Wetland Systems Protection Policy and bring it to the Board for their consideration.
- 3 Develop the Instream Flow Objective and bring it to the Board for their consideration.
- 4 Develop the Restoration Projects Exemption Criteria and bring it to the Board for their consideration.

**Outreach and Education on Sediment Control Program**

- 5 Conduct outreach and education.

**Progressive Enforcement**

- 6 Use progressive enforcement for violations of sediment control requirements.

**WDRs & Waivers for Specific Land Uses**

- 7 Develop general WDRs and a conditional waiver for vineyards.
- 8 Develop general WDRs and a conditional waiver for dairies.
- 9 Develop general WDRs and a conditional waiver for grazing activities.
- 10 Develop general WDRs and a 401 Certification for restoration projects.

**WDRs & Waivers for Specific Ownerships**

- 11 Develop individual, ownership-wide WDRs or conditional waivers.
- 12 Develop watershed-wide WDRs or conditional waivers.
- 13 Develop WDRs for counties for county roads.
- 14 Improve the Caltrans Storm Water Program (includes WDRs).
- 15 Continue to implement the general WDRs and conditional waiver for non-federal timber harvest activities.
- 16 Continue to implement the general WDRs and conditional waiver for federal timber harvest activities.
- 17 Develop WDRs or a conditional waiver for the USFS for non-timber harvest activities.
- 18 Develop WDRs or a conditional waiver for BLM for non-timber harvest activities.

**Table 1 (cont.)  
Regional Tasks**

**Other Regional Tasks that are Currently Underway**

- 19 Continue to implement, review, and potential revise the permits for the municipal, construction, and industrial storm water programs.
- 20 Continue to implement the 401 Certification Program.
- 21 Continue to fund excess sediment control projects through grants and loans.
- 22 Internal management & coordination.

**Other New Regional Tasks that Need to be Started**

- 23 Conduct road-based & aerial reconnaissance.
- 24 Develop a storm event and sediment response team.
- 25 Work with counties on ordinances.
- 26 Work with counties to update their General Plans.
- 27 Coordinate with county staff.
- 28 Coordinate with CDFG on 1600 Permits.
- 29 Coordinate with CDFG, NOAA Fisheries, and USFWS on HCPs and ITPs.
- 30 Work with State Water Board Staff on PG&E power line right-of-ways.
- 31 Develop and implement incentive program.
- 32 Employ a staff specialist on excess sediment control and employ GIS staff.
- 33 Develop tracking database.
- 34 Intra-Agency and Inter-Agency Staff Training.
- 35 Train public grant writers and project managers on sediment control standards.

**Regional Task 1**

**Develop the Measures to Control Excess Sediment Basin Plan Amendment and Bring it to the Regional Water Board for their Consideration**

**Background** Regional Water Board staff are currently developing a proposed Basin Plan amendment: “Measures to Control Excess Sediment.” This task was determined by the Regional Water Board to be a high priority during the 2007 Triennial Review process (it ranked second out of twenty-nine projects).

In its current form, the proposed amendment will include a prohibition against the discharge or threatened discharge of excess sediment from human caused activities to waters of the state. Excess sediment is defined as soil, rock, and sediments discharged to waters of the state in an amount that could be deleterious to beneficial uses or cause a nuisance. The proposed amendment also includes an implementation plan with guidance for landowners and for Regional Water Board staff. Under the implementation plan, new projects will be encouraged to prevent, minimize, monitor, and use adaptive management. Existing discharges should be inventoried, prioritized, controlled, monitored, and have adaptive management applied.

As with any Basin Plan amendment, the Measures to Control Excess Sediment Amendments does not take effect and cannot be implemented until it is adopted by the Regional Water Board, the State Water Board, and approved by the State Office of Administrative Law (OAL) and the U.S. EPA.

Task Complete the draft Measures to Control Excess Sediment Amendment and bring it to the Regional Water Board for their consideration. Should the Regional Water Board adopt the amendment, work towards getting approval from the State Water Board, OAL, and U.S. EPA.

## **Regional Task 2**

### **Develop the Stream and Wetland Systems Protection Policy and Bring it to the Regional Water Board for their Consideration**

Background Regional Water Board staff is currently developing a proposed Basin Plan amendment titled the Stream and Wetland Systems Protection Policy. This task was determined by the Regional Water Board to be a high priority during the 2007 Triennial Review process (it ranked third out of twenty-nine projects).

The proposed amendment will include new narrative water quality objectives for watershed hydrology that deals with infiltration capacity, stream channel equilibrium, floodplain connectivity; riparian vegetation, and wetland structure. The proposed amendment also includes an implementation plan that will describe criteria and actions to evaluate and ensure compliance with the new objectives. The implementation plan will likely include guidance and new performance criteria for permits, prohibitions on certain types of discharges, new WDRs and conditional waivers, and non-regulatory actions such as issuing grant funding.

As with any Basin Plan amendment, the Measures to Control Excess Sediment Amendment does not take effect and cannot be implemented until it is adopted by the Regional Water Board, the State Water Board, and approved by the State Office of Administrative Law (OAL) and the U.S. EPA. The amendment is expected to be considered by the Regional Water Board in 2008.

Task Complete the Stream and Wetland Systems Protection Policy and bring it to the Regional Water Board for their consideration. Should the Regional Water Board adopt the amendment, work toward getting approval from the State Water Board, OAL, and U.S. EPA.

### **Regional Task 3**

#### **Develop the Instream Flow Objective and Bring it to the Regional Water Board for their Consideration**

**Background** The task of developing an instream flow water quality objective was identified in the 2007 Triennial Review of the Basin Plan as a high priority for Regional Water Board staff to work on between 2007 and 2010. The task received a rank of ten out of twenty-nine basin planning-related projects. The instream flow objective will likely be a narrative objective that ensures natural hydrologic connectivity is maintained and protected in a manner that produces the seasonal patterns and ranges of flow necessary to support beneficial uses. Staff expect the instream flow objective will address issues beyond the scope of excess sediment control.

**Task** Develop the Instream Flow Water Quality Objective as an amendment to the Basin Plan and bring it to the Regional Water Board for their consideration. Should the Regional Water Board adopt the amendment, work toward getting approval from the State Water Board, OAL, and U.S. EPA.

### **Regional Task 4**

#### **Develop the Restoration Projects Exemption Criteria and Bring it to the Regional Water Board for their Consideration**

**Background** The task of developing exemption criteria for restoration projects was identified in the 2007 Triennial Review of the Basin Plan as a high priority for Regional Water Board staff to work on between 2007 and 2010. The task received a rank of 11 out of 29 basin planning-related projects. The restoration projects exemption criteria should encourage restoration projects that are intended to reduce or mitigate existing excess sediment sources, water pollution, or impaired beneficial uses by allowing for exemption to be granted from Basin Plan sediment prohibitions and water quality standards.

**Task** Develop the Restoration Projects Exemption Criteria as an amendment to the Basin Plan and bring it to the Regional Water Board for their consideration. Should the Regional Water Board adopt the amendment, work toward getting approval from the State Water Board, OAL, and U.S. EPA.

### **Regional Task 5**

#### **Conduct Outreach and Education**

**Background** In order to help landowners and other stakeholders better understand excess sediment control practices and new or revised regulations (such as the Measures to Control Excess Sediment Amendment and the Stream and Wetland Systems Protection Policy, should they be adopted), staff believe it is necessary to conduct

extensive outreach and coordination meetings, workshops, and engage in other informative and educational activities.

- Task 5a Determine the key stakeholders, such as landowners, watershed groups, trade groups, interested parties, agencies, and organizations for initial coordination efforts. Examples of key stakeholders include resource conservation districts (RCDs), the Natural Resources Conservation Service (NRCS), the Farm Bureau, the Cattlemen's Association, Western United Dairymen, the Salmonid Restoration Federation, the Sierra Club, California Department of Fish and Game (CDFG), California Department of Forestry and Fire Protection (Cal FIRE), University of California Cooperative Extension (UCCE), counties, cities, the United States Forest Service (USFS), California Coastal Commission, Caltrans, other agencies, engineering and contractor associations, landowner groups, and local watershed groups.
- Task 5b Meet with interested stakeholders to discuss excess sediment control and how stakeholders and their constituents can best come into compliance with water quality standards, and how to coordinate future outreach and educational efforts. Where possible, meet with landowners and stakeholders in the field and through tours to help ensure all players have similar context of watershed conditions and land uses.
- Task 5c Host public workshops on excess sediment control. Workshop content will include guidance on how to (1) be on a path toward compliance with the proposed Measures to Control Excess Sediment Basin Plan Amendment if adopted, (2) identify sources, (3) develop inventories, (4) prioritize and schedule repair efforts, (5) select sediment control practices and repair techniques, (6) monitor, and (7) how to adapt management strategies. A workshop may cover all these topics, or may focus on only one or two subjects. For example, there is currently a need to educate landowners on road assessment methods and when a licensed professional vs. a layman landowner can perform the assessment.
- The *Guidance for Excess Sediment Control* will likely be the main textbook for the workshops, although other publications will be appropriate. The workshops should include some field work if time allows and a good location is available, such as a nearby park or other accessible public land.
- Hold workshops in every county with sediment impaired water bodies. Workshops can be tailored for an individual watershed or to a group of landowners interested in one type of land use (e.g., vineyards, grazing, timber).
- Task 5d Complete the *Guidance for Excess Sediment Control*.
- Task 5e Coordinate workshop efforts with RCDs, UCCE, local watershed groups, municipalities, colleges and universities, and other organizations. These entities may be willing to support and promote Regional Water Board workshops and

help develop and present the material. Endorsement from these groups can lend credibility and reduce the fear that some members of the public may have to working with the Regional Water Board.

- Task 5f Give presentations at conferences and at the meetings of interested groups and agencies. Present success stories, an overview of the Regional Water Board's excess sediment control efforts, stream and wetland systems protection efforts, efforts specific to the watershed(s) of interest to the group, efforts specific to the land use(s) of interest to the group, and a short version of the information covered in the workshops. Solicit and discuss stakeholder concerns.
- Task 5g Conduct outreach with CDFG and other state and local agencies to encourage their participation in the Regional Water Board's excess sediment control efforts, and to ensure efforts provide protection of threatened and endangered species.
- Task 5h Develop and distribute newsletters, press releases, fact sheets, handouts, brochures, posters, and other communication items to help inform the public and announce successes and events. Work with professional graphic designers and printers to develop and distribute professional, high-quality documents.
- Task 5i Distribute copies of the *Handbook for Forest and Ranch Roads* (Weaver and Hagens 1994) to landowners and other agencies as needed. Work with Mendocino County RCD to consider web publication and a Spanish translation.
- Task 5j Develop and distribute videos of sediment control methods, example documents of a real-life inventory, priority list, schedule, etc.

## **Regional Task 6**

### **Use Progressive Enforcement for Violations of Sediment Control Requirements**

- Task Take progressive enforcement<sup>1</sup> action, as necessary, for violations of current excess sediment control requirements (such as the current Action Plan for Logging, Construction, and Association Activities) and future excess sediment control requirements (such as the Measures to Control Excess Sediment Amendment and the Stream and Wetland Systems Protection Policy, should they be adopted).

---

<sup>1</sup> Per the State Water Board's Water Quality Enforcement Policy dated February 19, 2002: "Progressive enforcement is an escalating series of actions that allows for the efficient and effective use of enforcement resources to: 1) assist cooperative discharges in achieving compliance; 2) compel compliance for repeat violations and recalcitrant violators; and 3) provide a disincentive for noncompliance. For some violations, an information response such as a phone call or staff enforcement letter is sufficient to inform the discharger that the violation has been noted by the [Regional Water Board] and to encourage a swift return to compliance. More formal enforcement is often an appropriate first response for more consequential violations. If any violation continues, the enforcement response should be quickly escalated to increasingly more formal and serious actions until compliance is achieved. Progressive enforcement is not appropriate in all circumstances. For example, where there is an emergency situation needing immediate response, immediate issuance of a cleanup and abatement order may be appropriate."

For each significant enforcement action, especially those that result in action by the Regional Water Board, develop and distribute press releases.

The benefit of this task is that immediate and appropriate action can be taken to control sediment without having to develop and adopt a permit (i.e., WDRs) or a conditional waiver.

## **Regional Task 7**

### **Develop General WDRs and a Conditional Waiver for Vineyards**

**Background** Vineyards are a source of excess sediment in the North Coast Region, both during and after construction. One ongoing program that addresses excess sediment from vineyards is Fish Friendly Farming (FFF). The FFF program is an incentive-based certification for vineyards and ranches that provides for self-determined compliance with water quality laws and the ESA. Under FFF, farmers develop a Farm Conservation Plan which includes a property wide inventory of sediment sources, a monitoring plan, and identifies beneficial management practices. Regional Water Board staff are currently and have been issuing letters recognizing the effort to protect and/or improve riparian conditions and fish habitat to farms that meet the intent of the FFF program. The Regional Water Board has also been involved with providing \$750,000 to the California Land Stewardship for the Fish Friendly Farming Program Agriculture Clean Water Implementation grant project, as of April 2007.

Another program that addresses excess sediment from vineyards is the Sonoma County Vineyard Erosion and Sedimentation Control Ordinance. The Ordinance applies to commercial planting and replanting activities on slopes from zero to 50% in Sonoma County. Requirements include stream/riparian area setbacks of 25' to 50', depending on slope and soil type; development and implementation of erosion control plans to protect disturbed areas, manage storm water runoff, and contain sediment movement; no winter time vegetation removal, ground disturbance (e.g., discing, grading), or planting; and fees.

**Task 7a** Develop region-wide general WDRs and a conditional waiver for vineyards for excess sediment and other water quality concerns (e.g., temperature). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

A conditional waiver will be available to those vineyards that meet certain sediment control and water quality protection requirements, which will be specified in the conditional waiver. Ensure conditional waiver eligibility for vineyards with a Farm Conservation Plan certified under Fish Friendly Farming. The general WDRs and conditional waiver should include an inventory of excess sediment sites, a priority list, a schedule for the repair of sites, a description of

practices to repair existing sites, a description of practices to prevent future discharges, a monitoring program, and adaptive management.

In developing the general WDRs and general conditional waiver for vineyards, work with the San Francisco Bay Regional Water Board and incorporate appropriate requirements from the Sonoma County vineyard ordinance to increase consistency.

In developing the general WDRs and general conditional waiver for vineyards, review and possibly incorporate requirements from the Sonoma County Vineyard Erosion and Sedimentation Control Ordinance in order to foster consistency in vineyard control requirements.

Task 7b Following their adoption, implement the region-wide general WDRs and conditional waiver for vineyards for excess sediment and other water quality concerns. Focus initial implementation efforts on education and outreach. Encourage enrollment in Fish Friendly Farming and the conditional waiver.

### **Regional Task 8**

#### **Develop General WDRs and a Conditional Waiver for Dairies**

Task 8a Develop region-wide general WDRs and a conditional waiver for dairies for excess sediment and other water quality concerns (e.g., nutrients). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

The conditional waiver should be designed to be available to dairies with a low-threat of discharge that meet certain sediment control and water quality protection requirements, which will be specified in the conditional waiver. Both WDRs and a conditional waiver should include an inventory of excess sediment sites and other pollutant sources, a priority list, a schedule for the repair of sites, a description of practices to repair existing sites, a description of practices to prevent future discharges, a monitoring program, and adaptive management.

Task 8b Following their adoption, implement the region-wide general WDRs and conditional waiver for dairies for excess sediment and other water quality concerns. Focus initial implementation efforts on education and outreach.

### **Regional Task 9**

#### **Develop General WDRs and a Conditional Waiver for Grazing Activities**

Task 9a In the near term, contact complainants and retrieve compliant reports received over the past three to four years. Solicit information from Regional Water Board field staff regarding any additional known sites in the Region. Emphasize

activities that are worse than typical and those that have resulted in measured or confirmed excess sediment discharges and water quality impacts. Inspect sites and grazing activities. Collect water quality samples when possible. For each confirmed excess sediment discharge and water quality impact, implement appropriate progressive enforcement actions.

Task 9b In the longer term, develop region-wide general WDRs and a conditional waiver for grazing activities for excess sediment and other water quality concern (e.g., temperature, nutrients). Bring the WDRs to the Regional Water Board for their consideration.

The conditional waiver should be developed to be available to those grazing activities that meet certain sediment control and water quality protection requirements, which will be specified in the conditional waiver. The general WDRs and conditional waiver should include an inventory of excess sediment sites, a priority list, a schedule for the repair of sites, a description of practices to repair existing sites, a description of practices to prevent future discharges, a monitoring program, and adaptive management.

Task 9c Should they be adopted, implement the region-wide general WDRs and conditional waiver for grazing activities for excess sediment and other water quality concerns. Focus initial implementation efforts on education and outreach.

### **Regional Task 10**

#### **Develop General WDRs and 401 Certification for Restoration Projects**

Background Many have complained about the often complicated, lengthy, and expensive process of obtaining permits for restoration work.

In 2003, in order to simplify the permit process, the Regional Water Board adopted a permit that included WDRs and a Water Quality Certification for watershed restoration projects in the Navarro River watershed, as part of the Navarro Coordinated Permit Program. Under the permit, landowners can do restoration work by just going through the Mendocino County RCD (the RCD and the NRCS are the permit holders). Restoration projects must meet certain size, timing, and sediment control requirements to qualify for the permit.

In August 2007, the State Water Board adopted a general 401 water quality certification order for small habitat restoration projects to make the permitting process easier. Restoration projects that are eligible for the general certification if they are (1) also eligible for a categorical exemption of CEQA, (2) do not exceed five acres or 500 linear feet of stream bank or coastline, (3) the project's primary purpose is habitat restoration, (4) the project period will not exceed five years, and (5) the project is not a compensatory mitigation project.

Task 10a      Develop region-wide general WDRs or a general conditional waiver of WDRs, and a general 401 Certification for restoration projects that reduce excess sediment and provide a benefit to water quality. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

Such a general permit and certification at the regional level should cover valuable sediment control restoration work that is not covered by the State Water Board's general 401 certification. Review the scope of the Navarro Coordinated Permit Program to determine if it is worthwhile to extend the program to the entire North Coast Region. Work with the RCDs and the NRCS.

Task 10b      Following their adoption, implement the region-wide general WDRs/conditional waiver and 401 Certification for restoration projects that reduce excess sediment and provide a benefit to water quality.

### **Regional Task 11**

#### **Develop Individual, Ownership-Wide WDRs or Conditional Waivers**

Background    With the exception of persons discharging into community sewer systems, any person discharging or proposing to discharge waste that could affect water quality must file a report of waste discharge (ROWD), unless the Regional Water Board waives the filing. The Regional Water Board must then determine the appropriate action to take: either issuing waste discharge requirements (WDRs) to the discharger or conditionally waiving the requirements. Authority is provided by Section 13260 of the California Water Code.

Additionally, Regional Water Board staff may require a landowner to submit a ROWD for activities that may result in a violation of the Measures to Control Excess Sediment Basin Plan Amendment, once the amendment is adopted and in effect.

Task            Where there is an excess sediment discharge that could affect water quality or result in a violation of the Measures to Control Excess Sediment Basin Plan Amendment (once it is adopted and in effect) as identified by the Regional Water Board and/or staff, require the landowner to submit a ROWD. Then determine the need for WDRs or a conditional waiver, develop the WDRs/conditional waiver if needed, and get Regional Water Board approval.

The following should be included in ROWDs and in WDRs and conditional waivers: (1) an inventory of excess sediment sites, (2) a priority list of sites, (3) a schedule for the repair of sites, (4) a description of the sediment control measures that will be taken to repair sites, (5) a description of the sediment control measures and management practices that will be taken to prevent future excess sediment discharges, (6) a monitoring plan, and (7) an adaptive management strategy.

It is likely that this task will be used primarily for large landowners (e.g., industrial timberland owners) and may be ownership-wide or just include property within a specific watershed. It is expected that this task will be used less frequently for small landowners (e.g., rural residences, small ranches), and only when significant discharges are identified by reconnaissance or complaints.

The need for several individual, ownership-wide WDRs and waivers has already been identified. These tasks are described in the appropriate watershed(s) or as separate regional tasks. This Work Plan includes tasks to develop the following individual, ownership-wide WDRs or waivers for:

- All counties in the Region for county roads – WDRs (see Regional Task 13)
- Big River Unit of the Mendocino Headlands State Park - waiver (see Big River Task 7)
- Campbell Timberland Management and Hawthorne Timber Company – WDRs (e.g., South Fork Eel River Task 11)
- Green Diamond – WDRs (e.g., South Fork Eel River Task 9)
- Gualala Redwoods Inc. – WDRs (see Gualala River Task 9)
- Mendocino Redwood Company – WDRs (e.g., Albion River Task 7)
- Preservation Ranch – WDRs (see Gualala River Task 11)
- United States Bureau of Land Management – WDRs or waiver (see Regional Task 18)
- United States Forest Service – WDRs or waiver (see Regional Task 17)

The benefit of this task is that it provides regulatory certainty to landowners, it simplifies the permit process, and it ensures that the highest threats to water quality within a given ownership are addressed.

## **Regional Task 12**

### **Develop Watershed-Wide WDRs or Conditional Waivers**

**Background** With the exception of persons discharging into community sewer systems, any person discharging or proposing to discharge waste that could affect water quality must file a report of waste discharge (ROWD), unless the Regional Water Board waives the filing. The Regional Water Board must then determine the appropriate action to take: either issuing waste discharge requirements (WDRs) to the discharger or conditionally waiving the requirements. Authority is provided by Section 13260 of the California Water Code.

Additionally, Regional Water Board staff may require a landowner to submit a ROWD for activities that may result in a violation of the Measures to Control Excess Sediment Basin Plan Amendment, once the amendment is adopted and in effect.

In some watersheds, it may be more effective and appropriate to develop WDRs and/or waivers that apply to all sediment-discharging activities in the watershed.

Task Require the landowner to submit a ROWD where there is excess sediment throughout a watershed that could affect water quality or result in a violation of the Measures to Control Excess Sediment Basin Plan Amendment (once it is adopted and in effect), as identified by the Regional Water Board and/or staff.. Then determine the need for WDRs or a conditional waiver, develop the WDRs/conditional waiver if needed, and obtain Regional Water Board approval.

The following should be included in ROWDs and in WDRs and conditional waivers: (1) an inventory of excess sediment sites, (2) a priority list of sites, (3) a schedule for repair of sites, (4) a description of the sediment control measures that will be taken to repair sites, (5) a description of the sediment control measures and management practices that will be taken to prevent future excess sediment discharges, (6) a monitoring plan, and (7) an adaptive management strategy.

The need for a few watershed-wide WDRs has already been identified in the Elk River and Freshwater Creek watersheds. These tasks are described in the appropriate watershed(s).

### **Regional Task 13**

#### **Develop WDRs for Counties for County Roads**

Task Develop WDRs for the control of excess sediment and other water quality concerns from county roads for Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity counties. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

The WDRs should include the following:

- **Inventory:** An inventory of all existing excess sediment sites caused by county roads. One possible inventory methodology is DIRT, the Direct Inventory of Roads and Treatments developed by the Five Counties Salmonid Conservation Program.
- **Priority List:** A priority list of existing excess sediment sites.
- **Schedule:** A schedule for the repair and control of existing excess sediment sites.
- **Practices to Fix Existing Sites:** A document describing the sediment control practices to be implemented by the county to repair and control excess sediment sites.
- **Practices to Prevent New Sites:** A description of the sediment control practices, maintenance practices, and other management measures to be implemented by the county to prevent and minimize future excess sediment sites to the maximum extent possible.

- **Monitoring:** A monitoring plan to ensure that the sediment control practices are implemented as proposed and are effective at controlling excess sediment.
- **Adaptive Management:** A commitment by the county to conduct adaptive management.

A portion of the required elements of WDRs for Mendocino, Humboldt, Del Norte, Trinity, and Siskiyou counties may already be satisfied by the Five Counties (5C) Salmon Conservation Process, the associated *County Road Maintenance Manual for Northwestern California Watersheds: A Water Quality and Stream Habitat Protection Guide* (Sommarstrom et al. 2001), and other existing 5C efforts. In Sonoma and Marin counties, some of the required elements may already be satisfied by Fishnet 4C, the Fishery Network of the Central California Coastal Counties.

A MOU specific to Siskiyou County roads in the Scott River watershed is due to be drafted and ready for consideration by Siskiyou County by September 8, 2008, per the Scott River TMDL Action Plan. See Scott River Task 4 for more information.

Priority            Highest for Siskiyou County.  
                         High for Humboldt, Marin, Mendocino, Sonoma, and Trinity counties.  
                         Low for Del Norte, Glen, Lake, and Modoc counties.

## **Regional Task 14**

### **Improve the Caltrans Storm Water Program**

**Background**    The California Department of Transportation (Caltrans) has jurisdiction over state highways which can be sources of excess sediment due to improper location, surfacing, drainage, or stream crossing design. Discharges of waste from Caltrans' facilities are regulated by the State Water Board under a NPDES Permit, Statewide Storm Water Permit, and WDRs (Order No. 99-06-DWQ and NPDES No. CAS000003), which was adopted on July 15, 1999. The permit and the program to implement the permit are generally known as the Caltrans Storm Water Program.

The overall goal of the Storm Water Program is to integrate appropriate storm water control activities into ongoing activities, thus making control of storm water pollution a part of Caltrans' normal business practices. As described by Caltrans (2005), components of the Storm Water Program include:

- **Storm Water Management Plan (SWMP).** Caltrans developed the SWMP to describe the procedures and practices used to reduce the discharge of pollutants to storm drainage systems and receiving waters.

- Annual Report and Regional Work Plans. The Annual Report describes the activities that Caltrans has undertaken in the previous fiscal year to implement the SWMP. The Regional Work Plans describe the activities that Caltrans Districts will undertake in the next fiscal year to implement the SWMP.
- Monitoring and Best Management Practice (BMP) Development. The purpose is to identify pollutants of concern in storm water runoff from Caltrans facilities and to describe how Caltrans identifies, evaluates, and approves BMPs.
- Public Education.
- Guidance for Design, Construction and Maintenance Activities. Guidance documents have been developed to implement storm water BMPs in the design, construction and maintenance of highway facilities.

Task Review the Caltrans Storm Water Program, especially the state wide permit, for adequacy and effectiveness in preventing, minimizing, and controlling excess sediment throughout the North Coast Region and especially in sediment impaired watersheds. Review for compliance with the Measures to Control Excess Sediment Basin Plan Amendment.

As of May 2007, Regional Water Board staff are working with State Water Board staff to re-issue the permit.

In the Scott River watershed, this task is scheduled to be accomplished from June 2007 through August 2009.

Task Include excess sediment prevention, minimization, and control measures in the next Caltrans Statewide Storm Water Permit that is currently being developed. Measures should include (1) the inventory, prioritization, scheduling, control/fix/repair, monitoring, and adaptive management of existing excess sediment; (2) the identification and implementation of sediment control practices that will prevent and minimize future excess sediment to the maximum extent possible; (3) monitoring; and (4) adaptive management.

It is expected that the current update to the Caltrans Statewide Storm Water Permit will be completed before the Measures to Control Excess Sediment Basin Plan Amendment is adopted and in effect. Ensure the permit is revised again to include language describing how Caltrans will ensure compliance with the Measures to Control Excess Sediment Prohibition as soon as possible after the amendment's adoption.

Task If the new Caltrans Statewide Storm Water Permit does not include adequate and effective excess sediment control measures, determine what additional measures

are necessary. Present these additional measures to the Regional Water Board as a *regional* storm water permit (similar to the one for Tahoe Basin).

### **Regional Task 15**

#### **Continue to Implement the General WDRs and Conditional Waiver for Non-Federal Timber Harvest Activities**

**Background** In June 2004, the Regional Water Board adopted general WDRs (Order No. R1-2004-0030) and a conditional waiver (Order No. R1-2004-0016) for discharges related to timber harvest activities on non-federal lands.

**Task** Continue to implement the general WDRs and conditional waiver for timber harvest activities on non-federal lands to prevent, minimize, and control excess sediment.

**Task** Continue to work with and participate in Cal FIRE's timber harvest project approval process to ensure excess sediment from commercial timber harvest activities is prevented, minimized, and controlled. Continue to use Senate Bill 810 authority when appropriate. Continue to comment on rule making by the Board of Forestry.

### **Regional Task 16**

#### **Continue to Implement the Conditional Waiver for Federal Timber Harvest Activities**

**Background** Since 2004, timber harvest activities on federal lands have been eligible for a conditional waiver if several conditions are met. Some of these conditions are (1) conducting an environmental review of the proposed project pursuant to NEPA, (2) the maintenance of a water quality program consistent with the Basin Plan, and (3) a verification system acceptable to the Regional Water Board that includes inspection, surveillance, enforcement, and monitoring of management practices. The conditional waiver expires in 2009.

**Task** Continue to implement the current conditional waiver for timber harvest activities on federal land.

### **Regional Task 17**

#### **Develop WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

**Background** Six national forests are located in the North Coast Region and are managed by the United States Forest Service (USFS). Of these, four national forests have sediment impaired rivers within their boundaries: the Klamath National Forest, Mendocino National Forest, Shasta-Trinity National Forest, and Six Rivers National Forest. The Modoc National Forest and Shasta-Rogue River National

Forest are the exceptions. All four national forests fall within the Northern Province of the Pacific Southwest Region (Region 5) of the USFS.

Task Develop WDRs or a conditional waiver of WDRs for the USFS for the control of excess sediment from non-timber harvesting activities, such as general access roads, recreation, grazing, and other land use activities. In other words, the WDRs or conditional waiver would be applicable to all USFS land and activities not covered under the current conditional waiver for timber harvest activities (described in Regional Task 17). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

The WDRs or conditional waiver may be applicable to the entire Northern Providence of the Pacific Southwest Region, to one individual National Forest, or to the USFS land within just one watershed. Another possibility, although not preferred by Regional Water Board staff at the time of this writing, is to develop state-wide WDRs or conditional waivers. Any of the above options will bring the USFS into compliance with the NPS Policy for their non-timber harvest activities that discharge excess sediment.

Consider using a conditional waiver when the USFS proactively develops and implements an excess sediment control plan with the elements described. If excess sediment sites are not proactively addressed, require a ROWD and develop WDRs. Both WDRs and a conditional waiver should include the following:

Contents Related to Excess Sediment:

- *Inventory:* An inventory of all existing excess sediment sites and all roads on USFS land.
- *Priority List:* A priority list of existing excess sediment sites.
- *Schedule:* A schedule for the repair and control of existing excess sediment sites.
- *Practices to Fix Existing Sites:* A description of the sediment control practices to be implemented by the USFS to repair and control existing excess sediment sites.
- *Practices to Prevent New Sites:* A description of sediment control practices, road maintenance practices, and other management measures to be implemented by the USFS to prevent and minimize future excess sediment discharges to the maximum extent possible.
- *Monitoring:* A monitoring plan to ensure that sediment control practices are implemented as proposed and are effective at controlling excess sediment.
- *Adaptive Management:* A commitment by the USFS to conduct adaptive management.

Contents Related to Grazing Activities:

- *Description of Grazing Management Practices:* A description of grazing management practices and riparian monitoring activities that the USFS will

implement in grazing allotments that are adequate and effective at preventing, reducing, and controlling excess sediment.

- *Monitoring:* A monitoring plan, including riparian monitoring, to ensure that grazing management practices are implemented as proposed and are effective at controlling excess sediment.
- *Adaptive Management:* A commitment by the USFS to conduct adaptive management.

## **Regional Task 18**

### **Develop WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

- Background** The United States Bureau of Land Management (BLM) manages the following land in the North Coast Region's boundaries:
- Cow Mountain; partly within the Russian River watershed; 52,000 acres total.
  - Elkhorn Ridge Potential Wilderness Area; South Fork Eel River watershed; 11,271 acres; will become a wilderness area in 2011.
  - Federal land around Lower Klamath Lake, Tule Lake, and Clear Lake in the Lost River watershed.
  - Federal land in the Scott River watershed; approximately 200 acres.
  - Headwaters Forest; Elk River, Salmon Creek, and Humboldt Bay watersheds; 7,400 acres.
  - King Range National Conservation Area; Mattole River watershed and other coastal tributaries; 60,000 acres.
  - Samoa Dunes Recreation Area; Humboldt Bay watershed; 300 acres.
  - Stornetta Public Lands; Garcia River watershed; 1,132 acres.
  - South Fork Eel River Wilderness: South Fork Eel River watershed; 12,915 acres.
  - South Spit Cooperative Management Area; Humboldt Bay watershed; a 4.5 mile stretch of beach.
  - Trinity River; 43 miles of river from Lewiston to Pigeon Point.

**Task** Develop WDRs or a conditional waiver of WDRs for BLM for the control of excess sediment from non-timber harvest activities, such as general access roads, recreation, grazing, and other land use activities. In other words, the WDRs or conditional waiver would be applicable to all BLM land and activities not covered under the current conditional waiver for timber harvest activities (described in Regional Task 18). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

The WDRs or conditional waiver may be applicable to all BLM lands in the North Coast Region, to the land within a given watershed, or to the land managed by a given field office.

Use a conditional waiver when BLM proactively develops and implements a excess sediment control plan with the following elements. If excess sediment

discharges are not proactively addressed, require a ROWD and develop WDRs. Both WDRs and a conditional waiver should include the following:

Contents Related to Excess Sediment:

- *Inventory*: An inventory of all existing excess sediment sites and all roads on BLM land.
- *Priority List*: A priority list of existing excess sediment sites.
- *Schedule*: A schedule for the repair and control of existing excess sediment sites.
- *Practices to Fix Existing Sites*: A description of the sediment control practices to be implemented by the BLM to repair and control existing excess sediment sites.
- *Practices to Prevent New Sites*: A description of sediment control practices, road maintenance practices, and other management measures to be implemented by the BLM to prevent and minimize future excess sediment discharges to the maximum extent possible.
- *Monitoring*: A monitoring plan to ensure that sediment control practices are implemented as proposed and are effective at controlling excess sediment.
- *Adaptive Management*: A commitment by the BLM to conduct adaptive management.

Contents Related to Grazing Activities:

- *Description of Grazing Management Practices*: A description of grazing management practices and riparian monitoring activities that BLM will implement in grazing allotments that are adequate and effective at preventing, reducing, and controlling excess sediment.
- *Monitoring*: A monitoring plan, including riparian monitoring, to ensure that grazing management practices are implemented as proposed and are effective at controlling excess sediment.
- *Adaptive Management*: A commitment by BLM to conduct adaptive management.

## **Regional Task 19**

### **Continue to Implement, Review, and Potentially Revise the Permits for the Municipal, Construction, and Industrial Storm Water Program**

#### Background *Municipal Storm Water*

The municipal storm water program regulates storm water discharges from municipal separate storm sewer systems (MS4). Municipal storm water permits require the development and implementation of a Storm Water Management Plan/Program, which include best management practices that should reduce discharges to the maximum extent practicable.

Municipal storm water management plans have been developed for the following areas within the North Coast Region:

- Arcata
- Cotati
- Eureka
- Fort Bragg
- Graton
- Healdsburg
- McKinleyville
- Mendocino County: unincorporated areas around Fort Bragg and Ukiah
- Rohnert Park
- Santa Rosa
- Sebastopol
- Ukiah
- Windsor

In many cities and counties, storm water control measures are inadequate. In many instances there is a lack of road maintenance plans and comprehensive storm water training for employees, and there are many culvert fish passage barriers.

Background *Construction Storm Water*

The construction storm water program regulates storm water discharges from construction projects that disturb one or more acres. These discharges are permitted under a state-wide general NPDES permit. The construction storm water permit requires dischargers to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that includes a site map, best management practices, visual monitoring program, chemical monitoring program, and a sediment monitoring plan.

Background *Industrial Storm Water*

The industrial storm water program regulates storm water discharges from ten categories of industrial facilities. These facilities are:

1. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards.
2. Manufacturing Facilities
3. Oil & Gas/Mining Facilities
4. Hazardous Waste Treatment, Storage, or Disposal Facilities
5. Landfills, Land Application Sites, and Open Dumps
6. Recycling Facilities
7. Steam Electric Power Generating Facilities
8. Transportation Facilities
9. Sewage or Wastewater Treatment Works
10. Manufacturing facilities where industrial materials, equipment, or activities are exposed to storm water.

Industrial storm water discharges are permitted under a state-wide general NPDES permit. The permit requires implementation of management measures that will achieve the performance standard of best available technology

economically achievable (BAT) and best conventional pollutant control technology (BCT). The general industrial permit also requires the development of a Storm Water Pollution Prevention Plan (SWPPP), a monitoring plan, and annual reporting.

- Task 19a Continue to implement the municipal storm water program, the construction storm water program, and the industrial storm water program to control excess sediment using existing resources.
- Task 19b Fully implement the municipal storm water program, the construction storm water program, and the industrial storm water program to control excess sediment. Ensure excess sediment sites are adequately and effectively controlled.
- Task 19c Review the state wide MS4 permit, construction storm water permit, and industrial storm water permit for adequacy and effectiveness in preventing, minimizing, and controlling excess sediment throughout the North Coast Region and especially in sediment-impaired watersheds. Review the state wide permits for compliance with the Measures to Control Excess Sediment Prohibition.
- Task 19d As part of their renewal, include excess sediment prevention, minimization, and control measures in the next state wide MS4 permit, construction storm water permit, and industrial storm water permit. Measures should include (1) the inventory, prioritization, scheduling, control/fix/repair, monitoring, and adaptive management of existing excess sediment; (2) the identification and implementation of sediment control practices that will prevent and minimize future excess sediment to the maximum extent possible; (3) monitoring; and (4) adaptive management.
- Task 19e Identify and designate additional facilities and municipalities that should be regulated by storm water permits. These facilities and municipalities currently fall below the minimum size limits that require compliance with general storm water permits. However, the storm water being discharged by certain facilities and municipalities are significant enough to require regulation under a permit. Develop these permits as needed.
- Task 19f If a new statewide permit does not include adequate and effective excess sediment control measures, determine what additional measures are necessary. Present these additional measures to the Regional Water Board as a *regional* storm water permit.

**Regional Task 20**  
**Continue to Implement the 401 Certification Program**

Background 401 Certifications - formally known as Clean Water Act Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects)

- regulate dredge and fill activities in surface waters, including wetlands. Many of these dredge and fill activities also require a federal 404 permit from the U.S. Army Corps of Engineers.

Task Continue to implement the 401 Certification Program to control excess sediment from dredge and fill activities.

Task Address issues relating to the Regional Water Board's authority to regulate "waters of the state" under the California Water Code.

Task Implement the General 401 Certification for Small Habitat Restoration Projects just adopted by the State Water Board in March 2007.

### **Regional Task 21**

#### **Continue to Fund Excess Sediment Control Projects through Grants and Loans**

Background The Regional Water Board is involved in awarding, distributing, and managing grants and loans for nonpoint source pollution control and watershed protection.

Recent funding programs include:

- Integrated Regional Water Management Program from Proposition 50.
- Nonpoint Source Pollution Control Program from Propositions 13 and 40.
- Integrated Watershed Management Program from Proposition 40.
- Coastal Nonpoint Source Pollution Control Program from Propositions 13 and 50.
- Clean Beaches Initiative Program.
- 319 Nonpoint Source Implementation Program from the federal Clean Water Act.
- Urban Storm Water Grant Program.
- State Revolving Fund Loans.

Task Continue to fund excess sediment control projects through available nonpoint source and watershed protection grants and loans.

Task Give a higher priority to projects that implement the tasks described in this Work Plan. If necessary, work to change the prioritization criteria for the above listed funding programs.

Task Coordinate grant and loan proposal review with Regional Water Board staff familiar with sediment control issues that usually do not work with the grant and loan programs.

## **Regional Task 22**

### **Internal Management, Coordination, and Training**

- Task            Coordinate excess sediment control efforts with State Water Board program managers, US. EPA program managers, and other Regional Water Boards.
- Task            Participate in State Water Board sponsored round table meetings and conferences for the NPS program, TMDL program, and basin planning program.
- Task            Participate in sediment-related state-wide and regional policy development.
- Task            Prepare reports and work plans for the State Water Board and the U.S. EPA.
- Task            Attend trainings.

## **Regional Task 23**

### **Conduct Road-based & Aerial Reconnaissance**

- Task            Use a combination of road-based and aerial reconnaissance to identify the most egregious excess sediment sources and most turbid streams and rivers. Secure a flight contract with pilots out of the Sonoma County, Redding, and Eureka airports. Contact the California Department of Forestry and Fire Protection and the U.S. Coast Guard to inquire about using their equipment for aerial reconnaissance.

Fly over sediment impaired watersheds on clear days following storms. Drive roads during and following storms. Drive roads after aerial reconnaissance has identified a general area of concern to narrow down the location of the excess sediment sites causing the turbid conditions.

As of March 2007, Tom Dunbar of the Enforcement Unit is working to establish aerial surveillance contracts paid for by the Cleanup and Abatement Account.

## **Regional Task 24**

### **Develop a Storm Event and Sediment Response Team**

- Task            Develop a storm event and sediment response team composed of Regional Water Board staff trained to identify, investigate, and take appropriate correction actions for discharges of excess sediment. The team should be deployed before, during, and after large storm events, in response to complaints, and as needed to identify, investigate, and take appropriate actions for excess sediment discharges

Develop the process for reacting to storm events, excess sediment discharges, complaints, staff observations, etc. Train staff. Develop field forms. Compile

necessary equipment. Compile background information and data on why sediment is a water quality concern so it does not have to be rewritten with each discharge response. Coordinate with other agencies. Consider adding staff members from other agencies to the team as appropriate.

## **Regional Task 25**

### **Work with Counties on Ordinances**

**Background** The grading activities that primarily cause excess sediment discharges are road construction and maintenance (especially for rural roads, residential drive ways, and road-association roads), construction of building pads, and recreational bulldozing. County grading ordinances and grading permits can help prevent and control excess sediment discharges from these activities. Other types of county ordinances, such as a riparian ordinance, might also be appropriate and helpful in controlling excess sediment.

Del Norte, Humboldt, and Sonoma counties have existing grading regulations. Trinity County is currently in the process of developing a grading ordinance. The extent and adequacy of these regulations are unknown. Mendocino County BOS voted in April 2007 to stop all work on their draft grading ordinance, and are currently following the Uniform Building Code for grading purposes. Additionally, Mendocino County has been drafting road grading regulations since April 2007, with the public hearing process scheduled to start in early 2008. Siskiyou County does not have a grading ordinance and the Board of Supervisors (BOS) are on record as not interested in developing one. Siskiyou County does, however, have a Land Development Manual that applies to subdivisions.

**Task 25a** Research and determine the content of an adequate and effective grading ordinance that will prevent and control excess sediment from grading activities.

**Task 25b** Work with the counties to research and determine the adequacy of existing and draft grading regulations in Del Norte, Humboldt, and Sonoma counties.

**Task 25c** If it is determined that existing grading regulations in Del Norte, Humboldt, and Sonoma counties are not adequate and effective, encourage the development, adoption, and implementation of revised and improved grading ordinances.

**Task 25d** Work with Siskiyou County to determine the extent of activities that are not regulated by the County's Land Development Manual and the Regional Water Board's construction stormwater program. Continue to encourage Siskiyou County to develop and implement a comprehensive ground disturbance or grading ordinance that addresses roads, land disturbance activities, and grading activities that are not currently regulated or adequately regulated to prevent and control excess sediment. This task is applicable throughout the County, but is necessary in the Scott River watershed. The Scott River TMDL Action Plan states that the

Regional Water Board encourages the development of a grading ordinance in the Scott River watershed by September 8, 2008.

- Task 25e Work with Trinity County to ensure that their draft ordinance is adequate and effective. Encourage the Board of Supervisors to adopt and implement a grading ordinance.
- Task 25f Work with Mendocino County to research and determine the adequacy of Mendocino County's current grading regulations under the Uniform Building Code, the draft grading ordinance as of April 2007, and the draft road grading regulations currently under development. Propose changes based on Regional Water Board staff's research of an adequate and effective grading ordinance. Work with County staff and the BOS to revise their draft ordinance/regulations if necessary. Encourage Mendocino County to develop and approve measures to better control excess sediment from grading activities.
- Task 25g Should any county fail to develop and adopt a grading ordinance or other mechanism, use existing regulatory tools on an individual, responsible party basis to ensure ground disturbance and grading activities do not discharge excess sediment. This may include requiring ROWDs and developing WDRs or conditional waivers for individuals (as described in Regional Task 11).

## **Regional Task 26**

### **Work with Counties to Update their General Plans**

Background Each county is required to adopt a general plan which prescribes the policies and guidelines used by the county in making land use decisions. General plans are long term, local planning documents that are often updated just once every twenty years. Sonoma, Mendocino, and Humboldt counties are currently working on updates.

Del Norte County: Last updated in 2003.

Humboldt County: Last updated in 1984.  
Currently developing the environmental resource management chapters. Draft scheduled for completion in February 2008. BOS consideration scheduled for Fall 2008.

Mendocino County: Last updated in 1981.  
Just began to update process. Draft scheduled for release in January 2008. BOS consideration scheduled for end of 2008.

Siskiyou County: Land Use Element last updated in 1980.

Sonoma County: Last updated in 1989.  
Currently developing an update. BOS consideration scheduled for April 2008.

Trinity County: Land Use Element last updated in 1988.  
Discussion by BOS in 2006 to update.

Task Research and determine the content of an adequate and effective general plan that will prevent and control excess sediment and be consistent with the Basin Plan.

Task Review and comment on draft and final general plan updates.

Task Participate in technical or advisory committees for the development of general plan updates.

### **Regional Task 27**

#### **Coordinate with County Staff**

Task Meet regularly with staff of County Planning, Transportation, Public Works, and/or Community Development Departments to discuss and coordinate municipal and construction storm water control efforts, general plan updates, county roads activities, and other excess sediment control activities. Meetings should happen annually to semi-annually.

Task Assign staff liaisons to the cities and counties in the North Coast Region to aid them in controlling excess sediment. Possible assignments include assisting with the development and/or implementation of grading ordinances, outreach and education activities, general plan updates, and other projects. Consider locating liaisons at county or city offices.

### **Regional Task 28**

#### **Coordinate with the California Department of Fish and Game on 1600 Permits**

Background The California Department of Fish and Game (CDFG) permits activities that could substantially modify a river, stream, or lake and adversely affect an existing fish and wildlife resource. These permits are known as Lake or Streambed Alteration Agreements or 1600 Permits.

Task Work with CDFG to ensure that CDFG improves notification to the Regional Water Board of projects with 1600 permit applications that may involve dredge or fill activities, may discharge excess sediment, or may otherwise impact water quality.

Task Work with CDFG to ensure that CDFG improves notification to 1600 permit applicants, informing them of requirements to obtain 401 Certifications from the Regional Water Board and 404 Permits for the U.S. Army Corps of Engineers.

Following adoption of the Measures to Control Excess Sediment Basin Plan Amendment (see Regional Task 1), work with CDFG to ensure that CDFG also notifies applicants of Regional Water Board requirements to prevent, minimize, and control excess sediment.

Task Consider developing a Memorandum of Understanding (MOU) with CDFG to formalize the notification process.

Task Work with CDFG to coordinate 1600 permits and 401 certifications so that the permits have similar sediment control requirements.

### **Regional Task 29**

#### **Coordinate with the California Department of Fish and Game, NOAA Fisheries, and USFWS on Habitat Conservation Plans and Incidental Take Permits**

Background Habitat conservation plans (HCPs) are long-term agreements between an applicant and the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NOAA Fisheries). They are designed to offset any harmful effects that a proposed activity might have on federally-listed threatened and endangered species.

At the state level, an incidental take permit (ITP) granted by the California Department of Fish and Game (CDFG) is the permitting process equivalent to the federal HCP. ITPs are required when non-federal activities result in the take of federally listed threatened or endangered species.

Coordinating on the development of HCPs and ITPs provides the Regional Water Board the opportunity to include sediment control requirements that will benefit water quality and listed salmonids, while minimizing the need for additional regulations on the landowner. By coordinating on these plans, landowners are able to address all their resource-type requirements at one time.

It is important to note that the Regional Water Board has no authority to approve or disapprove HCPs or ITPs. Also, HCPs and ITPs are designed to focus on endangered and threatened species, and there may be other water quality impacts that are not addressed by the plans. Therefore, it may be appropriate for the Regional Water Board to consider adopting waste discharge requirements or waivers concurrently to or soon following HCP and ITP development that lends Regional Water Board support for the HCP and ITP and/or adds additional water quality requirements as needed.

Task Coordinate with the CDFG, NOAA Fisheries, and the USFWS on the development and implementation of HCPs and ITPs that address threatened or endangered salmonids. Work with these agencies and the landowners to include conditions in the HCPs and ITPs that control excess sediment. Consider developing waste discharge requirements or waivers concurrently to or soon following HCP and ITP development to support the plans and ensure water quality concerns are addressed.

### **Regional Task 30**

#### **Work with State Water Board Staff on Excess Sediment Control Issues from PG&E Power Line Right of Ways**

Background Pacific Gas and Electric Company (PG&E) manages power lines throughout the North Coast Region and owns right of ways under those lines. These right of ways can be sources of excess sediment as they are often kept free of trees and other vegetation that could damage the power lines and are sometimes located on steep slopes.

Task Due to the state-wide nature of power line right of ways, work with State Water Board staff to ensure Pacific Gas and Electric Company (PG&E) is controlling excess sediment from their right of ways. Meet with State Water Board staff to discuss appropriate steps. Meet with PG&E to discuss current excess sediment control measures and possible improvements.

### **Regional Task 31**

#### **Develop and Implement Incentive Program**

Task Develop and implement an incentive program for landowners with strong sediment control records that go above and beyond legal requirements. Possible incentives may be expedited permit review and public recognition, such as public service announcements, trade journal articles, and awards.

### **Regional Task 32**

#### **Employ Staff Specialist on Excess Sediment Control and Employ GIS Staff**

Task Employ a staff specialist on excess sediment control to educate, train, help coordinate, and provide assistance and guidance to other Regional Water Board staff. Duties would also likely include taking the lead on especially complex excess sediment control issues.

Task Employ a staffer to provide GIS support for sediment control tasks and map making.

**Regional Task 33**  
**Develop Tracking Database**

Task            Develop a tracking database of excess sediment control efforts, complaints, and responses to complaints. Coordinate and integrate the database with monitoring data and other watershed data.

**Regional Task 34**  
**Intra-Agency and Inter-Agency Staff Training**

Task            Train Regional Water Board staff on the Measures to Control Excess Sediment Prohibition, the Stream and Wetlands Protection Policy, and general excess sediment control.

Task            Train Regional Water Board staff that work with the nonpoint source pollution control and watershed protection grant and loan programs to:

1. Better identify projects that will be highly effective at controlling excess sediment and will result in substantial improvements to water quality.
2. Increase knowledge of possible sediment control practices including when and where to use each practice.
3. Increase knowledge of sediment control standards used by the Regional Water Board and ensure consistency in sediment control requirements across programs.

Task            Conduct inter-agency training on excess sediment control and regulatory requirements and process with Regional Water Board staff and staff of Cal Fire, CDFG, the California Geological Survey, and other state and federal agencies as appropriate.

**Regional Task 35**  
**Train Public Grant Writers & Project Managers on Sediment Control Standards**

Task            Train those members of the public or other public agencies who write and manage grant and loan projects on the excess sediment control standards that restoration projects will need to meet.

### CHAPTER 3

#### WATERSHED-SPECIFIC SEDIMENT CONTROL TASKS

---

This chapter describes the sediment control tasks that are necessary to control excess sediment in the following watersheds.

Albion River	Jacoby Creek
Big River	Klamath River (downstream of Weitchpec)
Eel River, North Fork	Mad River
Eel River, Middle Fork	Mattole River
Eel River, South Fork	Navarro River
Eel River, Upper Mainstem	Noyo River
Eel River, Middle Mainstem	Redwood Creek
Eel River, Lower Mainstem	Russian River
Eel River, Van Duzen River	Scott River
Elk River	Stemple Creek & Estero de San Antonio
Estero Americano	Ten Mile River
Freshwater Creek	Trinity River, Mainstem
Garcia River	Trinity River, South Fork
Gualala River	

## ALBION RIVER WATERSHED SEDIMENT CONTROL TASKS

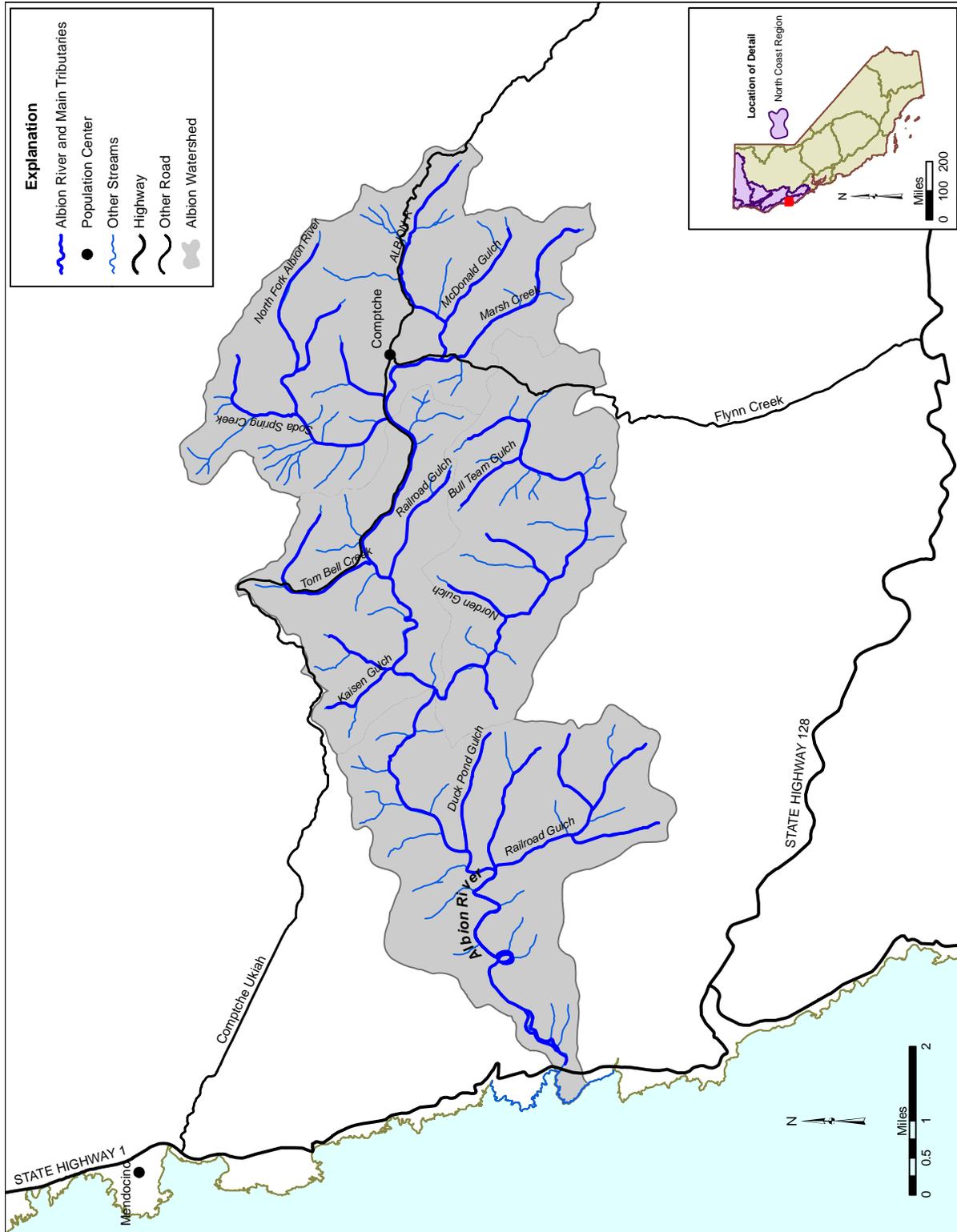


Figure 2. Albion River Watershed Map

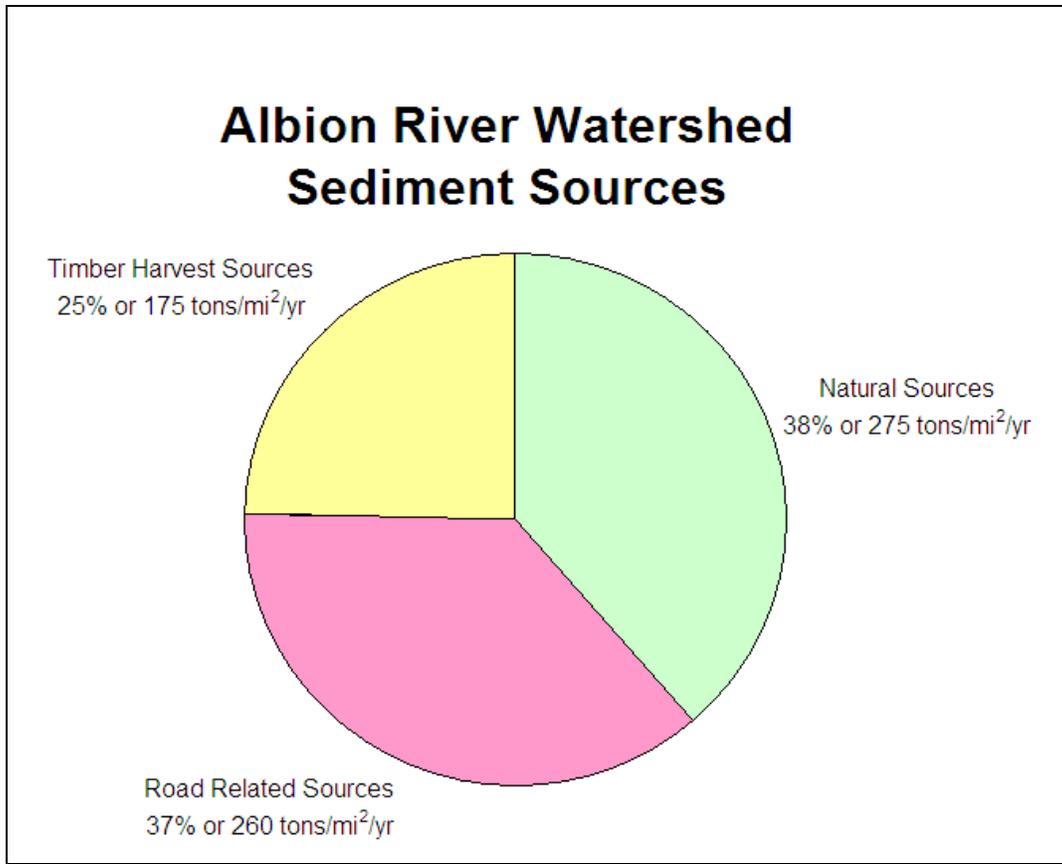


Figure 3. Albion River Watershed Sediment Sources. Data from: Albion River TMDL (U.S. EPA 2001a).

	Sediment Source	tons/mi <sup>2</sup> /yr *	
Natural	Landslides	134	275
	Surface Erosion	75	
	Fluvial & Stream Bank Erosion	66	
Anthropogenic	Harvest Related Landslides	158	435
	Skid Trail Related Surface Erosion	17	
	Road Related Landslides	170	
	Road Related Surface Erosion	90	
	Grassland Related Landslides	0	
	<b>Total of All Sources</b>	<b>710</b>	

\* Natural inputs are based on the full sediment source analysis study period of 1921 to 2000. Anthropogenic inputs are based on the most current sediment source analysis study period of 1989 to 2000.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Albion River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

<b>Table 3 Albion River Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects and LWD placement work.
4	Identify most egregious excess sediment sources.
5	Investigate Marsh Creek Road.
6	Use progressive enforcement or develop WDRs or conditional waivers.
7	Develop ownership-wide WDRs for Mendocino Redwood Company.
8	Develop WDRs for county roads in Mendocino County.

**Albion River Task 1  
Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Albion River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not the only, key stakeholder in the Albion River watershed is listed below.

*Mendocino Land Trust*

The Mendocino Land Trust acquired 7,334 acres of land in the Albion River and Big River watersheds, and conveyed the property to the State Parks under terms and conditions that bind the Mendocino Land Trust to the property's management. The Mendocino Land Trust's mission is to conserve important natural resources of Mendocino County, including wildlife habitat, open space, scenic vistas, working farmlands and forests, watersheds, and to facilitate public access.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Albion River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task            Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control and to promote the installation of riparian fencing. Fencing is needed to limit livestock grazing in the riparian areas where there is evidence of streambank erosion caused by grazing, especially along the North Fork Albion River, upper mainstem Albion River, and Marsh Creek. Ask UCCE advisors to encourage fencing. Incorporate fencing and riparian grazing limitations into appropriate WDRs and enforcement orders where riparian grazing is discharging excess sediment.

### **Albion River Task 3**

#### **Fund Excess Sediment Control Projects and LWD Placement Work**

Task            Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21). Fund large woody debris (LWD) placement work through grants (Regional Task 21). High priority locations for LWD placement include the mainstem Albion River, South Fork Albion River, and North Fork Albion River.

### **Albion River Task 4**

#### **Identify Most Egregious Excess Sediment Sources**

Task            Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

### **Albion River Task 5**

#### **Investigate Marsh Creek Road**

Task            Investigate excess sediment discharges from Marsh Creek Road. Determine need for enforcement actions and use progressive enforcement as necessary.

Marsh Creek Road is managed by a road association, and therefore it is expected that this task will take a significant amount of staff and legal time if enforcement is needed. Several landowners are likely to support Regional Water Board attention; others will not.

### **Albion River Task 6**

#### **Use Progressive Enforcement or Develop and Implement WDRs or Conditional Waivers**

- Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:
- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
  - Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 1).
  - Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 2).
  - Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

### **Albion River Task 7**

#### **Develop Ownership-Wide WDRs for Mendocino Redwood Company**

Background Mendocino Redwood Company (MRC) owns approximately 70-80% of the Albion River watershed.

On June 14, 2007, the Regional Water Board adopted Resolution R1-2007-0034, which describes the collaborative effort to develop ownership-wide WDRs for timber harvesting activities conducted by Mendocino Redwood Company (MRC) on their lands in Mendocino and Sonoma counties. The primary purpose of this resolution is to set forth MRC's and the Regional Water Board's shared understanding of the intent and key elements of their collaboration to develop an ownership-wide approach to compliance with the Porter-Cologne Act, the Basin Plan, and Clean Water Act based on the Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) that MRC is close to completing.

Task Following completion of the HCP/NCCP, develop ownership-wide WDRs for Mendocino Redwood Company to address excess sediment and other water quality concerns. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

Include in the ownership-wide WDRs the water quality control measures contained in the HCP/NCCP. Strive to develop the ownership-wide WDRs within eight months of the signing of the HCP/NCCP Implementation Agreement.

**Albion River Task 8**

**Develop and Implement WDRs for County Roads in Mendocino County**

Task            Work with Mendocino County to develop, adopt, and implement WDRs to control excess sediment from county roads (Regional Task 13). Within the Albion River watershed, focus on Compteché-Ukiah Road and Flynn Creek Road.

## BIG RIVER WATERSHED SEDIMENT CONTROL TASKS

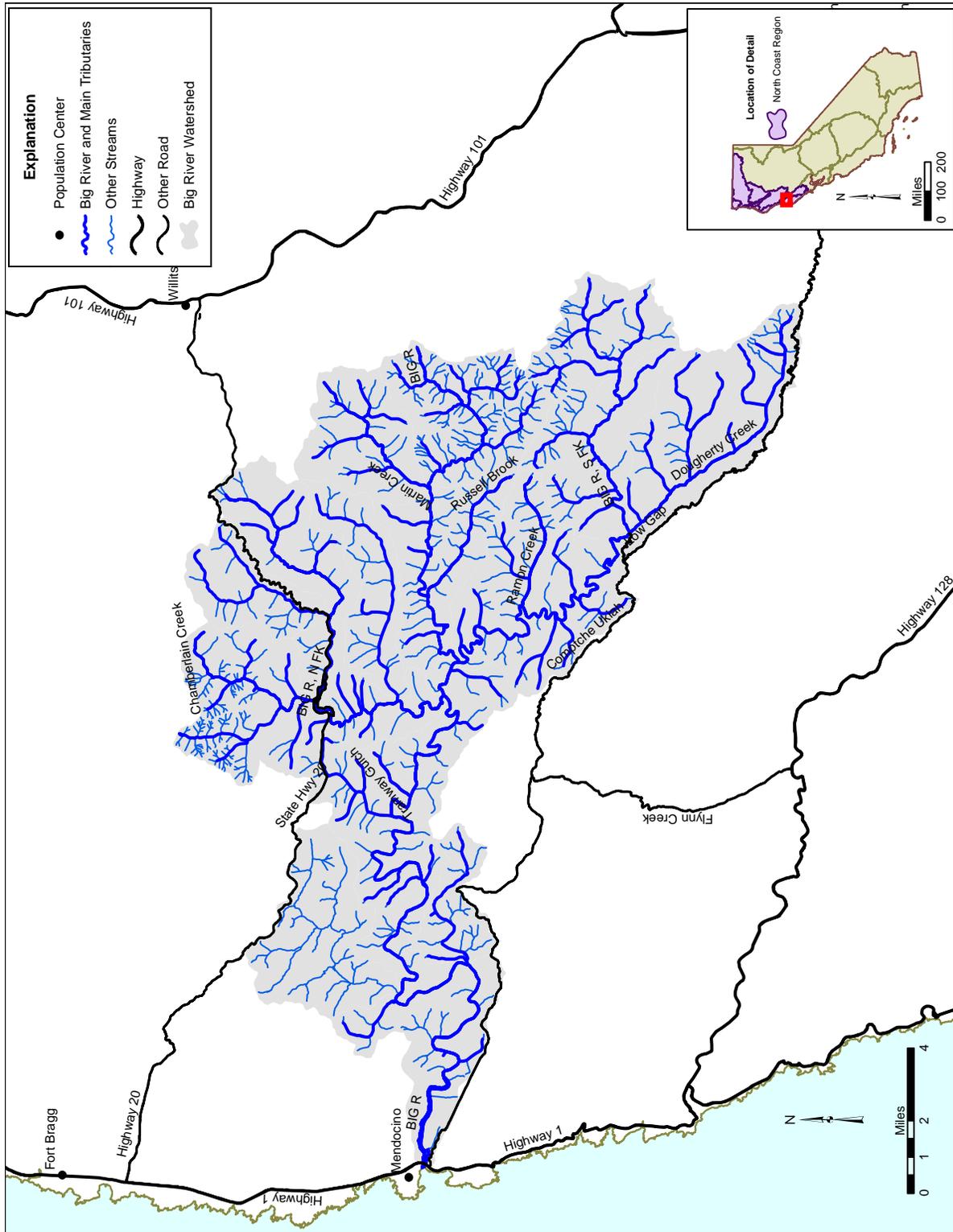


Figure 4. Big River Watershed Map

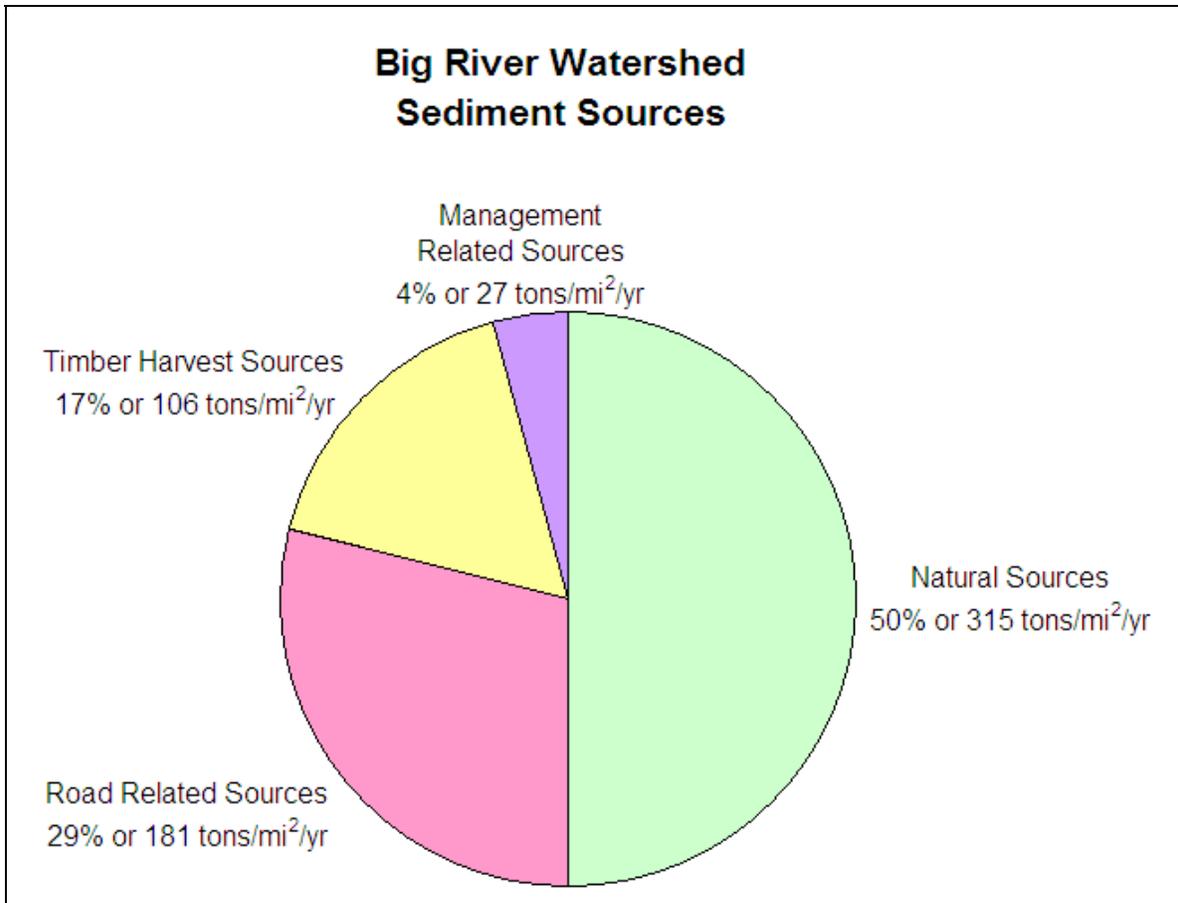


Figure 5. Big River Watershed Sediment Sources. Data from: Big River TMDL (U.S. EPA 2001b).

Table 4 Big River Watershed Sediment Sources			
	Sediment Source	tons/mi <sup>2</sup> /yr *	
Natural	Landslides	175	315
	Surface Erosion	75	
	Fluvial & Stream Bank Erosion	65	
Anthropogenic	Harvest Related Landslides	92	314
	Skid Trail Related Landslides	7	
	Skid Trail Related Surface Erosion	7	
	Road Related Landslides	88	
	Road Related Surface Erosion	93	
	Grassland Related Surface Erosion	27	
	Total of All Sources	629	

\* Background inputs are based on the full sediment source analysis study period of 1921 to 2000. Anthropogenic inputs are based on the most current sediment source analysis study period of 1989 to 2000.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Big River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

**Table 5  
Big River Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or waivers.
6	Work with The Conservation Fund, Coastal Ridges, and Jackson Demonstration State Forest to ensure compliance with Measures to Control Excess Sediment Prohibition.
7	Develop a conditional waiver for the Big River Unit of the Mendocino Headlands State Park.
8	Develop ownership-wide WDRs for Mendocino Redwood Company.
9	Develop WDRs for county roads in Mendocino County.
10	Work with Caltrans on Hwy 20.

**Big River Task 1**

**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Big River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not the only, key stakeholder in the Big River watershed is listed below.

*Mendocino Land Trust*

The Mendocino Land Trust acquired 7,334 acres of land in the Albion River and Big River watersheds, and conveyed the property to the State Parks under terms and conditions that bind the Mendocino Land Trust to the property's management. The Mendocino Land Trust's mission is to conserve important natural resources of Mendocino County, including wildlife habitat, open space, scenic vistas, working farmlands and forests, watersheds, and to facilitate public access.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

## **Big River Task 2**

### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Big River watershed, with a focus on the 32 smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops and meeting with stakeholders.

## **Big River Task 3**

### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

## **Big River Task 4**

### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the South Fork Big River watershed along Comptche-Ukiah Road. The South Fork Big River watershed produced twice the volume of sediment from landslides/mass wasting as any other planning watershed, according to the TMDL.

## **Big River Task 5**

### **Use Progressive Enforcement or Develop and Implement WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 1).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 2).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Big River watershed, this task, in tandem with Big River Task 3 above, is expected to be especially useful for controlling excess sediment from the 32 smaller private landowners with 160 to 3,800 acres that are mostly concentrated in the South Fork Big River watershed along Comptche-Ukiah Road. These landowners make up 17% of the entire Big River watershed. The rest of the watershed is owned by only five landowners: State Parks, The Conservation Fund, Jackson Demonstration State Forest, Mendocino Redwood Company, and Coastal Ridges LLC.

### **Big River Task 6**

#### **Work with The Conservation Fund, Coastal Ridges, and Jackson Demonstration State Forest to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Background** The Conservation Fund owns approximately 11,000 acres in the lower and middle Big River watershed. This property was purchased from Campbell-Hawthorne Timber Company in 2006. The Conservation Fund intends to implement sustainable forestry practices that will restore water quality and protect salmonid habitat.

Coastal Ridges LLC owns approximately 18,400 acres of land in the northeastern portion of the Big River watershed, including the headwaters of the mainstem Big River and the North Fork Big River. Coastal Ridges was formerly known as Pioneer Resources LLC.

Jackson Demonstration State Forest (JDSF) is owned by the State of California and managed by Cal FIRE. JDSF is 48,652 acres in size and is located in the Big River and Noyo River watersheds. Cal FIRE has developed the Draft Forest Management Plan and a Draft Environmental Impact Report that describes the proposed future management approach, including timber harvest activities, recreational uses, hillslope management guidelines, and a road management plan. These documents have been the subject of litigation which has resulted in little activity and no timber harvesting in JDSF since 2003. The Board of Forestry should consider adoption of the Draft Forest Management Plan and the Draft EIR in 2008.

**Task** Work with The Conservation Fund, Coastal Ridges LLC, and Jackson Demonstration State Forest to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Big River Task 7**

#### **Develop a Conditional Waiver for the Big River Unit of the Mendocino Headlands State Park**

**Background** Approximately 7,000 acres of the lower Big River, including the estuary, is managed as the Big River Unit of the Mendocino Headlands State Park, which is part of the California Department of Parks and Recreation (State Parks). This property was purchased from Campbell-Hawthorne Timber Company in 2002. The terms and conditions of the purchase direct a preservation and protection approach to land management which a heavy focus on salmonids, aquatic life, and wetlands. State Parks has expressed interest in working with Regional Water Board staff to develop a conditional waiver for the Big River Unit. State Parks has been inventorying excess sediment sites and roads, assessing resources, and has develop preliminary recommendations.

**Task** Should State Parks continue to want a conditional waiver, develop a conditional waiver of WDRs for the Big River Unit of the Mendocino Headlands State Park. Bring the waiver to the Regional Water Board for their consideration. If adopted, implement the waiver. State Parks staff estimated that early 2008 would be a good time to start developing the conditional waiver.

Should State Parks no longer want a conditional waiver, work with State Parks to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition, once it is adopted and in effect. See Big River Task 6 for what this would likely include.

### **Big River Task 8**

#### **Develop Ownership-Wide WDRs for Mendocino Redwood Company**

**Background** On June 14, 2007, the Regional Water Board adopted Resolution R1-2007-0034, which describes the collaborative effort to develop ownership-wide WDRs for timber harvesting activities conducted by Mendocino Redwood Company (MRC) on their lands in Mendocino and Sonoma counties. The primary purpose of this resolution is to set forth MRC's and the Regional Water Board's shared understanding of the intent and key elements of their collaboration to develop an ownership-wide approach to compliance with the Porter-Cologne Act, the Basin Plan, and Clean Water Act based on the Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) that MRC is close to completing.

**Task** Following completion of the HCP/NCCP, develop ownership-wide WDRs for Mendocino Redwood Company to address excess sediment and other water quality concerns. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

Include in the ownership-wide WDRs the water quality control measures contained in the HCP/NCCP. Strive to develop the ownership-wide WDRs within eight months of the signing of the HCP/NCCP Implementation Agreement.

**Big River Task 9**

**Develop WDRs for County Roads in Mendocino County**

Task            Work with Mendocino County to develop WDRs to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Big River watershed, focus on Comptche-Ukiah Road.

**Big River Task 10**

**Work with Caltrans on Hwy 20**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment from Highway 20. Work with Caltrans to ensure their management practices prevent future excess sediment discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## EEL RIVER WATERSHED SEDIMENT CONTROL TASKS

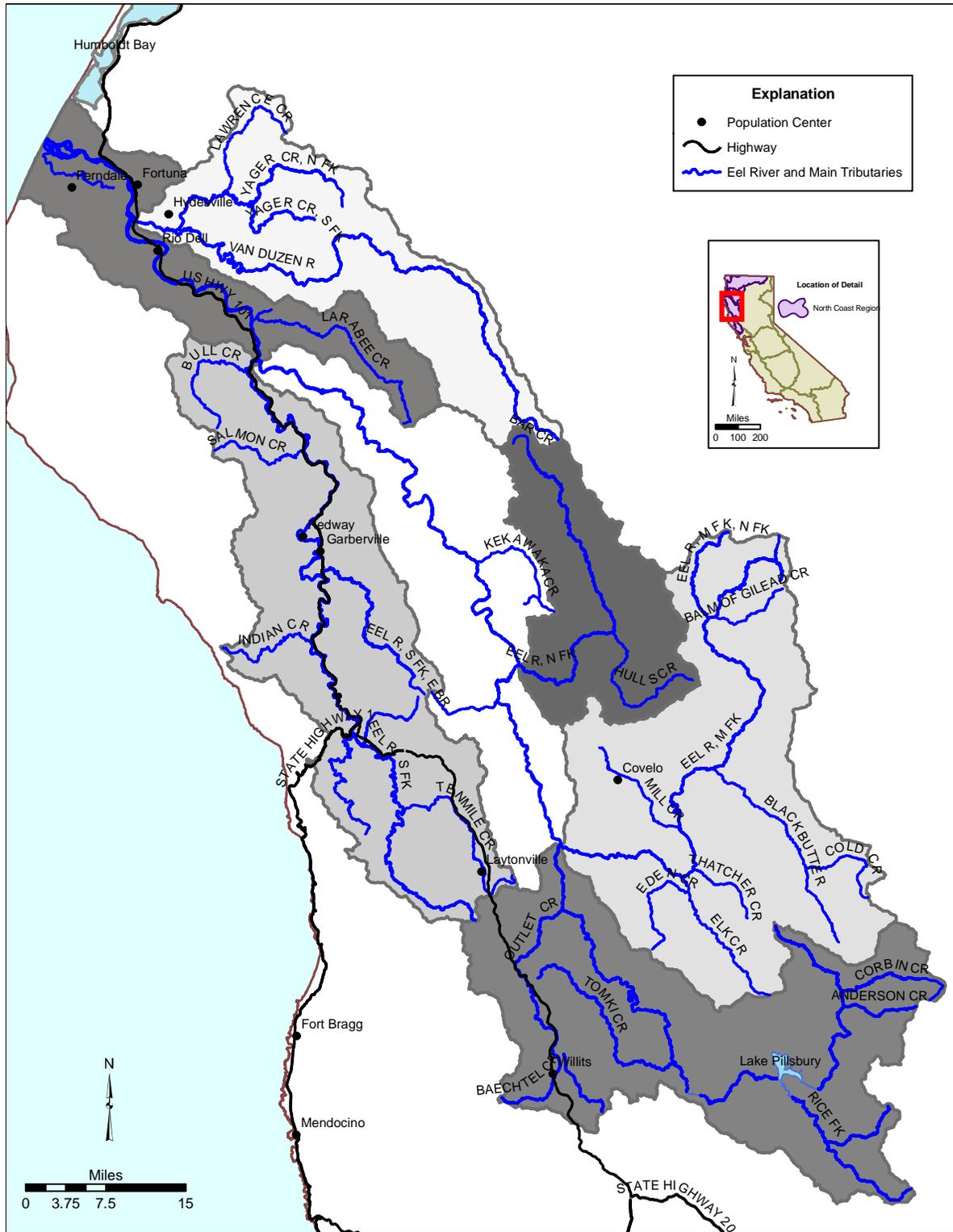


Figure 6. Eel River Watershed Map

## NORTH FORK EEL RIVER WATERSHED SEDIMENT CONTROL TASKS

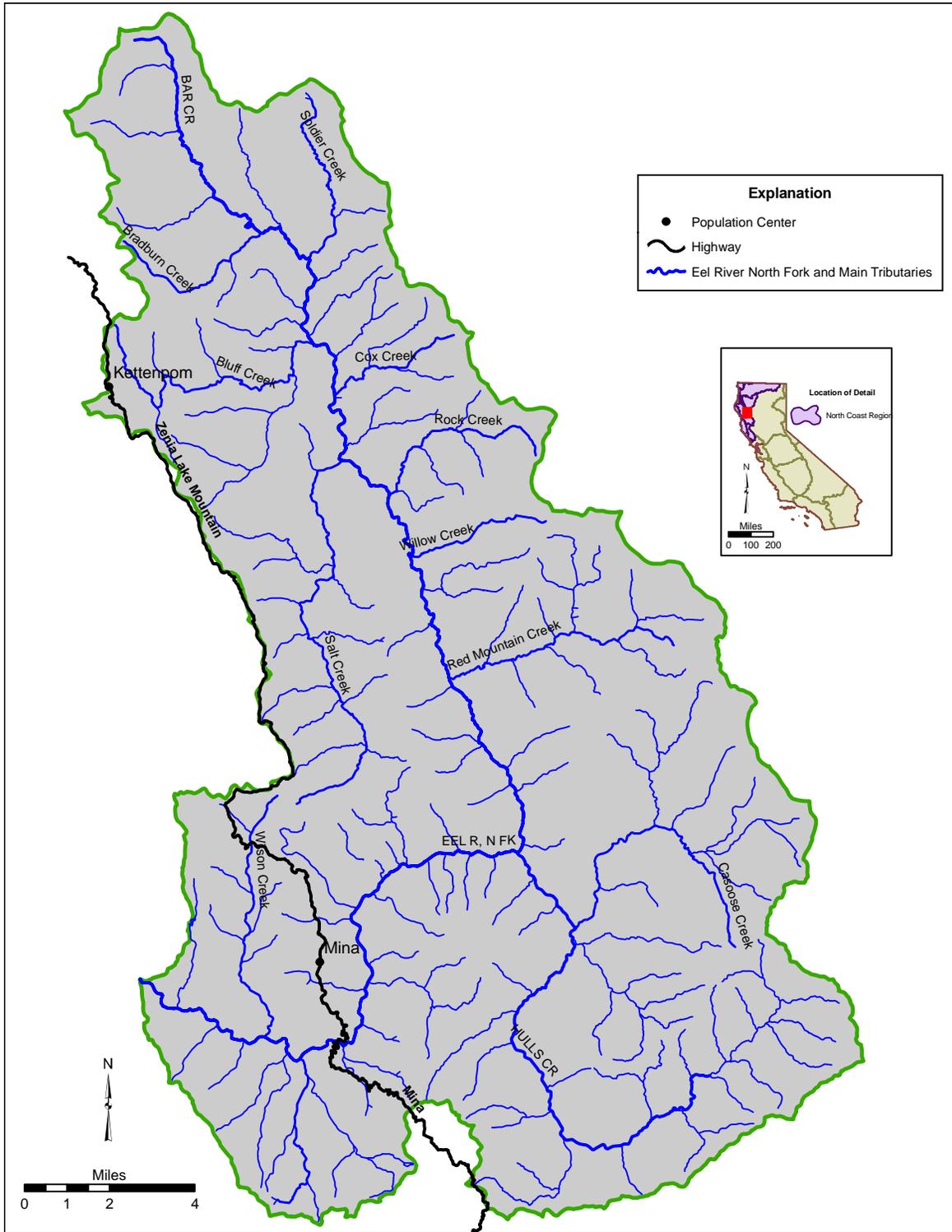


Figure 7. North Fork Eel River Watershed Map

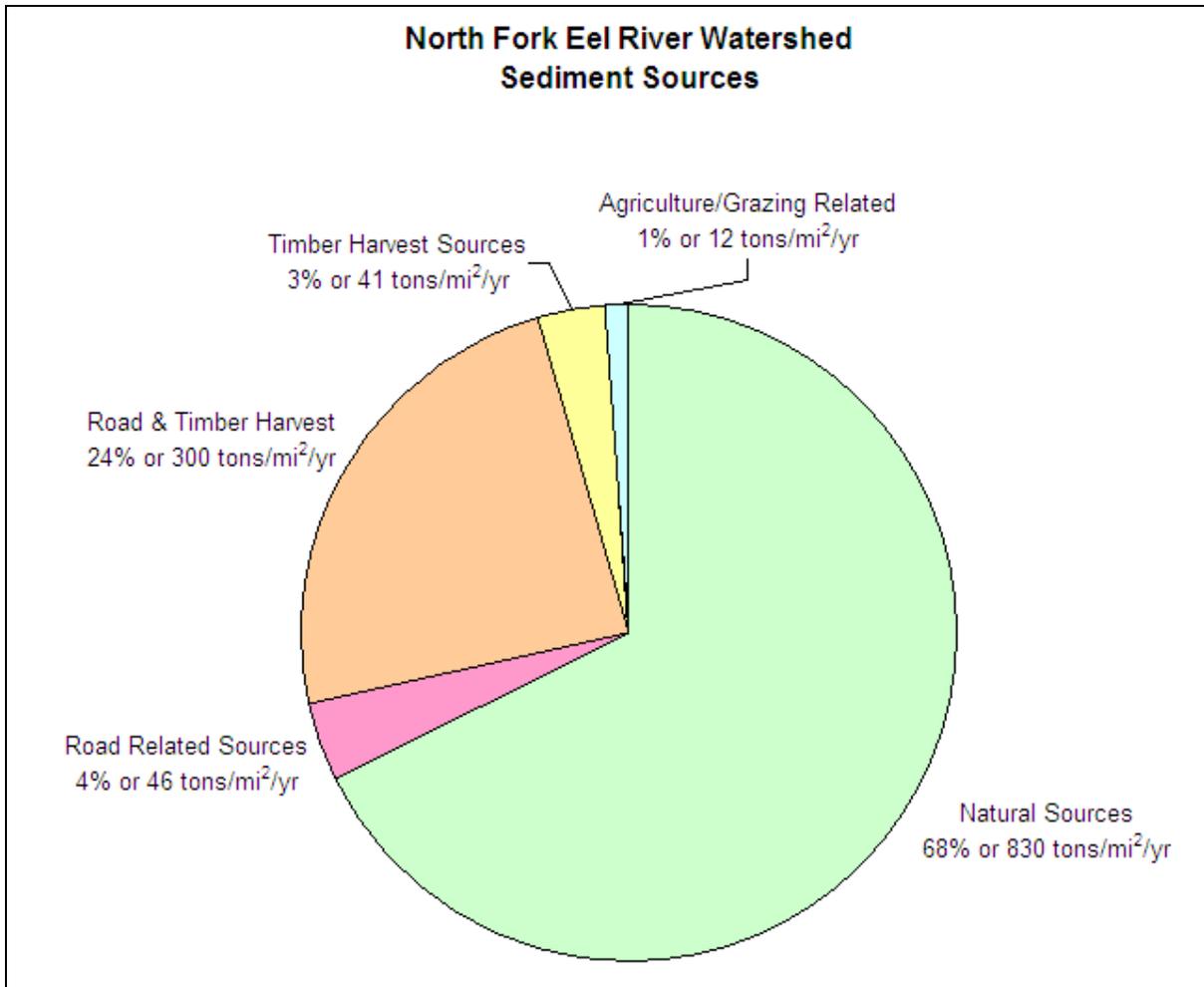


Figure 8. North Fork Eel River Watershed Sediment Sources. Data from: North Fork Eel River TMDL (U.S. EPA 2002).

	Sediment Source	tons/mi <sup>2</sup> /yr	
Natural	Landslides > 5,000 yd <sup>3</sup>	375	830
	Smaller Features	455	
Anthropogenic	Roads ≤ 5,000 yd <sup>3</sup>	46	399
	Road & Harvest Landslides > 5,000 yd <sup>3</sup>	300	
	Tractor Harvest ≤ 5,000 yd <sup>3</sup>	40	
	Cable Harvest ≤ 5,000 yd <sup>3</sup>	1	
	Agriculture/Grazing	12	
Total of All Sources		1,229	

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the North Fork Eel River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

<b>Table 7</b>	
<b>North Fork Eel River Tasks</b>	
1	Identify and work with key stakeholders
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Work with Round Valley Indian Tribes.
5	Identify most egregious excess sediment sources.
6	Use progressive enforcement or develop WDRs or waivers.
7	Work with Redwood Empire to ensure compliance with the Measures to Control Excess Sediment Prohibition.
8	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
9	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
10	Develop WDRs for county roads in Mendocino & Trinity counties.
11	Survey the effectiveness of rolling dips.

**North Fork Eel River Task 1**  
**Identify and Work with Key Stakeholders**

- Task Determine key stakeholders in the North Fork Eel River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations.
  
- Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**North Fork Eel River Task 2**  
**Conduct Outreach and Education and Work with Interested Stakeholders**

- Task Conduct outreach and education efforts and work with interested stakeholders/watershed groups to promote excess sediment control in the North Fork Eel River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops and meeting with stakeholders.

### **North Fork Eel River Task 3 Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **North Fork Eel River Task 4 Work with Round Valley Indian Tribes**

Task Meet with tribal representatives of the Round Valley Reservation to discuss stream restoration work, encourage continued restoration efforts, suggest restoration techniques, warn against other restoration techniques, encourage source control and road repair, and requirements for 401 Certifications for dredge and fill activities on non-tribal land. Offer assistance.

Task Work with the Round Valley Indian Tribes to coordinate workshops on excess sediment control.

### **North Fork Eel River Task 5 Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Considering the remote nature and rugged terrain of the watershed, aerial flights will be the primary reconnaissance method. Focus initial reconnaissance efforts on private in-holdings within Six Rivers National Forest and BLM land, the private ranches and homesteads in the lower part of the watershed, and concentrations of rural residences around Mina and in Hulls Valley.

### **North Fork Eel River Task 6 Use Progressive Enforcement or Develop and Implement WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).

- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the North Fork Eel River watershed, this task, in tandem with North Fork Eel River Task 5 above, is expected to be especially useful for controlling excess sediment from the private in-holdings within Six Rivers National Forest and BLM land, the private ranches and homesteads in the lower part of the watershed, and concentrations of rural residences around Mina and in Hulls Valley.

### **North Fork Eel River Task 7**

#### **Work with Redwood Empire to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Background** Redwood Empire is an industrial timberland owner whose land in the North Fork Eel River watershed was formerly owned by Louisiana-Pacific.

**Task** Work with Redwood Empire to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should Redwood Empire choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 3.

### **North Fork Eel River Task 8**

#### **Implement WDRs or a Conditional Waiver for the USFS**

**Task** Meet with United States Forest Service (USFS) staff to identify current and future sediment control actions in Six Rivers National Forest, including the status of a excess sediment site inventory, site repair and control, and grazing management practices.

**Task** Following their development and adoption, implement the WDRs or the conditional waiver for the control of excess sediment and other water quality concerns on USFS land (as described in Regional Task 17) in the North Fork Eel River watershed. Because USFS land within the North Fork Eel River watershed were estimated to meet TMDL load allocations, it is likely that the current management practices conducted by the USFS are adequate to control excess sediment and protect water quality.

**North Fork Eel River Task 9**  
**Implement WDRs or a Conditional Waiver for BLM**

Task Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for the control of excess sediment and other water quality concerns on BLM land in the North Fork Eel River watershed.

**North Fork Eel River Task 10**  
**Develop WDRs for County Roads in Mendocino & Trinity Counties**

Task Develop WDRs for Mendocino County and Trinity County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the North Fork Eel River watershed, focus on Bald Mountain Road, Bluff Creek Road, Long Ridge Road, Mina Road / Zena-Mina Road, and Zena-Hettenshaw Road.

**North Fork Eel River Task 11**  
**Survey the Effectiveness of Recent Road Mitigation Work**

Background A significant number of rolling dips have been installed on roads in Six Rivers National Forest to reduce hydrologic connectivity and excess sediment. Since road-related surface erosion is one of the more significant sources of excess sediment on USFS land in the North Fork Eel River watershed, and since the installation of rolling dips has been a major sediment control effort by the USFS, it would be helpful to know the effectiveness of this management practice in controlling excess sediment.

Task Survey the effectiveness of recent road mitigation work on USFS roads in the North Fork Eel River watershed.

## MIDDLE FORK EEL RIVER WATERSHED SEDIMENT CONTROL TASKS

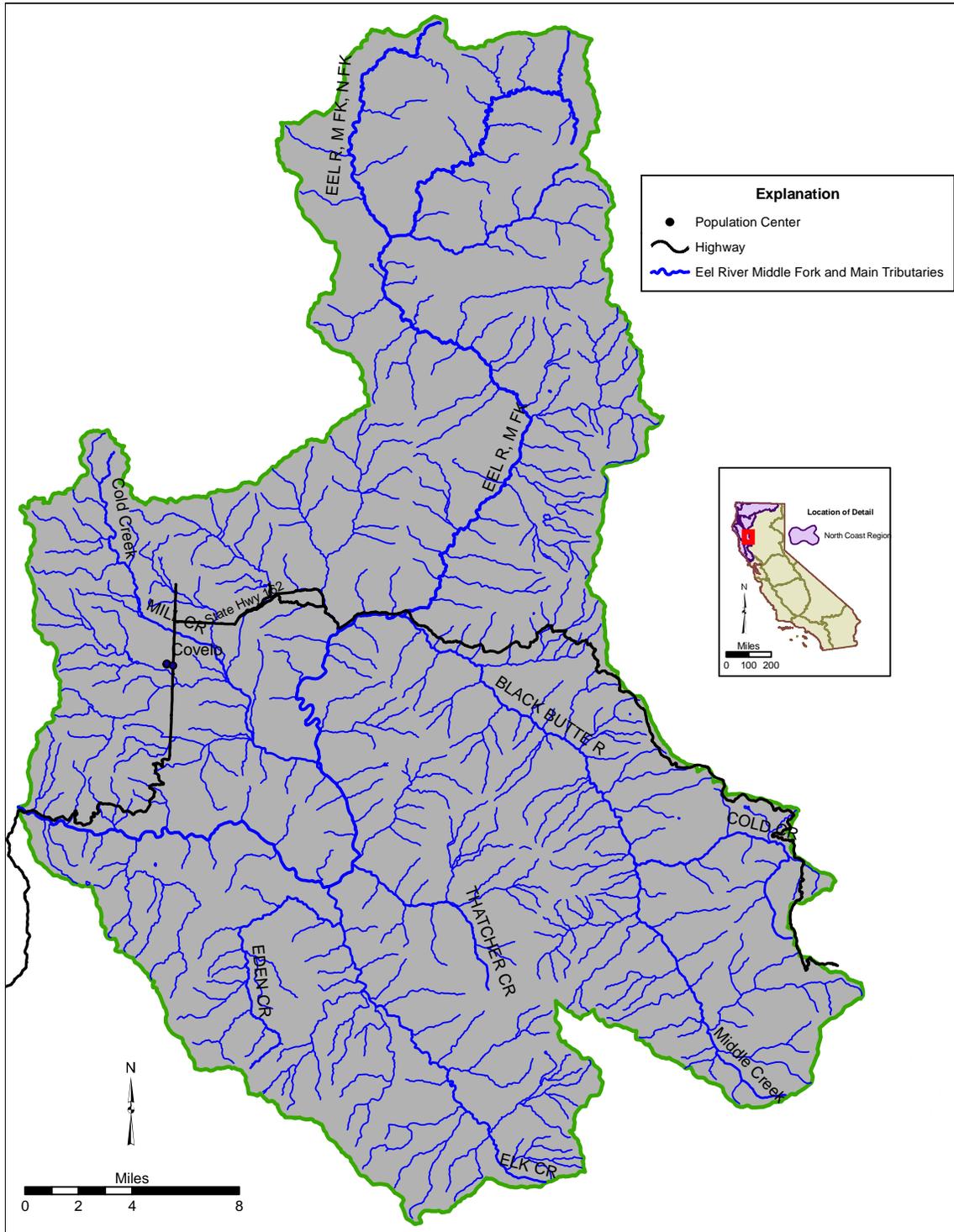


Figure 9. Middle Fork Eel River Watershed Map.

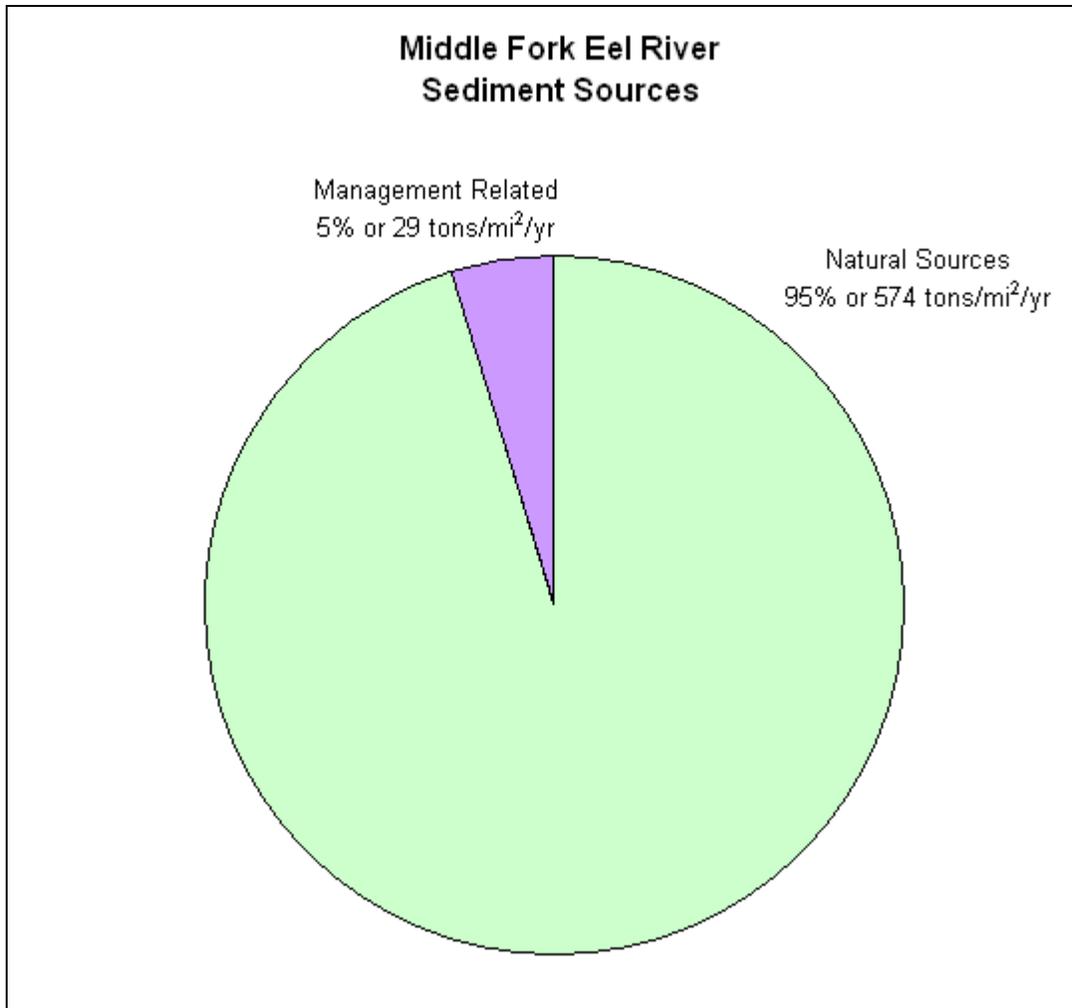


Figure 10. Middle Fork Eel River Sediment Sources. Data from: Middle Fork Eel River TMDL (U.S. EPA 2003b).

<b>Table 8</b>						
<b>Middle Fork Eel River Watershed Sediment Sources</b>						
<b>in tons/mi<sup>2</sup>/yr</b>						
Sediment Source	Black Butte	Elk Creek	Round Valley	Upper Middle Fork Eel	Williams/Thatcher	Entire Middle Fork Eel
Natural	724	1,059	374	410	417	574
Management Related:						
Landslides	9	12	10	2	2	6
Small Management Sources	7	41	9	8	19	23
<b>Total of All Sources</b>	<b>740</b>	<b>1,112</b>	<b>393</b>	<b>420</b>	<b>438</b>	<b>603</b>

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Middle Fork Eel River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff’s best professional judgement. The tasks may be revised as conditions change.

<b>Table 9</b>	
<b>Middle Fork Eel River Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Work with Round Valley Indian Tribes.
5	Work with Mendocino County Planning Department on Eden Project subdivision.
6	Identify most egregious excess sediment sources.
7	Investigate Town Creek Dam.
8	Use progressive enforcement or develop WDRs or waivers.
9	Work with Coastal Ridges to ensure compliance with the Measures to Control Excess Sediment Prohibition.
10	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
11	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
12	Develop WDRs for county roads in Mendocino County.
13	Work with Caltrans on Hwy 162.

**Middle Fork Eel River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Middle Fork Eel River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board’s excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**Middle Fork Eel River Task 2**  
**Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Middle Fork Eel River watershed, with a focus on the smaller private landowners and the Round Valley Water District. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops and meeting with stakeholders.

**Middle Fork Eel River Task 3  
Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

**Middle Fork Eel River Task 4  
Work with Round Valley Indian Tribes**

Task Meet with tribal representatives of the Round Valley Reservation to discuss stream restoration work, encourage continued restoration efforts, suggest restoration techniques, warn against other restoration techniques, encourage source control and road repair, and discuss requirements for 401 Certifications for dredge and fill activities on non-tribal land. Offer assistance.

Task Work with the Round Valley Indian Tribes to coordinate workshops on excess sediment control.

**Middle Fork Eel River Task 5  
Work with Mendocino County Planning Department on the Eden Project Subdivision**

Background The Eden Project is an eco-village community proposed for the Eden Valley. As proposed, it will include homesteads, farmland, and a village for approximately 80 homes. The land is not currently owned by the Eden Project developers.

Task Work with Mendocino County Planning Department and developers of the Eden Project when the Eden Project subdivision is proposed for county approval to ensure that excess sediment dischargers are controlled.

**Middle Fork Eel River Task 6  
Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts on Round Valley and other areas of higher population densities in the Mill Creek watershed; private in-holdings within Mendocino National Forest, the Yolla Bolly Wilderness, and BLM land; and Eden Valley in the Elk Creek watershed.

### **Middle Fork Eel River Task 7 Investigate Town Creek Dam**

**Background** Town Creek Dam is located on Mill Creek just before the creek enters Round Valley. The dam has failed. Some restoration has been attempted, but sediment discharges continue.

**Task** Investigate current and possible future discharges from Town Creek Dam. Determine corrective measures and need for enforcement action. Use progressive enforcement as necessary.

### **Middle Fork Eel River Task 8 Use Progressive Enforcement or Develop and Implement WDRs or Conditional Waivers**

**Task** For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Middle Fork Eel River watershed, this task, in tandem with Middle Fork Eel River Task 6 above, is expected to be especially useful for controlling excess sediment in Round Valley and other areas of higher population densities in the Mill Creek watershed; private in-holdings within Mendocino National Forest, the Yolla Bolly Wilderness, and BLM land; and Eden Valley in the Elk Creek watershed.

### **Middle Fork Eel River Task 9 Work with Coastal Ridges to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Task** Work with Coastal Ridges LLC, formerly known as Pioneer Resources, to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should Coastal Ridges choose not to comply with the Measures to Control Excess

Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Middle Fork Eel River Task 10**

#### **Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

- Task Meet with United States Forest Service (USFS) staff to identify current and future sediment control actions in the Yolla Bolly Middle Eel Wilderness and Mendocino National Forest, including the status of a excess sediment site inventory, site repair and control, and grazing management practices.
- Task Following their development and adoption, implement the WDRs or the conditional waiver for the control of excess sediment and other water quality concerns on USFS land (as described in Regional Task 17) in the Middle Fork Eel River watershed. Because USFS land within the Black Butte and Upper Middle Fork Eel watersheds were estimated to meet TMDL load allocations, it is likely that the current management practices conducted by the USFS in those watersheds are adequate to control excess sediment and protect water quality.

### **Middle Fork Eel River Task 11**

#### **Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

- Task Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for the control of excess sediment and other water quality concerns on BLM land in the Middle Fork Eel River watershed.

### **Middle Fork Eel River Task 12**

#### **Develop WDRs for County Roads in Mendocino County**

- Task Develop WDRs for Mendocino County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Middle Fork Eel River watershed, focus on Poonkienny Road and Mina Road.

### **Middle Fork Eel River Task 13**

#### **Work with Caltrans on Hwy 162**

- Task Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment from Hwy 162. Work with Caltrans to ensure their management

practices prevent future sediment discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## SOUTH FORK EEL RIVER WATERSHED SEDIMENT CONTROL TASKS

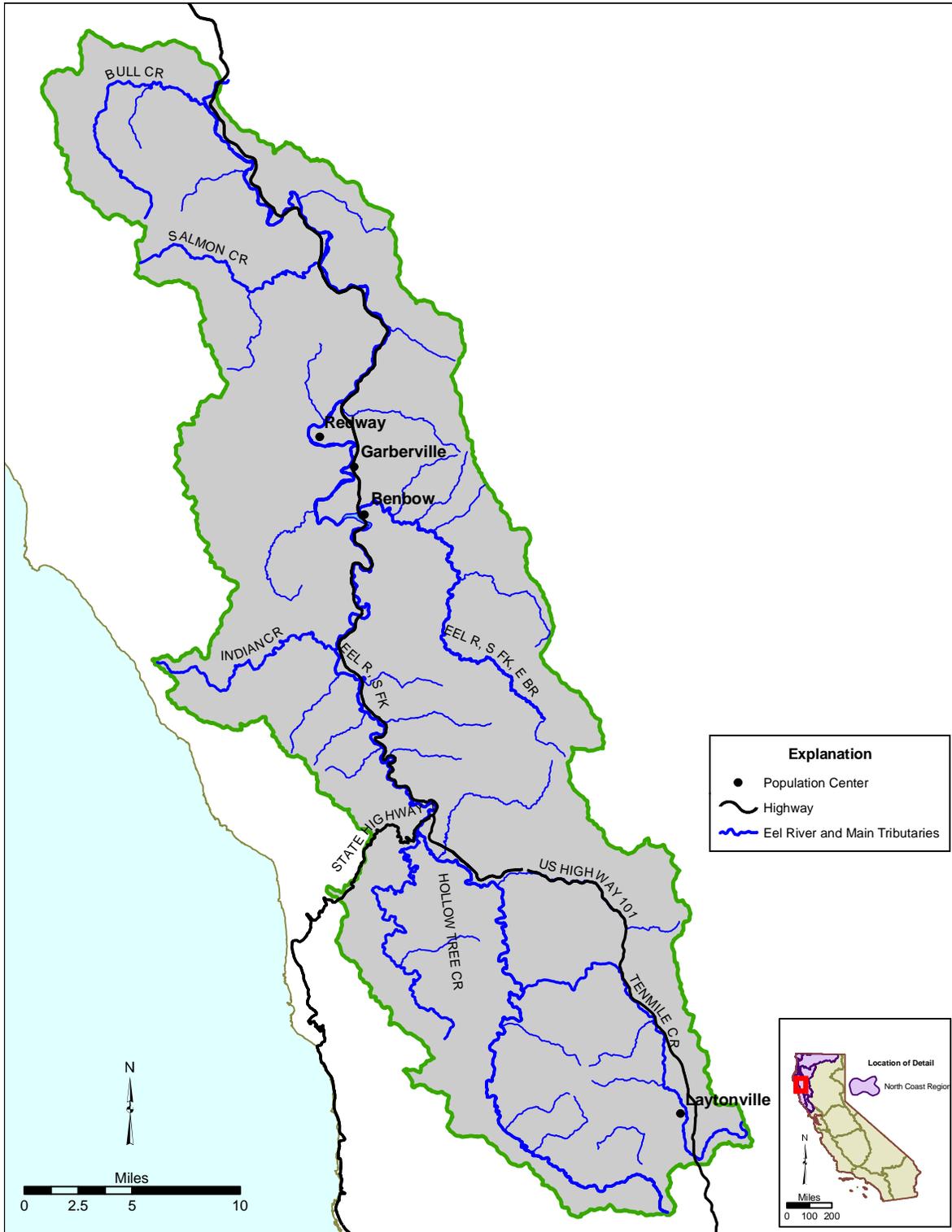


Figure 11. South Fork Eel River Map.

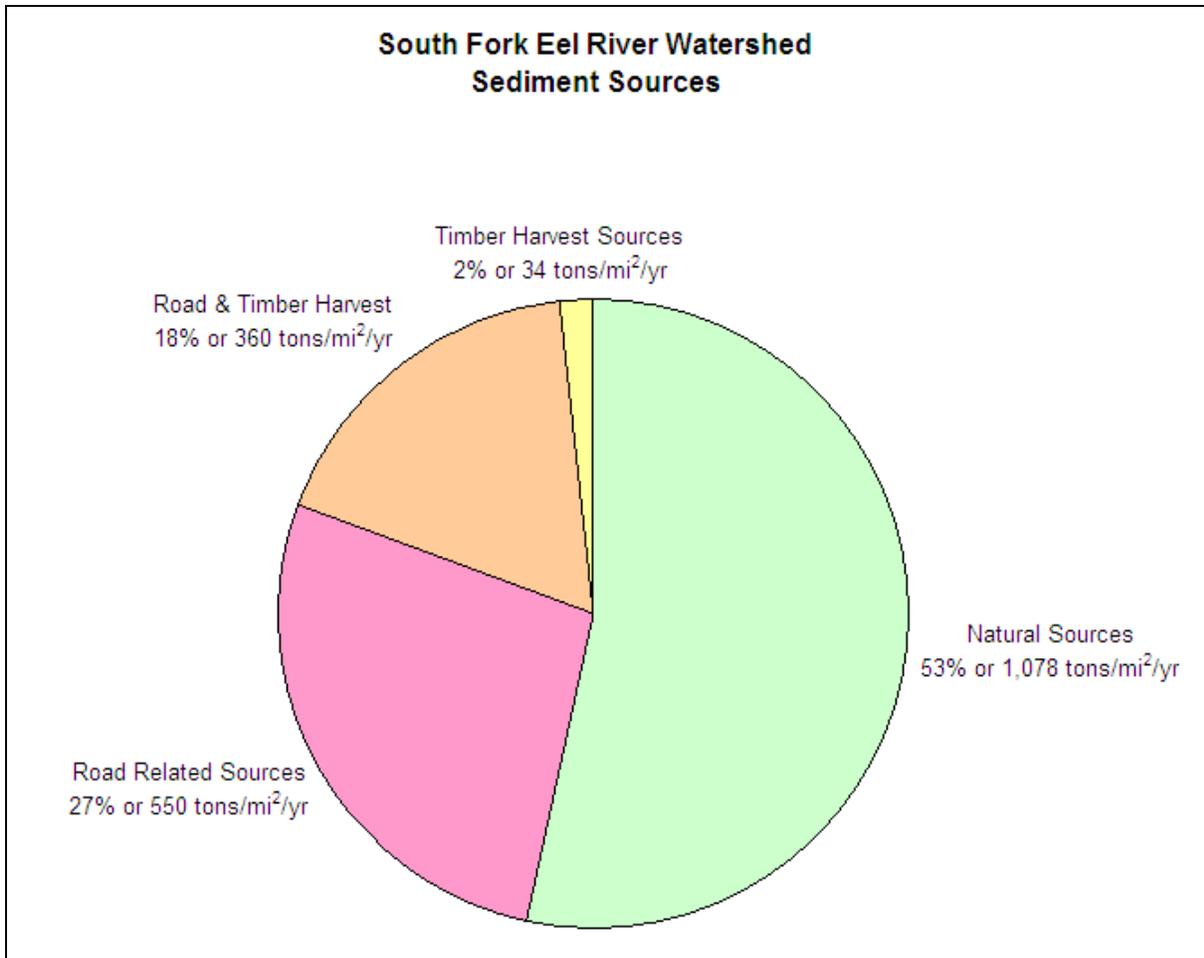


Figure 12. South Fork Eel River Watershed Sediment Sources. Data from: South Fork Eel River TMDL (U.S. EPA 1999a).

Sediment Source		tons/mi <sup>2</sup> /yr *	
Natural	Earthflows (Toes & Gullies)	766	1,078
	Shallow Landslides	211	
	Soil Creep	101	
Anthropogenic	Road Surface Erosion	108	944
	Road Crossing Failures & Gullies	442	
	Shallow Landslides (Roads & Harvest)	360	
	Skid Trail Erosion	34	
Total of All Sources		2,022	

\* Current load estimate from 1981 to 1996.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the South Fork Eel River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

**Table 11**  
**South Fork Eel River Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund sediment waste discharge control projects.
4	Identify most egregious excess sediment sources.
5	Investigate China Creek Road.
6	Use progressive enforcement or develop WDRs or conditional waivers.
7	Work with Barnum Timber Company, Coast Ridges, Eel River Sawmills, Harwood Timber, Humboldt Redwoods State Park, Pacific Lumber Company, Soper Wheeler, and Wagner Timber Company to ensure compliance with the Measures to Control Excess Sediment Prohibition.
8	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
9	Develop ownership-wide WDRs for Green Diamond.
10	Develop ownership-wide WDRs for Mendocino Redwood Company.
11	Develop ownership-wide WDRs for Campbell/Hawthorne.
12	Develop revised 401 Certifications for Benbow Dam.
13	Develop WDRs for county roads in Mendocino & Humboldt counties.
14	Work with Caltrans on Hwy 101 and other state highways.

**South Fork Eel River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the South Fork Eel River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the South Fork Eel River watershed are listed here.

*The Eel River Watershed Improvement Group (ERWIG)*

The Eel River Watershed Improvement Group (ERWIG) is a non-profit, landowner-based organization whose mission is to improve stream salmonid habitat conditions in the Eel River basin. ERWIG is primarily focused on the South Fork Eel River, the Van Duzen River, and the Lower Mainstem Eel River where they are working under a CDFG grant to inventory road-related sediment sources and other watershed restoration work.

*The Friends of the Eel River*

The Friends of the Eel River is an advocacy group whose mission is to restore the Eel River and its tributaries to a natural state of abundance, wild and free. Their immediate goal is to remove Cape Horn Dam (Van Arsdale Reservoir) and Scott Dam (Lake Pillsbury).

*Redwood Forest Foundation, Inc.*

The Redwood Forest Foundation, Inc. is a non-profit organization that acquires, protects, restores, and manages forestlands for the long-term public benefit.

*Coastal Headwaters Association*

The Coastal Headwaters Association is a community group that focuses on education efforts in schools and forest protection.

*Native American Tribes and Organizations*

Native American tribes and organizations in the South Fork Eel River watershed include the Cahto, Eel River Wailakis, and the InterTribal Sinkyone Wilderness Council. The InterTribal Sinkyone Wilderness Council is a non-profit organization comprised of 10 federally recognized Northern California tribes with direct ties to the Sinkyone region. The Council is a California Indian peoples' environmental consortium working to re-establish local Indian stewardship within the Sinkyone region of Northern California through land conservation, habitat restoration, and traditional resource management.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**South Fork Eel River Task 2**

**Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the South Fork Eel River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

**South Fork Eel River Task 3**

**Fund Excess Sediment Control Projects**

Background As of April 2007, the Regional Water Board is involved in providing \$525,000 to California State Parks for reforestation of the upper Bull Creek watershed.

Task Continue to fund and seek additional funding for excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

**South Fork Eel River Task 4  
Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the East Branch South Fork Eel River, Dean Creek, and Salmon Creek. These tributaries may be the largest sediment producers in the watershed.

**South Fork Eel River Task 5  
Investigate China Creek Road**

Task Investigate excess sediment discharges from China Creek Road. Determine need for enforcement actions and use progressive enforcement as necessary. Publicize sediment control efforts on this road in the South Fork Eel River and Mattole River watersheds, neighboring watersheds, and the Eureka area.

Since China Creek Road is managed by a road association, it is expected that this task will take a significant amount of staff and legal time. Reports from Regional Water Board staff indicate that the road is one of the worst excess sediment dischargers in the northern part of the Region.

China Creek Road runs through both the South Fork Eel River and Mattole River watersheds. This task is discussed in the chapters for both watersheds.

**South Fork Eel River Task 6  
Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).

- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the South Fork Eel River watershed, this task, in tandem with South Fork Eel River Task 4 above, is expected to be especially useful for controlling excess sediment from private landowners and ranches that make up approximately 80% of the watershed. The private land holdings and ranches are roughly located along the Hwy 101 corridor and in and around the communities of Branscomb, Laytonville, Laytonville Rancheria, Cummings, Leggett, Piercy, Whitethorn, Garberville, Redway, Briceland, Phillipsville, Miranda, and Myers Flat.

### **South Fork Eel River Task 7**

#### **Work with Barnum Timber Company, Coastal Ridges, Eel River Sawmills, Harwood, Humboldt Redwoods State Park, Pacific Lumber Company, Soper Wheeler, and Wagner Timber Company to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Background** Humboldt Redwoods State Park encompasses 52,000 acres, most of which is located in the South Fork Eel River watershed. Barnum Timber Company, Coastal Ridges, Eel River Sawmills, Harwood, Pacific Lumber Company, Soper Wheeler, and Wagner Timber Company also own and/or manage a significant number of acres in the watershed.

**Task** Work with Barnum Timber Company, Coastal Ridges, Eel River Sawmills, Harwood, Humboldt Redwoods State Park, Pacific Lumber Company, Soper Wheeler, and Wagner Timber Company to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **South Fork Eel River Task 8**

#### **Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

**Task** Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM for the control of excess sediment within the South Fork Eel River watershed. The WDRs or the

conditional waiver may be applicable to all BLM land in the North Coast Region, to all BLM land within the South Fork Eel River watershed, or to the land managed by a given field office.

**South Fork Eel River Task 9**  
**Develop Ownership-wide WDRs for Green Diamond**

Task            Develop ownership-wide WDRs for Green Diamond Resource Company to address excess sediment and other water quality concerns on their ownership in the South Fork Eel River watershed (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property in the South Fork Eel River watershed.

**South Fork Eel River Task 10**  
**Develop Ownership-Wide WDRs for Mendocino Redwood Company**

Background    On June 14, 2007, the Regional Water Board adopted Resolution R1-2007-0034, which describes the collaborative effort to develop ownership-wide WDRs for timber harvesting activities conducted by Mendocino Redwood Company (MRC) on their lands in Mendocino and Sonoma counties. The primary purpose of this resolution is to set forth MRC's and the Regional Water Board's shared understanding of the intent and key elements of their collaboration to develop an ownership-wide approach to compliance with the Porter-Cologne Act, the Basin Plan, and Clean Water Act based on the Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) that MRC is close to completing.

Task            Following completion of the HCP/NCCP, develop ownership-wide WDRs for Mendocino Redwood Company to address excess sediment and other water quality concerns. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

Include in the ownership-wide WDRs the water quality control measures contained in the HCP/NCCP. Strive to develop the ownership-wide WDRs within eight months of the signing of the HCP/NCCP Implementation Agreement.

**South Fork Eel River Task 11**  
**Develop Ownership-Wide WDRs for Campbell Timberland Management/ Hawthorne Timber Company**

Background    Campbell Timberland Management, LLC manages timberland in the South Fork Eel River watershed on the behalf of the landowner, Hawthorne Timber Company, LLC.

Task Develop ownership-wide WDRs for Campbell Timberland Management / Hawthorne Timber Company to address excess sediment and other water quality concerns on their property. Bring the WDRs to the Regional Water Board for their consideration. Should they be adopted by the Board, implement the WDRs.

**South Fork Eel River Task 12**  
**Develop Revised 401 Certifications for Benbow Dam**

Background Benbow Dam is a flashboard dam summer dam that is installed in the South Fork Eel River by the California Department of Parks and Recreation. Benbow Dam is currently permitted by a 401 Certification that expires after the summer 2007 season.

Task Develop a revised 401 Certification for the California Department of Parks and Recreation for Benbow Dam. Include language within the 401 Certification that (1) ensures the dam prevents and minimizes bank erosion, (2) requires the inventory, prioritization, repair, and monitoring of any existing excess sediment discharges caused by the dam, and (3) addresses other water quality issues as necessary (e.g., ensures nutrient levels and water temperatures do not harm salmonids and other beneficial uses).

**South Fork Eel River Task 13**  
**Develop WDRs for County Roads in Mendocino and Humboldt Counties**

Task Develop WDRs for Mendocino and Humboldt counties to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the South Fork Eel River watershed, focus on Bellsprings Road (Mendocino and Humboldt counties), Spyrock Road (Mendocino County), Dyerville Loop Road (Humboldt County), and East Branch Road (Humboldt County).

**South Fork Eel River Task 14**  
**Work with Caltrans on Hwy 101 and other State Highways**

Task Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment sites from Highway 101, the Avenue of the Giants, and other state highways in the South Fork Eel River watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

Task            Continue to work with Caltrans to control and prevent excess sediment discharges from the Confusion Hill slide along Highway 101 and the mainstem South Fork Eel River.

## UPPER MAINSTEM EEL RIVER WATERSHED SEDIMENT CONTROL TASKS

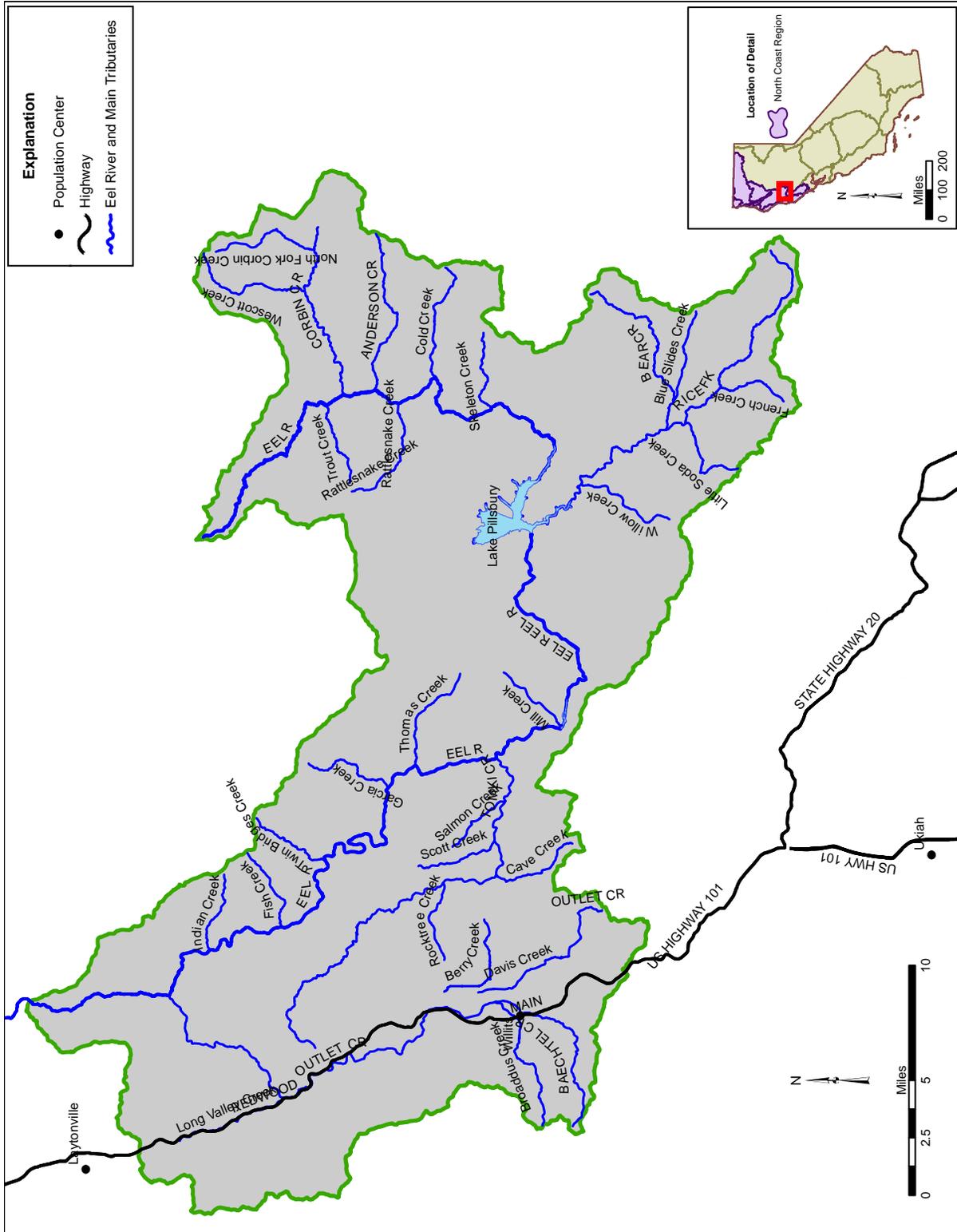


Figure 13. Upper Mainstem Eel River Watershed Map.

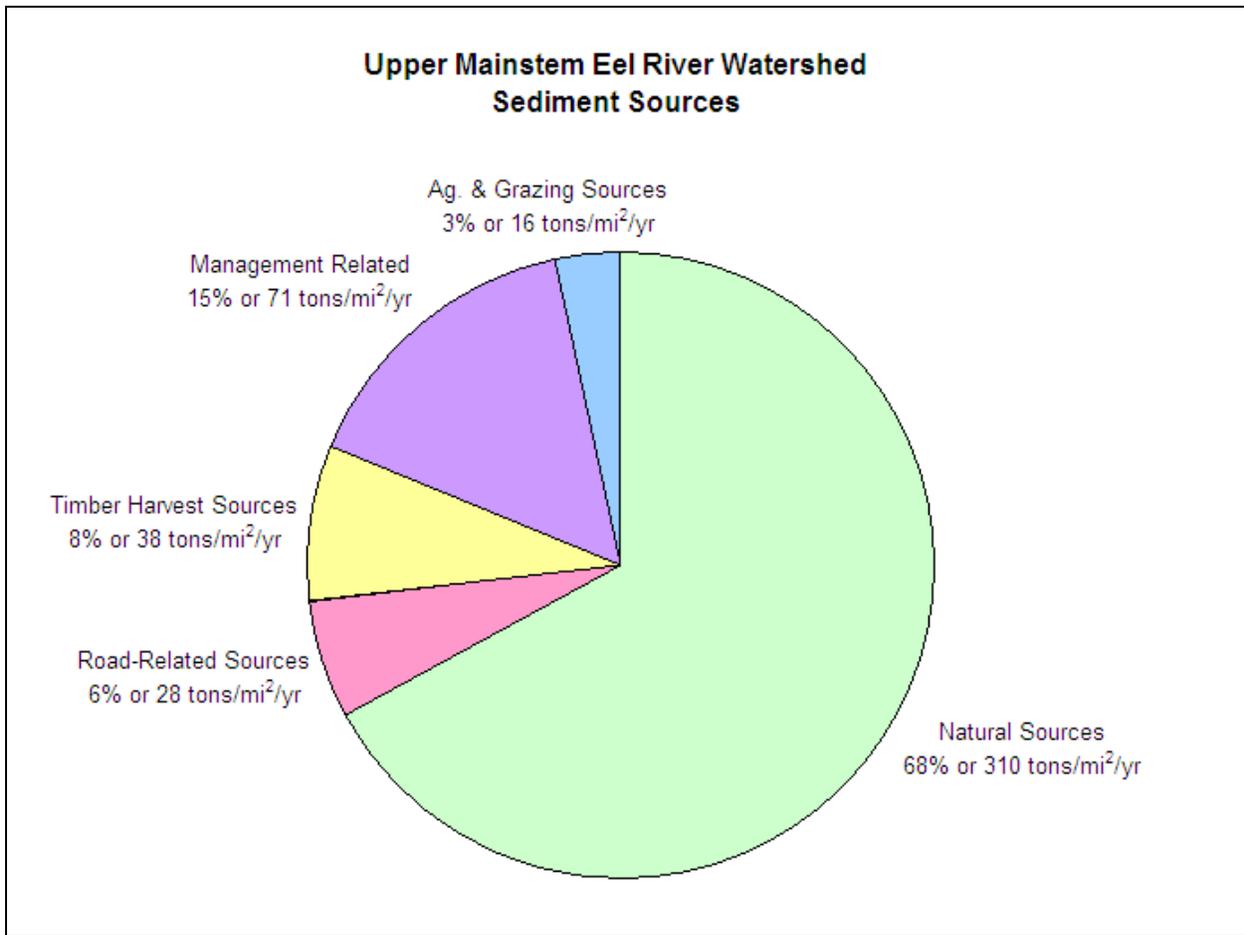


Figure 14. Upper Mainstem Eel River Watershed Sediment Sources. Data from: Upper Main Eel River TMDL (U.S. EPA 2004).

Sediment Source		tons/mi <sup>2</sup> /yr	
Natural	Large Features (> 3,000 yds <sup>3</sup> )	190	310
	Small Features (< 3,000 yds <sup>3</sup> )	120	
Anthropogenic	Large Features (> 3,000 yds <sup>3</sup> ) – Management Related	71	152
	Road Related (< 3,000 yds <sup>3</sup> )	28	
	Timber Harvest (< 3,000 yds <sup>3</sup> )	38	
	Agriculture/Grazing (< 3,000 yds <sup>3</sup> )	16	
Total of All Sources		462	

\* Based on sediment load estimate from 1940 to 2004.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Upper Mainstem Eel River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff’s best professional judgement. The tasks may be revised as conditions change.

<b>Table 13</b>	
<b>Upper Mainstem Eel River Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund sediment waste discharge control projects.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or conditional waivers.
6	Work with Coastal Ridges to ensure compliance with the Measures to Control Excess Sediment Prohibition.
7	Develop ownership-wide WDRs for Campbell/Hawthorne.
8	Work with North Coast Railroad Authority
9	Work with Brooktrails.
10	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
11	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
12	Implement general WDRs and a general conditional waiver for vineyards
13	Develop WDRs for Mendocino County for county roads.
14	Work with Caltrans on Hwy 101 and Hwy 162.
15	Review effectiveness of the Tomki Creek Restoration Project

**Upper Mainstem Eel River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Upper Mainstem Eel River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not all, of the key stakeholders in the Upper Mainstem Eel River watersheds is listed here.

*The Friends of the Eel River*

The Friends of the Eel River is an advocacy group whose mission is to restore the Eel River and its tributaries to a natural state of abundance, wild and free. Their immediate goal is to remove Cape Horn Dam (Van Arsdale Reservoir) and Scott Dam (Lake Pillsbury).

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board’s excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

## **Upper Mainstem Eel River Task 2**

### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Upper Mainstem Eel River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

## **Upper Mainstem Eel River Task 3**

### **Fund Excess Sediment Control Projects**

Background As of April 2007, the Regional Water Board is involved in providing approximately \$337,000 to the County of Mendocino's Department of Transportation for the Tomki Road Feasibility Study and Prototype Vented Low Water Crossing grant project.

Task Continue to fund and seek additional funding for excess sediment control projects (Regional Task 21).

## **Upper Mainstem Eel River Task 4**

### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the Outlet Creek, Long Valley Creek, Broaddus Creek, Baechtel Creek, Ryan Creek, and Haehl Creek watersheds. These creeks provide some of the only coho habitat in the entire Upper Mainstem Eel River watershed.

## **Upper Mainstem Eel River Task 5**

### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).

- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Upper Mainstem Eel River watershed, this task, in tandem with Upper Mainstem Eel River Task 4 above, is expected to be especially useful for controlling excess sediment from the smaller private ranches in the Outlet Creek and Tomki Creek watersheds, and along the Eel River between Lake Pillsbury and Dos Rios and around Hearst.

### **Upper Mainstem Eel River Task 6**

#### **Work with Coastal Ridges to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Task** Work with Coastal Ridges to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Upper Mainstem Eel River Task 7**

#### **Develop Ownership-Wide WDRs for Campbell Timberland Management/ Hawthorne Timber Company**

**Background** Campbell Timberland Management, LLC manages timberland within the Upper Mainstem Eel River watershed on behalf of the landowner, Hawthorne Timber Company, LLC.

**Task** Develop ownership-wide WDRs for Campbell Timberland Management / Hawthorne Timber Company to address excess sediment and other water quality concerns on their property. Bring the WDRs to the Regional Water Board for their consideration. Should they be adopted by the Board, implement the WDRs.

### **Upper Mainstem Eel River Task 8**

#### **Work with the North Coast Railroad Authority**

**Background** The North Coast Railroad Authority owns the Northwestern Pacific Railroad that runs north through Little Lake Valley and then parallels Outlet Creek to Dos Rios.

The Regional Water Board, in cooperation with CDFG and DTSC, is working with the North Coast Railroad Authority to address excess sediment and other water quality concerns (primarily toxic waste and soil contamination issues) from the railroad. Under a court-established consent decree, the North Coast Railroad Authority inventoried all threatened and existing discharges, but the inventory is now old and out-of-date. The consent decree also set dates for the control of discharges. In addition, WDRs and CAOs have been adopted. Many requirements of the consent decree and Regional Water Board orders have not been met because of the lack of money. The North Coast Railroad Authority currently has funding to focus on re-opening the stretch of track from Marin County to Willits, and they are working on an EIR for their activities along this stretch.

- Task Continue to work cooperatively with CDFG and DTSC to ensure the North Coast Railroad Authority implements existing WDRs, CAOs, and the consent decree.
- Task Continue to work with the North Coast Railroad Authority on their EIR to (1) ensure existing excess sediment sites are identified, prioritized, controlled; (2) ensure future operations are conducted in a manner that prevents and minimizes additional excess sediment sites; and (3) ensure monitoring occurs.
- Task Revise existing WDRs that allow for the sidecast of sediment during emergencies to allow for train passage. Ensure sediment is not discharged into a water body.

### **Upper Mainstem Eel River Task 9**

#### **Work with Brooktrails**

Background Brooktrails is a residential neighborhood and community services district just west of Willits along Willits Creek. The Brooktrails Township Community Services District provides water, sewer, fire protection and recreation services and facilities to Brooktrails. There are currently 1,511 single family residences in Brooktrails, with 4,000 planned for at full build-out.

Task Work with the Brooktrails Township Community Services District to ensure their existing roads and facilities are not discharging excess sediment and that any new construction will prevent future discharges.

### **Upper Mainstem Eel River Task 10**

#### **Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

Background Approximately half of the Upper Mainstem Eel River watershed consists of Mendocino National Forest. Snow Mountain Wilderness also lies within the watershed.

Task Meet with United States Forest Service (USFS) staff to identify current and future sediment control actions in Mendocino National Forest, including the status of a excess sediment site inventory, site repair and control, and grazing management practices.

Task Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment and other water quality concerns in the Upper Mainstem Eel River watershed. According to the TMDL (U.S. EPA, 2004, p.57), USFS lands may meet sediment load allocations if future management practices and the intensity of management are not changed from the recent past, as provided by the NWFP.

**Upper Mainstem Eel River Task 11  
Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

Task Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment and other water quality concerns in the Upper Mainstem Eel River watershed.

**Upper Mainstem Eel River Task 12  
Implement General WDRs and a General Conditional Waiver for Vineyards**

Task Following their development and adoption, implement the general WDRs for excess sediment from vineyards (Regional Task 7).

Task Following their development and adoption, implement the general conditional waiver of WDRs for excess sediment from vineyards with a Farm Conservation Plan certified under Fish Friendly Farming (Regional Task 7).

Task Encourage enrollment in Fish Friendly Farming and the conditional waiver once it is developed.

**Upper Mainstem Eel River Task 13  
Develop WDRs for County Roads in Mendocino & Lake Counties**

Task Develop WDRs for Mendocino and Lake counties to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Upper Mainstem Eel River watershed, focus on Tomki Road (Mendocino County) and Lake County roads around Lake Pillsbury.

**Upper Mainstem Eel River Task 14**  
**Work with Caltrans on Hwy 101 and Hwy 162**

Task Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highway 101, Highway 162 (the Covelo Road), and other state highways in the Upper Mainstem Eel River watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

**Upper Mainstem Eel River Task 15**  
**Review Effectiveness of the Tomki Creek Restoration Project**

Background The Tomki Creek Restoration Project was an effort by the Mendocino County RCD, the NRCS, and local citizens in the 1980s and early 1990s to treat erosion sites and help restore the salmonid fishery. Bank stabilization work, riparian plantings, and other sediment control work was done in String, Rocktree, and Wheelbarrow creeks (all tributary to Tomki Creek) in the early 1990s. Most of this work was funded by 319(h) Nonpoint Source Grants.

Task Work with the Mendocino County RCD to investigate and review the effectiveness of the Tomki Creek Restoration Project.

Task Determine if additional restoration work is needed along Tomki Creek and its tributary streams.

Task If additional restoration work is needed, identify and rank additional work.

## MIDDLE MAINSTEM EEL RIVER WATERSHED SEDIMENT CONTROL TASKS

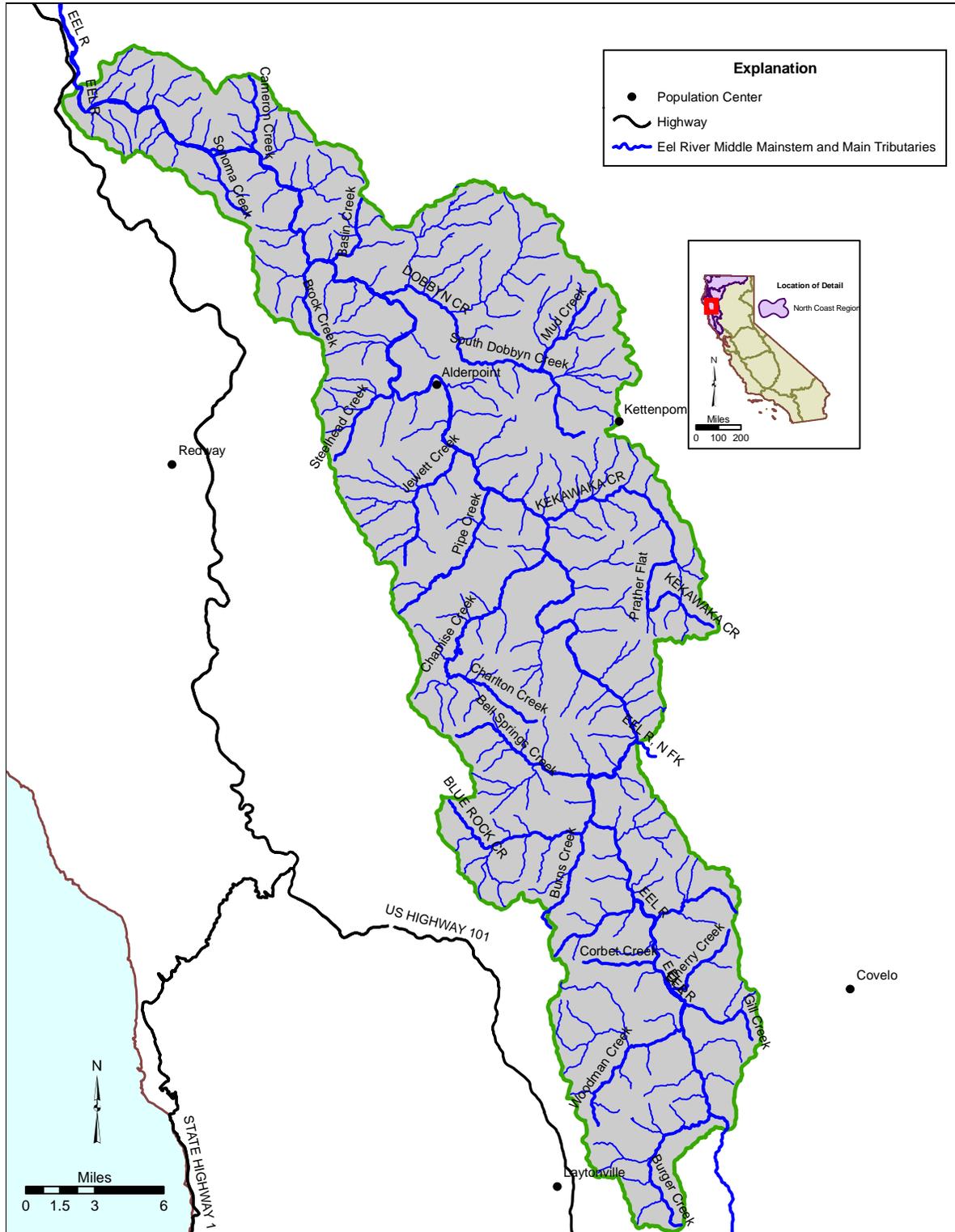


Figure 15. Middle Mainstem Eel River Watershed Map.

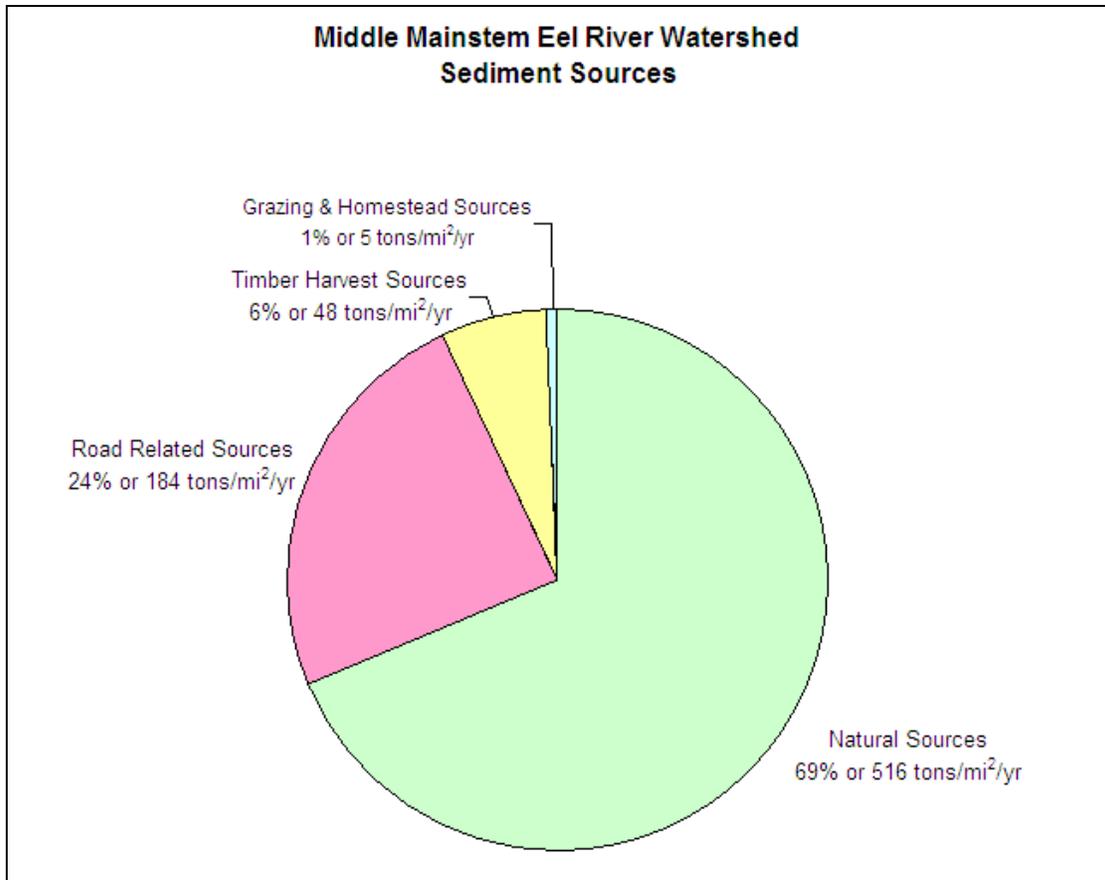


Figure 16. Middle Mainstem Eel River Watershed Sediment Sources. Data from: Middle Main Eel River TMDL (U.S. EPA 2005).

<b>Table 14</b>			
<b>Middle Mainstem Eel River Watershed Sediment Sources</b>			
	Sediment Source	tons/mi <sup>2</sup> /yr	
Natural	Landslides & Other Large Features	237	516
	Debris Slides & Bank Erosion	233	
	Earthflows	46	
Anthropogenic	Roads – Landslides	80	237
	Roads – Small Features (e.g., gullies, stream crossing failures)	104	
	Timber Harvest – Landslides & Other Large Features	36	
	Timber Harvest – Small Features	12	
	Grazing & Homesteads	5	
	<b>Total of All Sources</b>	<b>753</b>	

Data based on sediment load estimate from 1940 to 2005.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Middle Mainstem Eel River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff’s best professional judgement. The tasks may be revised as conditions change.

<b>Table 15</b>	
<b>Middle Mainstem Eel River Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Work with Round Valley Indian Tribes.
5	Identify most egregious excess sediment sources.
6	Use progressive enforcement or develop WDRs or conditional waivers.
7	Work with Fort Seward Ranch and Pacific Lumber Company to ensure compliance with the Measures to Control Excess Sediment Prohibition.
8	Work with North Coast Railroad Authority.
9	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
10	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
11	Develop WDRs for county roads in Mendocino, Humboldt, and Trinity counties.

**Middle Mainstem Eel River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Middle Mainstem Eel River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not all, of the key stakeholders in the Middle Mainstem Eel River watershed is listed here.

*The Friends of the Eel River*

The Friends of the Eel River is an advocacy group whose mission is to restore the Eel River and its tributaries to a natural state of abundance, wild and free. Their immediate goal is to remove Cape Horn Dam (Van Arsdale Reservoir) and Scott Dam (Lake Pillsbury).

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board’s excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Middle Mainstem Eel River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Upper Mainstem Eel River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Middle Mainstem Eel River Task 3**

#### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Middle Mainstem Eel River Task 4**

#### **Work with Round Valley Indian Tribes**

Task Meet with tribal representatives of the Round Valley Reservation to discuss stream restoration work, encourage continued restoration efforts, suggest restoration techniques, warn against other restoration techniques, encourage source control and road repair, and discuss requirements for 401 Certifications for dredge and fill activities on non-tribal land. Offer assistance.

### **Middle Mainstem Eel River Task 5**

#### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Considering the remote nature of the Middle Fork Eel River watershed and the lack of public roads, aerial flights will be the primary reconnaissance method. Focus initial reconnaissance efforts in Thompson and Kapple creeks downstream of McCann. These creeks provide some of the only coho rearing habitat in the Middle Mainstem Eel River watershed. Also focus initial efforts on rural ranch roads.

### **Middle Mainstem Eel River Task 6**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

- Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:
- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
  - Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
  - Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
  - Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Middle Mainstem Eel River watershed, this task, in tandem with Middle Mainstem Eel River Task 5 above, is expected to be especially useful for controlling excess sediment from the private ranches, homesteads, and rural residences that make up the majority of the watershed.

### **Middle Mainstem Eel River Task 7**

#### **Work with Fort Seward Ranch and Pacific Lumber Company to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

Background Fort Seward Ranch is an approximately 25,000 acre private ranch owned by the Satterly Family. Timber harvesting and grazing activities possibly discharge excess sediment. A sediment source inventory has been developed for the property.

Pacific Lumber Company (PALCO) owns land downstream of Eel Rock where conifers are more prevalent with the influence of coastal fog.

Task Work with Fort Seward Ranch/the Satterly Family and Pacific Lumber Company to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

**Middle Mainstem Eel River Task 8**  
**Work with the North Coast Railroad Authority**

- Background** The North Coast Railroad Authority owns the Northwestern Pacific Railroad that runs parallel to the Eel River. The Regional Water Board, in cooperation with CDFG and DTSC, is working with the North Coast Railroad Authority to address excess sediment and other water quality concerns (primarily toxic waste and soil contamination issues) from the railroad. Under a court-established consent decree, the North Coast Railroad Authority inventoried all threatened and existing discharges, but the inventory is now old and out-of-date. The consent decree also set dates for the control of discharges. In addition, WDRs and CAOs have been adopted. Many requirements of the consent decree and Regional Water Board orders have not been met because of the lack of money. The North Coast Railroad Authority currently has funding to focus on re-opening the stretch of track from Marin County to Willits, and they are working on an EIR for their activities along this stretch.
- Task** Continue to work cooperatively with CDFG and DTSC to ensure the North Coast Railroad Authority implements existing WDRs, CAOs, and the consent decree.
- Task** Continue to work with the North Coast Railroad Authority on their EIR to (1) ensure existing excess sediment sites are identified, prioritized, controlled; (2) ensure future operations are conducted in a manner that prevents and minimizes additional excess sediment sites; and (3) ensure monitoring occurs.
- Task** Revise existing WDRs that allow for the sidecast of sediment during emergencies to allow for train passage. Ensure sediment is not discharged into a water body.

**Middle Mainstem Eel River Task 9**  
**Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

- Task** Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment and other water quality concerns in the Middle Mainstem Eel River watershed. The WDRs or the conditional waiver may apply to all USFS land in the North Coast Region, to just the Six Rivers National Forest, or to just the land within the Six River National Forest that is also within the boundaries of the Middle Mainstem Eel River watershed.

**Middle Mainstem Eel River Task 10**

**Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

Task            Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment and other water quality concerns in the Middle Mainstem Eel River watershed.

**Middle Mainstem Eel River Task 11**

**Develop WDRs for County Roads in Mendocino, Humboldt, and Trinity Counties**

Task            Develop WDRs for Mendocino, Humboldt, and Trinity counties to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Middle Mainstem Eel River watershed, focus on Alderpoint Road and Dyerville Loop Road. For county roads that run through open grazing land, the counties should fence culvert outlets to protect against grazing-caused erosion.

## LOWER MAINSTEM EEL RIVER WATERSHED SEDIMENT CONTROL TASKS

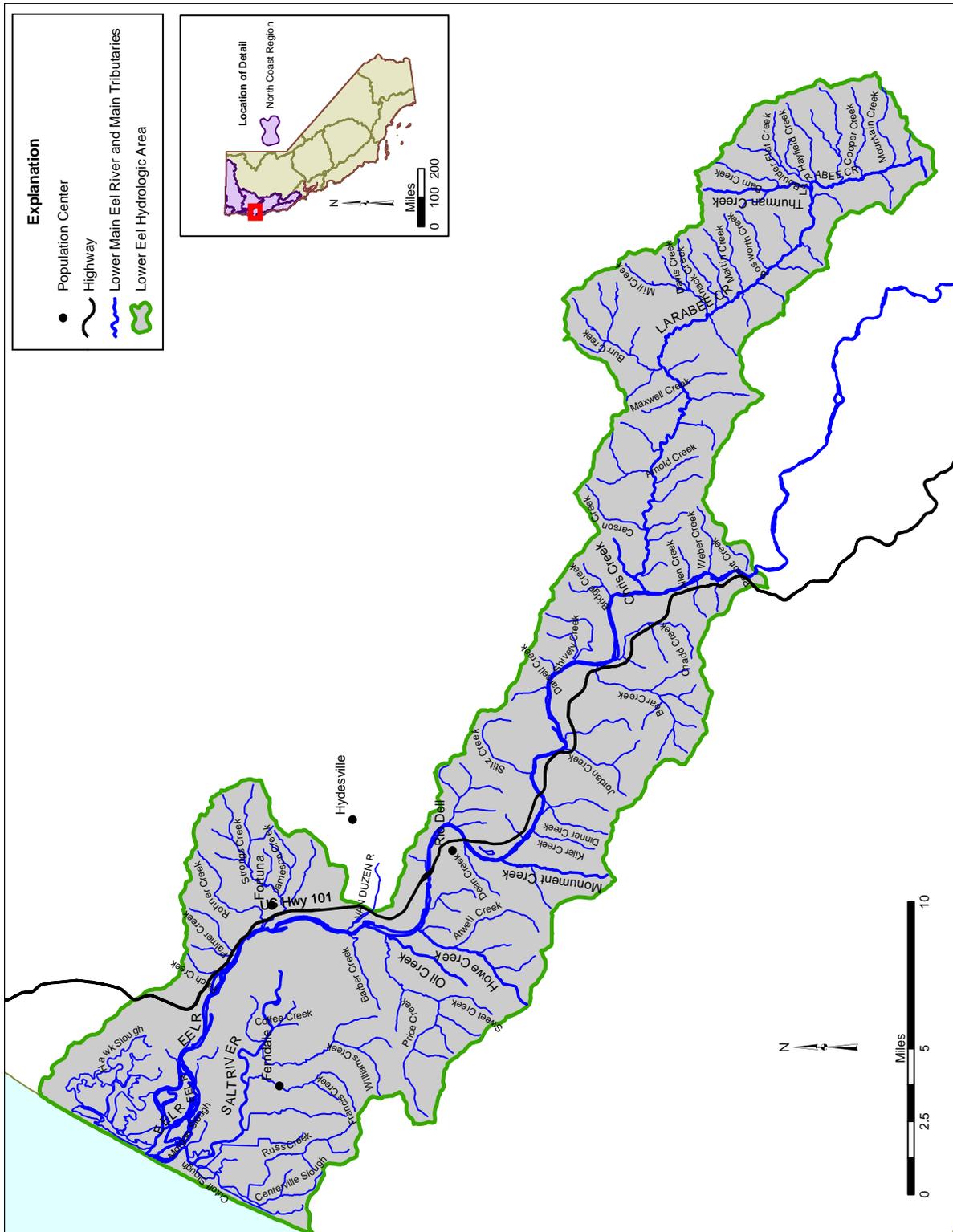


Figure 17. Lower Mainstem Eel River Watershed Map.

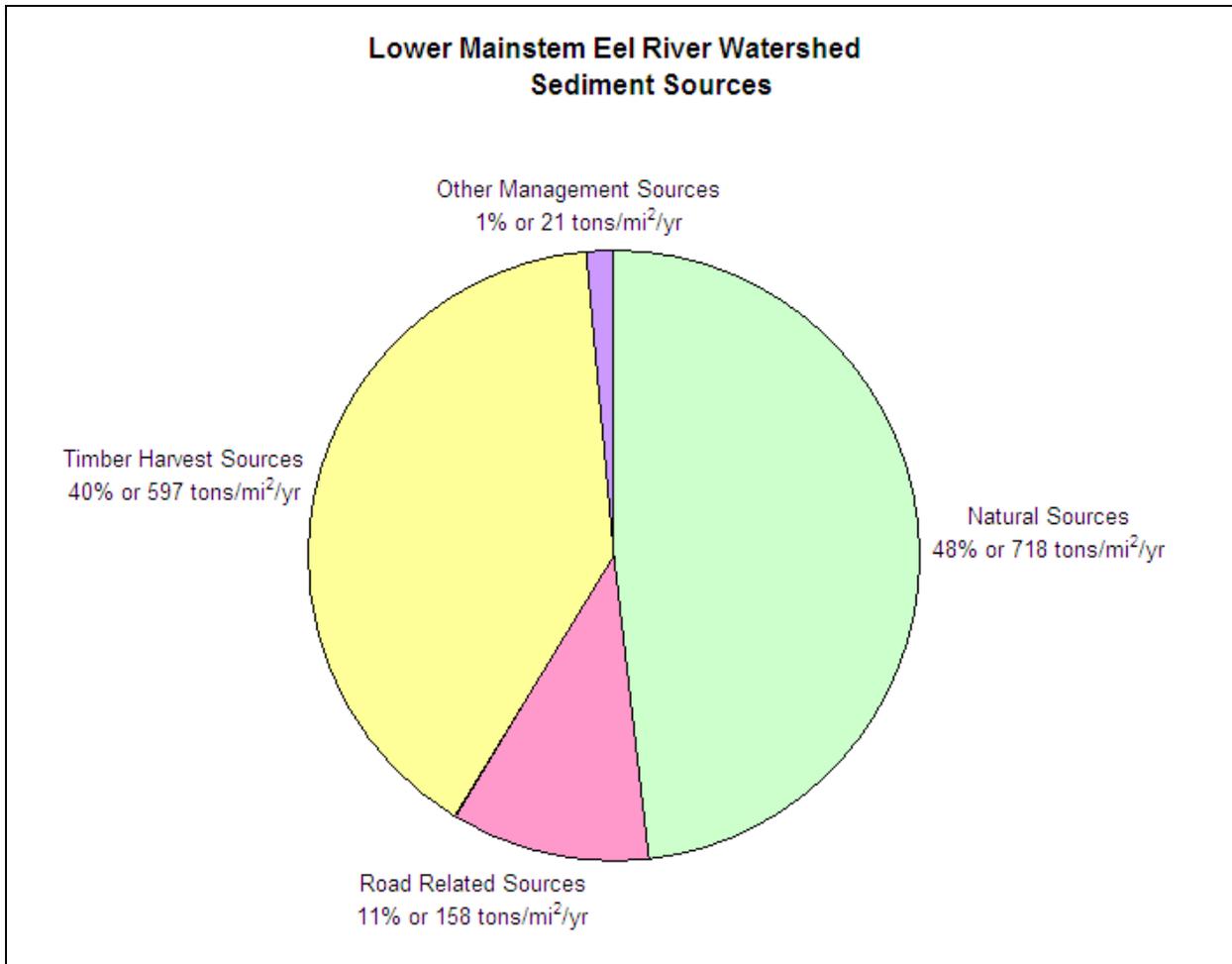


Figure 18. Lower Mainstem Eel River Watershed Sediment Sources. Data from: TMDL (U.S. EPA 2007a).

<b>Table 16</b>			
<b>Lower Mainstem Eel River Watershed Sediment Sources</b>			
	Sediment Source	tons/mi <sup>2</sup> /yr	
Natural	Earthflows	56	718
	Non-Earthflow	662	
Anthropogenic	Roads – Episodic Road Erosion (mass wasting and fluvial erosion)	43	776
	Roads – Chronic Road Erosion (surface erosion)	115	
	Timber Harvest	590	
	Timber Harvest – Skid Trails	7	
	Bank Erosion	21	
	<b>Total of All Sources</b>	<b>1,494</b>	

Data based on sediment load estimate from 1955 to 2003. Data from: TMDL (U.S. EPA 2007a).

The Lower Mainstem Eel River watershed includes the mainstem Eel River downstream of the confluence with the South Fork Eel River to the Pacific Ocean, Larabee Creek, and the Salt River. The Van Duzen River is discussed separately.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Lower Mainstem Eel River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff’s best professional judgement. The tasks may be revised as conditions change.

<b>Table 17</b>	
<b>Lower Mainstem Eel River Tasks</b>	
1	Identify and work with key stakeholders
2	Conduct outreach and education and work with interested stakeholders.
3	Develop dairy-focused outreach and education program.
4	Fund sediment waste discharge control projects.
5	Work with Table Bluff Rancheria – Wiyot Tribe.
6	Identify most egregious excess sediment sources.
7	Use progressive enforcement or develop WDRs or conditional waivers.
8	Work with Eel River Sawmills, Humboldt Redwoods State Park, and Pacific Lumber Company to ensure compliance with the Measures to Control Excess Sediment Prohibition.
9	Work with the North Coast Railroad Authority.
10	Work with Humboldt County and City of Fortuna to improve stormwater requirements.
11	Work with Humboldt County RCD on the Coordinated Permit Program.
12	Continue to regulate instream gravel mining operations.
13	Ensure projects in the estuary and 401 certifications improve conditions.
14	Develop ownership-wide WDRs for Green Diamond.
15	Develop watershed-wide WDRs for timber harvest activities in Bear Creek.
16	Develop watershed-wide WDRs for timber harvest activities in Jordan Creek.
17	Develop watershed-wide WDRs for timber harvest activities in Stitz Creek.
18	Develop general WDRs and a general conditional waiver for dairies.
19	Develop WDRs for county roads in Humboldt County.
20	Work with Caltrans on Hwy 101.

**Lower Mainstem Eel River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Lower Mainstem Eel River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Lower Mainstem Eel River are listed here.

*Eel River Watershed Improvement Group*

The Eel River Watershed Improvement Group (ERWIG) is a non-profit, landowner-based organization whose mission is to improve stream salmonid habitat conditions in the Eel River basin. ERWIG is primarily focused on the

South Fork Eel River, the Van Duzen River, and the Lower Mainstem Eel River where they are working under a CDFG grant to inventory road-related sediment sources and other watershed restoration work.

*Friends of the Eel River*

The Friends of the Eel River is an advocacy group whose mission is to restore the Eel River and its tributaries to a natural state of abundance, wild and free. Their immediate goal is to remove Cape Horn Dam (Van Arsdale Reservoir) and Scott Dam (Lake Pillsbury).

*Fortuna Creeks Project*

The Fortuna Creeks Project is a high school based organization that conducts stream monitoring and restoration work.

*Humboldt Creamery Association*

The Humboldt Creamery Association is a group of forty-three farming families in the Lower Mainstem Eel River watershed.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**Lower Mainstem Eel River Task 2**

**Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts to promote excess sediment control in the Upper Mainstem Eel River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

**Lower Mainstem Eel River Task 3**

**Develop Dairy-Focused Outreach and Education Program**

Task Work with the Humboldt County Farm Bureau, Western United Dairymen, dairy operators, and stakeholders to develop and implement a collaborative outreach and education program for dairy water quality. Program components should include photos and examples of active excess sediment sources, natural sources,

excess sediment sources that are healing, control projects and measures, and the inclusion of technical experts.

#### **Lower Mainstem Eel River Task 4 Fund Excess Sediment Control Projects**

**Background** As of April 2007, the Regional Water Board is involved in providing the following grant funding for work in the Lower Mainstem Eel River watershed:

- Approximately \$5,000,000 to Humboldt County RCD for the Salt River Ecosystem Project.
- Approximately \$506,000 to Humboldt County RCD for the Humboldt Agriculture Phase III Proposition 13 Grant Project.
- Approximately \$500,000 to Humboldt County RCD for the Eel River Sediment (III) 319(h) Grant Project.
- Approximately \$773,000 to the Eel River Watershed Improvement Group for the Little Larabee Watershed Sediment Project.

**Task** Continue to fund excess sediment control projects in the Lower Mainstem Eel River watershed through available nonpoint source and watershed protection grants and loans (Regional Task 21).

#### **Lower Mainstem Eel River Task 5 Work with the Table Bluff Reservation - Wiyot Tribe**

**Background** The Table Bluff Reservation – Wiyot Tribe owns 20 acres in the Eel River estuary that is comprised of an un-delineated mix of wetlands and upland habitat. This area is now referred to as “the old Reservation.” The Table Bluff Reservation – Wiyot Tribe has an established Water Pollution Control Program per the CWA, has performed a Preliminary Water Quality Assessment, created a Non-Point Source Assessment and Management Plan, and submitted to US EPA a draft Quality Assurance Program Plan for the Tribe’s water quality monitoring program. It doesn’t appear that sedimentation impacts the Reservation or that the Tribe’s activities are discharging significant amounts of excess sediment.

**Task** Coordinate outreach and education efforts (Regional Task 5) with the Table Bluff Reservation – Wiyot Tribe.

#### **Lower Mainstem Eel River Task 6 Identify Most Egregious Excess Sediment Sources**

**Task** Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations,

general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

### **Lower Mainstem Eel River Task 7**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

- Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:
- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
  - Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
  - Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
  - Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Lower Mainstem Eel River watershed, this task, in tandem with Lower Mainstem Eel River Task 6 above, is expected to be especially useful for controlling excess sediment from the private ranches, homesteads, and rural residences in the watershed.

### **Lower Mainstem Eel River Task 8**

#### **Work with Eel River Sawmills, Humboldt Redwoods State Park, and Pacific Lumber Company to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

Task Work with Eel River Sawmills, Humboldt Redwoods State Park, and Pacific Lumber Company to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

Task When working with Pacific Lumber Company, incorporate current Regional Water Board timber harvest staff efforts to develop watershed-wide WDRs for all of PALCO's property in Bear and Jordan Creeks.

**Lower Mainstem Eel River Task 9**  
**Work with the North Coast Railroad Authority**

**Background** The North Coast Railroad Authority owns the Northwestern Pacific Railroad that runs parallel to the Eel River. The Regional Water Board, in cooperation with CDFG and DTSC, is working with the North Coast Railroad Authority to address excess sediment and other water quality concerns (primarily toxic waste and soil contamination issues) from the railroad. Under a court-established consent decree, the North Coast Railroad Authority inventoried all threatened and existing discharges, but the inventory is now old and out-of-date. The consent decree also set dates for the control of discharges. In addition, WDRs and CAOs have been adopted. Many requirements of the consent decree and Regional Water Board orders have not been met because of the lack of money. The North Coast Railroad Authority currently has funding to focus on re-opening the stretch of track from Marin County to Willits, and they are working on an EIR for their activities along this stretch.

**Task** Continue to work cooperatively with CDFG and DTSC to ensure the North Coast Railroad Authority implements existing WDRs, CAOs, and the consent decree.

**Task** Continue to work with the North Coast Railroad Authority on their EIR to (1) ensure existing excess sediment discharges are identified, prioritized, controlled; (2) ensure future operations are conducted in a manner that prevents and minimizes additional excess sediment discharges; and (3) ensure monitoring occurs.

**Task** Revise existing WDRs that allow for the sidecast of sediment during emergencies to allow for train passage. Ensure sediment is not discharged into a water body.

**Lower Mainstem Eel River Task 10**  
**Work with Humboldt County and City of Fortuna to Improve Storm Water Requirements**

**Task** Work with Humboldt County and the City of Fortuna on improving the storm water requirements for rural residential developments.

**Lower Mainstem Eel River Task 11**  
**Work with Humboldt County RCD on the Coordinated Permit Program**

**Task** Work with Humboldt County RCD and Sustainable Conservation to develop and implement a WDR and 401 Certification for restoration projects similar to the Navarro Coordinated Permit Program (see Regional Task 10).

### **Lower Mainstem Eel River Task 12**

#### **Continue to Regulate Instream Gravel Mining Operations**

**Background** There are eleven gravel mining sites in the Lower Mainstem Eel River watershed that remove over 5,000 yd<sup>3</sup> per year of aggregate. Most of the concern in managing gravel mines is in the reconfiguration of the low flow channel. Trench, alcove, or wetland pit mining are recommended over bar skimming.

**Task** Continue to permit gravel mining operations through 401 Certifications. Ensure mining activities use trench, alcove, or wetland pit mining. Ensure mining activities are conducted in a manner that (1) prevents and reduces excess sediment; (2) ensures existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored; (3) ensures adaptive management occurs (4) protects and restores the shapes, slopes, and planforms of stream channels that are necessary to balance sediment loads and water discharges in streams and to prevent excessive erosion or deposition of sediment; (5) protects and restores the connectivity between streams and their floodplains; and (6) protects and restores riparian vegetation. Ensure instream impacts are mitigated with stream restoration projects or other mitigation projects when specifically called for in a 401 Certification permit.

**Task** Continue to use industrial stormwater permits to regulate stormwater runoff from gravel processing plants and haul roads in the Lower Mainstem Eel River watershed. Ensure activities are conducted so as to prevent and minimize future excess sediment discharges. Ensure existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored. Ensure adaptive management occurs. Focus on the prevention and control of excess sediment from access and haul roads.

### **Lower Mainstem Eel River Task 13**

#### **Ensure Projects in the Estuary and 401 Certifications Improve Conditions**

**Task** Ensure that any 401 Certifications for projects in the estuary and levee system achieve more natural flood plain characteristics. Utilize set back levees for the improvement of flood control, riparian function and to establish channel meander and habitat diversity.

### **Lower Mainstem Eel River Task 14**

#### **Develop Ownership-wide WDRs for Green Diamond**

**Task** Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership in the Lower Mainstem Eel River watershed (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their

consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property within the Lower Mainstem Eel River watershed.

**Lower Mainstem Eel River Task 15**

**Develop Watershed-wide WDRs for Timber Harvest Activities in the Bear Creek Watershed**

Task            Develop watershed-wide WDRs for timber harvest activities in the Bear Creek watershed. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The primary landowner in the Bear Creek watershed at the time of this writing is the Pacific Lumber Company (PALCO). Therefore, the WDRs may also take the form of ownership-wide WDRs for PALCO for all their activities in the Bear Creek watershed.

**Lower Mainstem Eel River Task 16**

**Develop Watershed-wide WDRs for Timber Harvest Activities in the Jordan Creek Watershed**

Task            Develop watershed-wide WDRs for timber harvest activities in the Jordan Creek watershed. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The primary landowner in the Jordan Creek watershed at the time of this writing is the Pacific Lumber Company (PALCO). Therefore, the WDRs may also take the form of ownership-wide WDRs for PALCO for all their activities in the Jordan Creek watershed.

**Lower Mainstem Eel River Task 17**

**Develop Watershed-wide WDRs for Timber Harvest Activities in the Stitz Creek Watershed**

Task            Develop watershed-wide WDRs for timber harvest activities in the Stitz Creek watershed. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The primary landowner in the Stitz Creek watershed at the time of this writing is the Pacific Lumber Company (PALCO). Therefore, the WDRs may also take the form of ownership-wide WDRs for PALCO for all their activities in the Stitz Creek watershed.

**Lower Mainstem Eel River Task 18**  
**Implement General WDRs and a General Conditional Waiver for Dairies**

Task            Following their development and adoption, implement the general WDRs and the general conditional waiver for dairies for excess sediment and other water quality concerns (Regional Task 8).

**Lower Mainstem Eel River Task 19**  
**Develop WDRs for County Roads in Humboldt County**

Task            Develop WDRs for Humboldt County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Lower Mainstem Eel River watershed, focus on Shively Road (consider winter closure).

**Lower Mainstem Eel River Task 20**  
**Work with Caltrans on Hwy 101**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highway 101, the Avenue of the Giants, and other state highways in the Lower Mainstem Eel River watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## VAN DUZEN RIVER WATERSHED SEDIMENT CONTROL TASKS

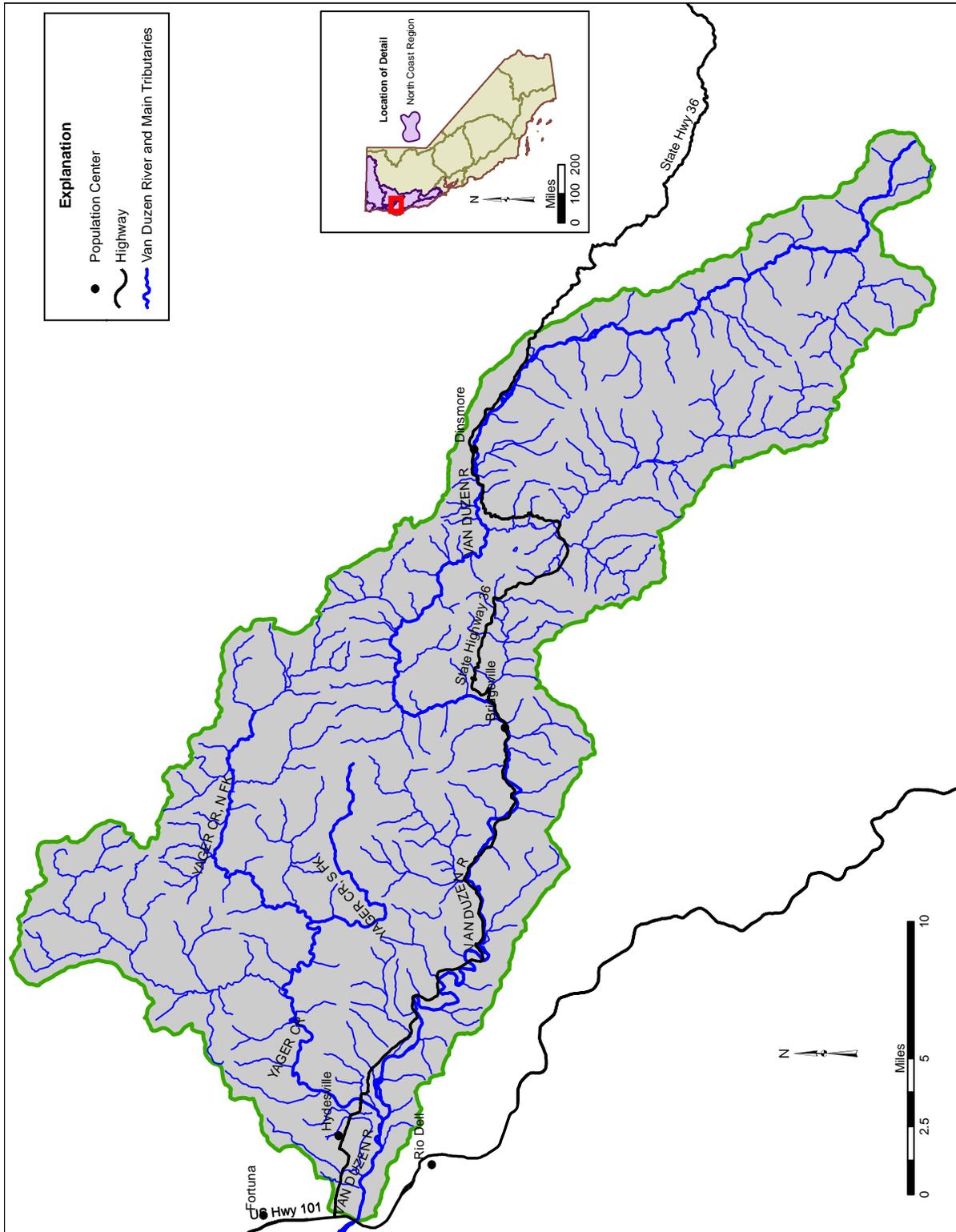


Figure 19. Van Duzen River Watershed Map.

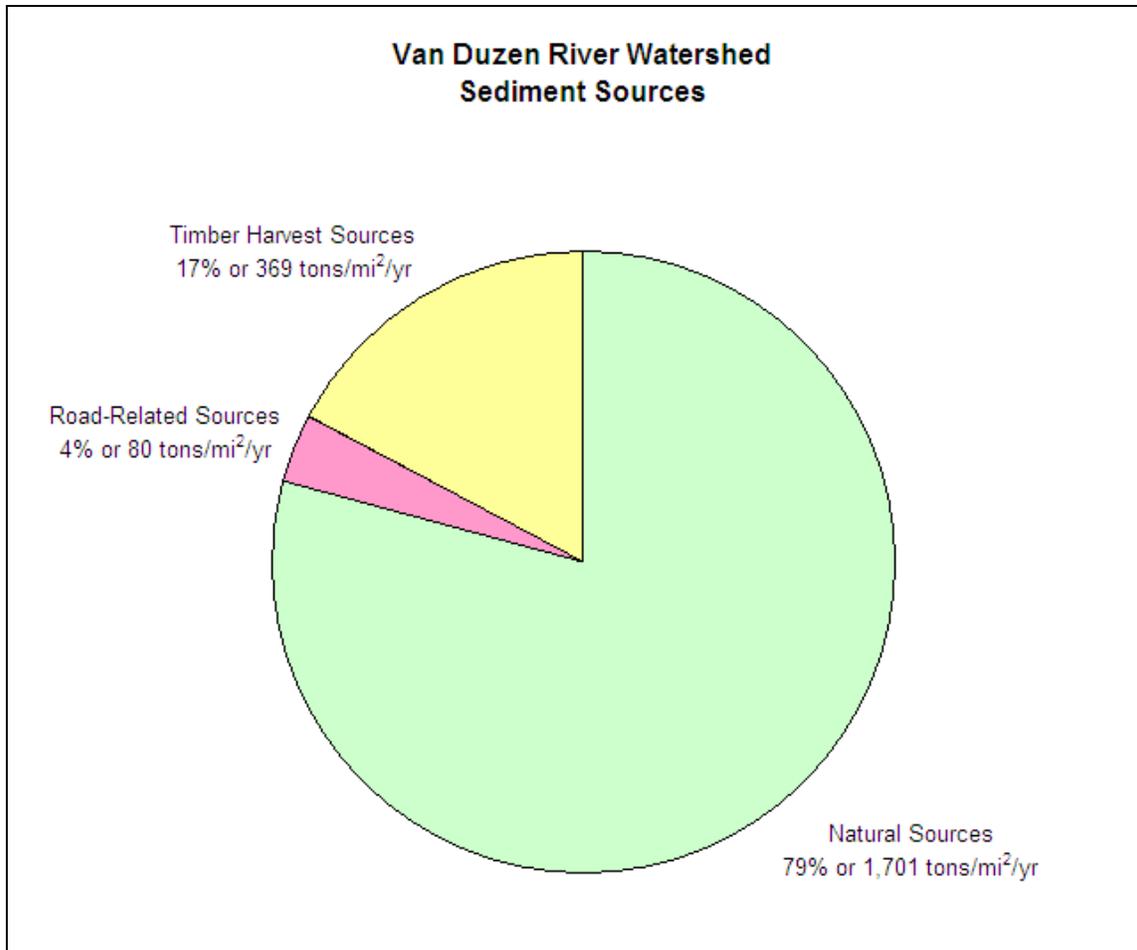


Figure 20. Van Duzen River Sediment Sources. Data from: Van Duzen River TMDL (U.S. EPA 1999c).

Sediment Source		tons/mi <sup>2</sup> /yr	
Natural	No Land Use Association	1,665	1,701
	Advanced Second Growth	36	
Anthropogenic	Road Related Sources	80	449
	Timber Harvest – Skid Trail Related	82	
	Timber Harvest – Tractor Clear Cut	194	
	Timber Harvest – Cable Clear Cut	57	
	Timber Harvest – Partial Harvest	36	
Total of All Sources		2,150	

Based on sediment load estimates from 1955 to 1999.

The Van Duzen River empties into the Lower Mainstem Eel River, and is thus organized in the Eel River section of this Work Plan. This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Van Duzen River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

**Table 19**  
**Van Duzen River Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund sediment waste discharge control efforts.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or conditional waivers.
6	Work with Humboldt County to reduce stormwater pollution.
7	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
8	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
9	Work with Pacific Lumber company to ensure compliance with the Measures to Control Excess Sediment Prohibition.
10	Develop ownership-wide WDRs for Green Diamond.
11	Develop WDRs for county roads in Humboldt and Trinity counties.
12	Work with Caltrans on Highway 36.

**Van Duzen River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Van Duzen River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Van Duzen River watershed are listed here.

*The Buckeye Conservancy*

The Buckeye Conservancy is an organization of family farm, ranch, and non-industrial forest landowners and resource managers in Humboldt County. The Buckeye Conservancy is dedicated to the promotion, communication, and implementation of those ideals and policies that support the ecologic and economic sustainability of natural resources and open space in family ownership.

*Eel River Watershed Improvement Group*

The Eel River Watershed Improvement Group (ERWIG) is a non-profit, landowner-based organization whose mission is to improve stream salmonid habitat conditions in the Eel River basin. ERWIG is primarily focused on the South Fork Eel River, the Van Duzen River, and the Lower Mainstem Eel River

where they are working under a CDFG grant to inventory road-related sediment sources and other watershed restoration work.

*Friends of the Eel River*

The Friends of the Eel River is an advocacy group whose mission is to restore the Eel River and its tributaries to a natural state of abundance, wild and free. Their immediate goal is to remove Cape Horn Dam (Van Arsdale Reservoir) and Scott Dam (Lake Pillsbury).

*Friends of the Van Duzen River*

The Friends of the Van Duzen is a grass roots community organization the is comprised of residents and visitors. The focus of the group is river restoration and organizing elementary student and citizen monitoring efforts.

*Yager/Van Duzen Environmental Stewards*

The Yager/Van Duzen Environmental Stewards (YES) is a landowner-based organization that is composed of private landowners that together own approximately 78% of the land base in the middle third of the Van Duzen River watershed. They focus of YES is to represent landowners and work with the agencies involved with water quality issues.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**Van Duzen River Task 2**

**Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Van Duzen River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Van Duzen River Task 3**

#### **Fund Excess Sediment Control Efforts**

**Background** As of April 2007, the Regional Water Board is involved with providing grant funding for the following excess sediment control projects in the Van Duzen River watershed.

- Approximately \$340,000 to the Friends of the Eel River for the Toward a Working TMDL: A Watershed Plan for the Van Duzen River Basin grant project.
- Approximately \$773,000 to the Eel River Watershed Improvement Group for the Little Larabee Watershed Sediment Project under the 319(h) Nonpoint Source Implementation grant program.
- \$500,000 to the Yager/Van Duzen Environmental Stewards for the Van Duzen Watershed Sediment Reduction 319(h) grant.

**Task** Continue to fund and seek additional funding for excess sediment control efforts and projects in the Van Duzen River watershed (Regional Task 21).

### **Van Duzen River Task 4**

#### **Identify Most Egregious Excess Sediment Sources**

**Task** Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in Lawrence Creek, Wolverton Gulch, Root Creek, Grizzly Creek, Stevens Creek, the mainstem Van Duzen River in the middle subbasin, Little Larabee Creek, and Little Van Duzen River. These streams are ranked as the highest priority for erosion and sedimentation control actions by the Department of Fish and Game under the California Coastal Watershed Planning and Assessment Program.

### **Van Duzen River Task 5**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

**Task** For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).

- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Van Duzen River watershed, this task, in tandem with Van Duzen River Task 4 above, is expected to be especially useful for controlling excess sediment from private ranches and rural residences throughout the watershed. Approximately 31% of the watershed is in parcels larger than 1 acre that are used for private ranches and non-industrial timber harvesting. Another 26% of the watershed is in parcels less than 1 acre that are used for private rural residences.

**Van Duzen River Task 6**  
**Work with Humboldt County to Reduce Stormwater Pollution**

Task            Work with Humboldt County to improve stormwater requirements for rural residential developments.

**Van Duzen River Task 7**  
**Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

Task            Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment in Six Rivers National Forest within the Van Duzen River watershed.

**Van Duzen River Task 8**  
**Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

Task            Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment on BLM land in the Van Duzen River watershed.

**Van Duzen River Task 9**  
**Work with Pacific Lumber Company to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

Task            Work with Pacific Lumber Company to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time

schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should PALCO choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

**Van Duzen River Task 10**  
**Develop Ownership-Wide WDRs for Green Diamond**

Task            Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property in the Van Duzen River watershed.

**Van Duzen River Task 11**  
**Develop WDRs for County Roads in Humboldt and Trinity Counties**

Task            Develop WDRs for Humboldt County and Trinity County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Van Duzen River watershed, focus on Shively Road.

**Van Duzen River Task 12**  
**Work with Caltrans on Highway 36**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highway 36 and other state highways in the Van Duzen River watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## ELK RIVER WATERSHED SEDIMENT CONTROL TASKS

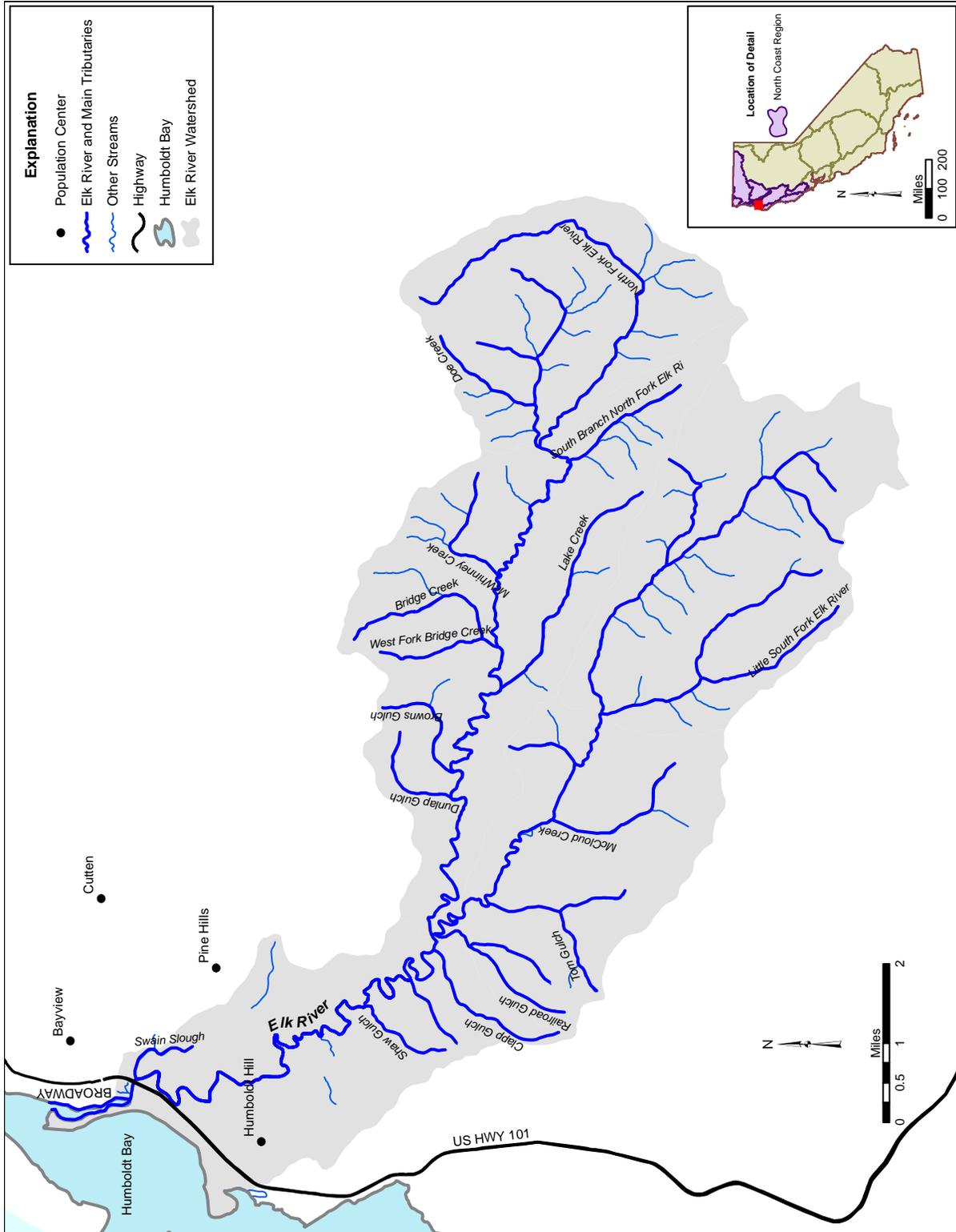


Figure 21. Elk River Watershed Map

The sediment TMDL for Elk River is currently being developed by Regional Water Board staff. An estimate of current sediment sources is not yet available.

Regional Water Board staff are also currently developing the implementation plan for the sediment TMDL, which will include the tasks that need to be undertaken to comprehensively control human-caused excess sediment in the Elk River watershed. The draft TMDL and implementation plan is expected to be completed in early 2008. The following is a list of tasks that are likely to be included in the implementation plan for the Elk River Sediment TMDL. However, until the sediment source analysis and the TMDL are completed, it is unknown if additional tasks might be needed. The tasks may be revised as conditions change and more information is available.

<b>Table 20 Elk River Tasks</b>	
1	Fund excess sediment control projects.
2	Continue to implement CAOs for PALCO.
3	Continue to implement watershed-wide WDRs for PALCO.
4	Continue to implement watershed-wide WDRs for Green Diamond.
5	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
6	Develop the sediment TMDL.
7	Assist small landowners develop NPS Pollution Prevention Plans.
8	Identify most egregious excess sediment sources.
9	Use progressive enforcement or develop WDRs or waivers.
10	Work with Humboldt County & City of Eureka to improve stormwater requirements.
11	Work w/ landowners on water supply restoration/replacement & flood nuisance abatement.

### **Elk River Task 1**

#### **Fund Excess Sediment Control Projects**

Task            Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Elk River Task 2**

#### **Continue to Implement Cleanup & Abatement Orders for PALCO**

Task            Continue to implement cleanup and abatement orders for Pacific Lumber Company (PALCO) to control existing excess sediment on their land in the Elk River watershed. Modify cleanup and abatement orders as necessary based on the TMDL and other new information and data.

### **Elk River Task 3**

#### **Continue to Implement Watershed-wide WDRs for PALCO**

Task Continue to implement watershed-wide WDRs for PALCO to ensure current and future land disturbing activities prevent excess sediment discharges. Modify watershed-wide WDRs based on the TMDL and other new information and data.

### **Elk River Task 4**

#### **Continue to Implement Watershed-wide WDRs for Green Diamond**

Task Continue to implement watershed-wide WDRs for Green Diamond to control existing excess sediment sites and ensure current and future activities prevent additional discharges. Modify watershed-wide WDRs based on the TMDL and other new information and data.

### **Elk River Task 5**

#### **Implement WDRs or a Wavier for BLM for Non-Timber Harvest Activities**

Task Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment and address other water quality concerns on BLM lands in the Elk River watershed.

### **Elk River Task 6**

#### **Develop the Sediment TMDL**

Task Develop the sediment TMDL for the Elk River watershed, including the implementation plan, and bring it to the Regional Water Board for their consideration.

### **Elk River Task 7**

#### **Assist Small Landowners Develop and Implement NPS Pollution Prevention Plans**

Task Assist small landowners in the lower Elk River watershed to obtain grant funding for the development of NPS Pollution Prevention Plans. Assist in the development, implementation, and monitoring of the plans.

**Elk River Task 8**  
**Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

**Elk River Task 9**  
**Use Progressive Enforcement or Develop and Implement WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

**Elk River Task 10**  
**Work with Humboldt County and City of Eureka to Improve Storm Water Requirements**

Task Work with Humboldt County's and the City of Eureka's Planning Departments on improving the storm water requirements for rural residential developments.

**Elk River Task 11**  
**Work with Landowners to Develop and Implement Strategy for Water Supply Restoration or Replacement and Flood Nuisance Abatement**

Task Issue Cleanup and Abatement Order(s) to responsible parties for domestic and agricultural water supply restoration or replacement and flood nuisance abatement.

Task Work with landowners to develop watershed groups and restoration strategies to facilitate beneficial use restoration and nuisance abatement.

## ESTERO AMERICANO WATERSHED SEDIMENT CONTROL TASKS

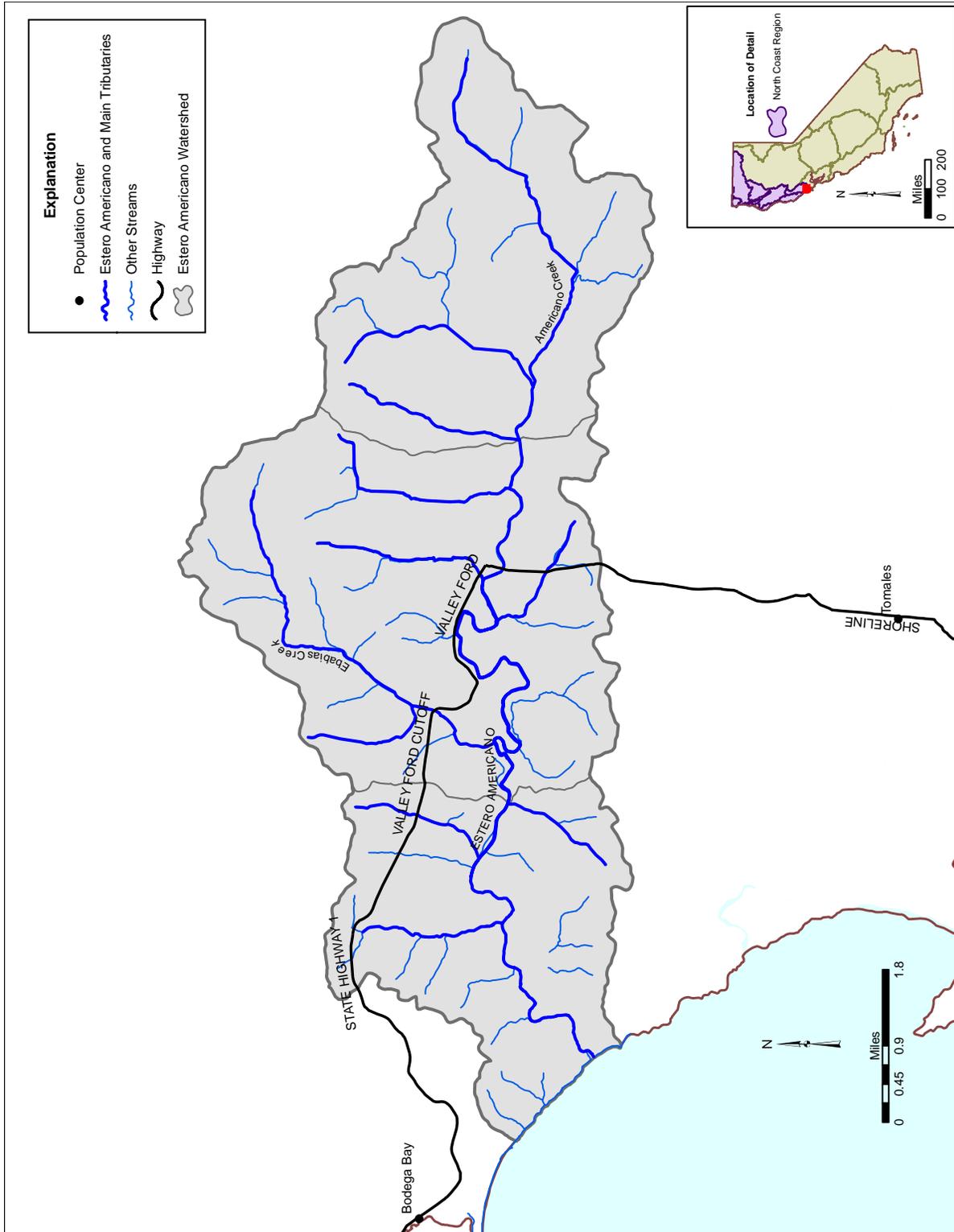


Figure 22. Estero Americano Watershed Map.

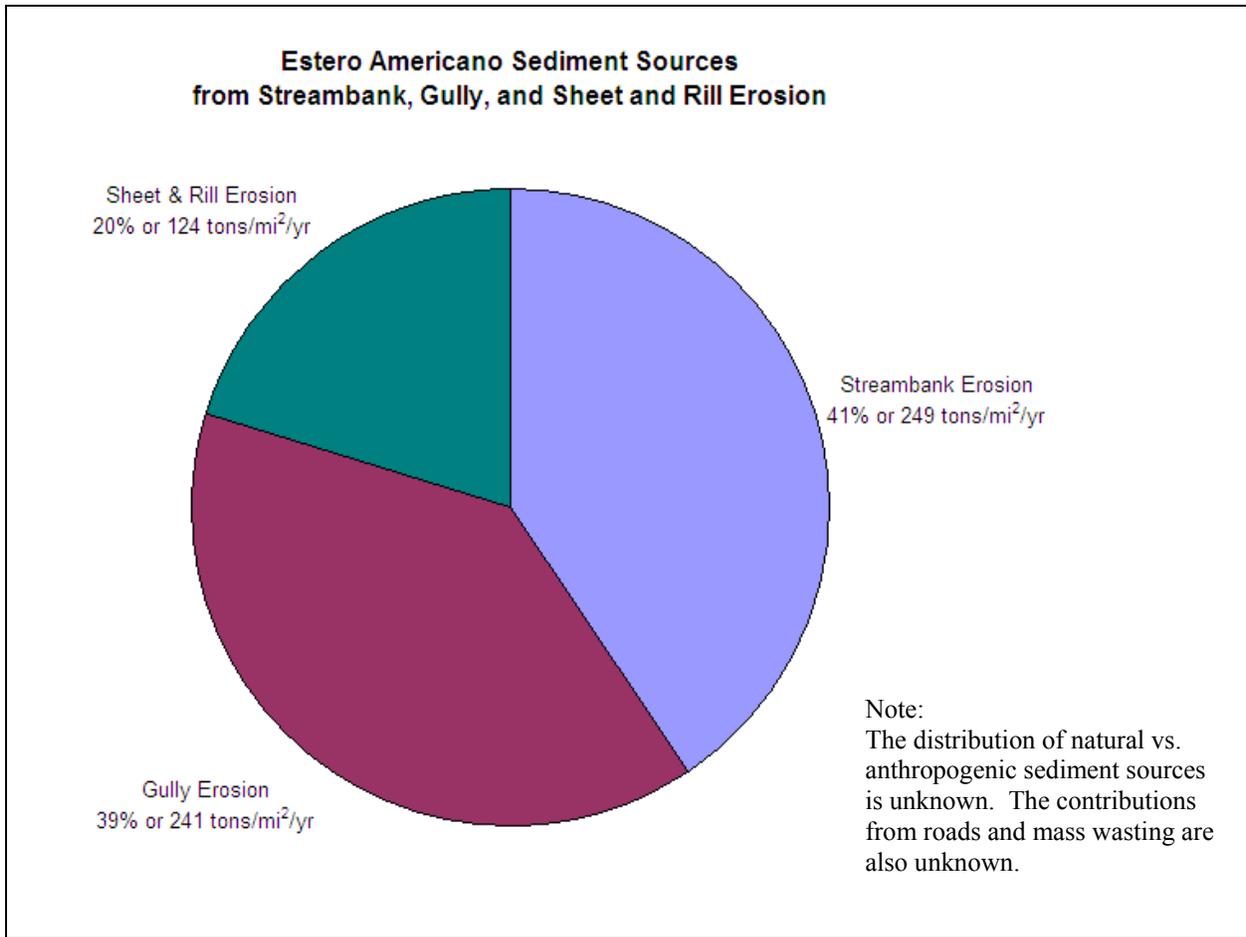


Figure 23. Estero Americano Watershed Sediment Sources. Data from: Hickey 2007.

<b>Table 21 Estero Americano Watershed Sediment Sources from Streambank, Gully, and Sheet and Rill Erosion</b>	
Sediment Source	tons/mi <sup>2</sup> /yr
Streambank Erosion – Blue line Streams	209
Streambank Erosion – Seasonal Streams	39
Gully Erosion	241
Sheet and Rill Erosion	124
<b>Total</b>	<b>613</b>

From: The Estero Americano Watershed Management Plan Version 1, February 2007 by the Gold Ridge RCD (Hickey 2007).

The sediment TMDL for the Estero Americano watershed, which includes Americano Creek, has not been developed and an estimate of all sediment sources is not available. However, the Gold Ridge RCD estimated sediment loads for streambank, gully, and sheet and rill erosion. These data are presented above. It is important to note that these load estimates do not distinguish between natural and anthropogenic sources and they do not include loads from roads and mass wasting, which are often the largest sediment sources in north coast watersheds.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Albion River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. However, until the sediment source analysis and the TMDL are completed, it is unknown if additional tasks might be needed. The tasks may be revised as conditions change and more information is available.

<b>Table 22</b>	
<b>Estero Americano Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Develop dairy-focused outreach and education program.
4	Fund excess sediment control projects.
5	Implement the Estero Americano Watershed Management Plan.
6	Identify most egregious excess sediment sources.
7	Use progressive enforcement or develop WDRs or conditional waivers
8	Implement general WDRs and a general conditional waiver for dairies.
9	Work with Sonoma Land Trust on the Estero Americano Preserve.
10	Develop WDRs for county roads in Sonoma and Marin counties.
11	Work with Caltrans on Hwy 1 and Bodega Hwy.

**Estero Americano Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Estero Americano watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not all, of the key stakeholders in the Estero Americano watershed is the Gold Ridge Resource Conservation District (RCD).

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

## **Estero Americano Task 2**

### **Conduct Outreach and Education and Work with Interested Stakeholders**

**Task** Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Estero Americano watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

## **Estero Americano Task 3**

### **Develop Dairy-Focused Outreach and Education Program**

**Background** The Animal Resource Management Committee is run by the Sonoma County Farm Bureau to help dairy, horse, poultry, and livestock producers address animal waste management issues, and encourage environmental compliance and protection of our environment.

**Task** Work with the Animal Resource Management Committee, Sonoma County Farm Bureau, Western United Dairymen, dairy operators, and stakeholders to develop and implement a collaborative outreach and education program for dairy water quality. Attend meetings of the Animal Resource Management Committee. Outreach and education program components should include photos and examples of active excess sediment sources, natural sources, excess sediment sources that are healing, control projects and measures, and the inclusion of technical experts.

## **Estero Americano Task 4**

### **Fund Excess Sediment Control Projects**

**Task** Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

## **Estero Americano Task 5**

### **Implement the Estero Americano Watershed Management Plan**

**Background** The Estero Americano Watershed Management Plan, Version 1, February 2007 (Hickey 2007) was developed by the Gold Ridge RCD and partly funded by a 205(j) planning grant. The Plan identifies potential sources of the watershed's sediment impairment and identifies management solutions that were developed through a voluntary and cooperative planning process.

The Estero Americano Watershed Management Plan is directly applicable to the dairies and ranches that make up over 80% of the Estero Americano watershed.

The Plan includes in Chapter 6 several erosion and sediment reduction action plans. These action plans are to:

- Implement a rangeland water quality management program.
- Reduce sediment loads to the estuary from gully erosion.
- Implement a private roads erosion reduction program.

The Gold Ridge RCD currently has funding to implement some of the action plan tasks. The implementation of projects that are currently funded is expected to reduce excess sediment from agricultural sources by 15% or 95 tons/mi<sup>2</sup>/yr.

As of April 2007, the Regional Water Board is involved in providing the following grant funding for work in the Estero Americano watershed:

- \$580,000 to the Gold Ridge RCD for dairy related water quality work under the Proposition 50 Dairy Water Quality Grant program.
- Approximately \$863,000 to the Gold Ridge RCD for the Estero Americano Watershed Rangeland Water Quality Management Project.
- Approximately \$606,000 to the Gold Ridge RCD for the Estero Americano Watershed Sediment Reduction Project.

Task Continue to fund, seek additional funding, and assist the Gold Ridge RCD, landowners, and other stakeholders to implement the action plans listed in Chapter 6 of the Estero Americano Watershed Management Plan (Hickey 2000).

### **Estero Americano Task 6 Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts on the parts of the watershed that drain into Ebabias Creek and the Estero Americano downstream from the confluence with Ebabias Creek. These streams are likely the only potential restorable habitat for steelhead in the watershed.

### **Estero Americano Task 7 Use Progressive Enforcement or Develop and Implement WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.

- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Estero Americano watershed, this task, in tandem with Estero Americano Task 4 above, is expected to be especially useful for controlling excess sediment from the rural residences around Valley Ford, Bloomfield, and in the upper reaches of Ebabias Creek off Bodega Highway, Barnett Valley Road, and Burnside Road.

### **Estero Americano Task 8 Implement General WDRs and a General Conditional Waiver for Dairies**

Task            Following their development and adoption, implement the general WDRs and the general conditional waiver for dairies for excess sediment and other water quality concerns (Regional Task 8).

### **Estero Americano Task 9 Work with Sonoma Land Trust on the Estero Americano Preserve**

Background    The Estero Americano Preserve is a 127 parcel that borders the north side of the Estero. The Preserve is managed by the Sonoma Land Trust, who purchased the property along with the Sonoma County Agricultural Preservation and Open Space District and the Coastal Conservancy. The Sonoma Land Trust has prepared a road management and erosion control plan for the Preserve.

Task            Work with the Sonoma Land Trust to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. Review the road management and erosion control plan.

Task            Coordinate workshop efforts with the Sonoma Land Trust (Regional Task 5). Consider using the Preserve as a field trip location.

### **Estero Americano Task 10 Develop WDRs for County Roads in Sonoma and Marin Counties**

Task            Develop WDRs for Sonoma County and Marin County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

**Estero Americano Task 11**  
**Work with Caltrans on Highway 1 and Bodega Highway**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highway 1, Bodega Highway, and other state highways in the Estero Americano watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## FRESHWATER CREEK WATERSHED SEDIMENT CONTROL TASKS

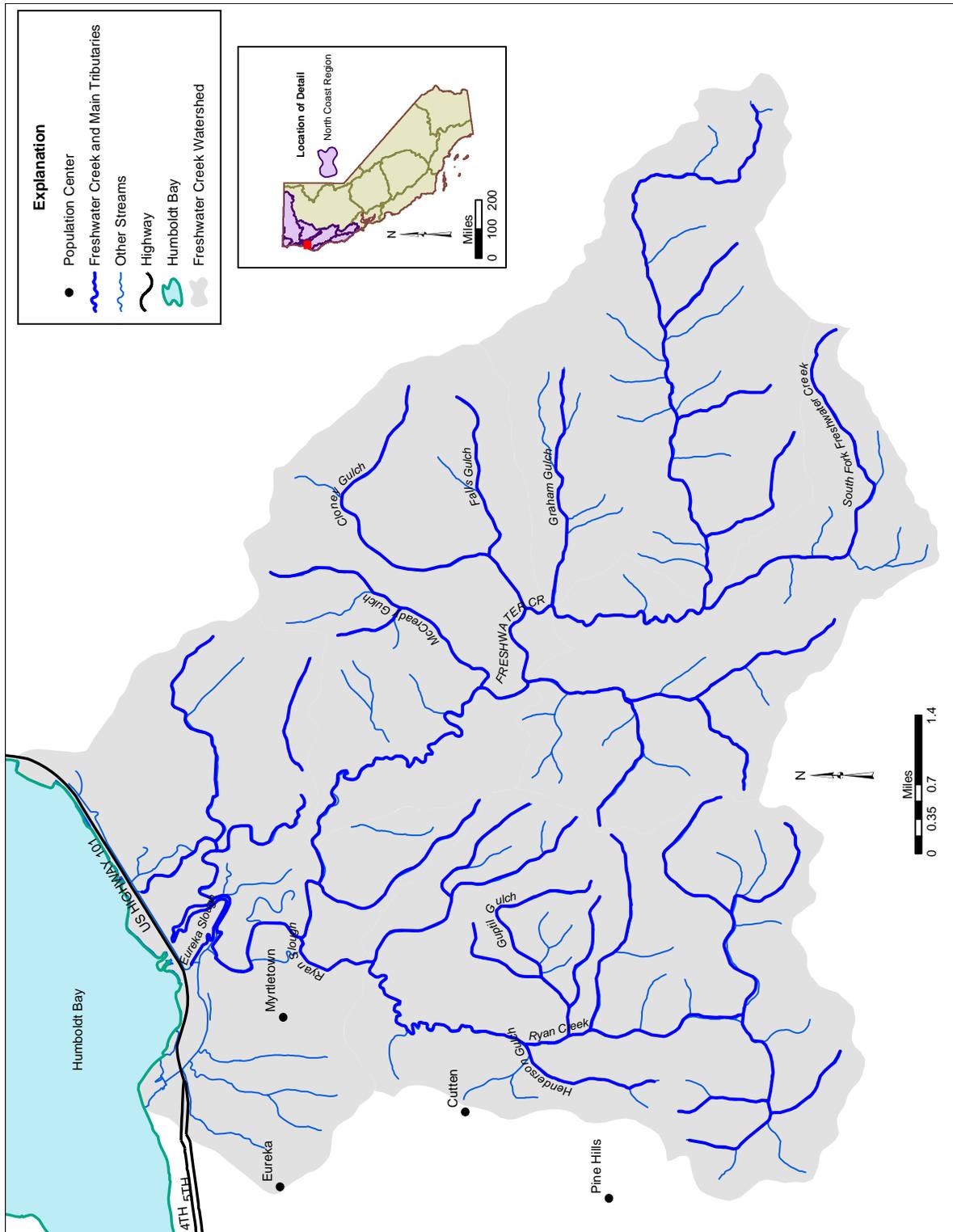


Figure 24. Freshwater Creek Watershed Map.

The Freshwater Creek watershed includes Ryan Creek and Fay Slough. The sediment TMDL for Freshwater Creek is currently being developed by Regional Water Board staff. An estimate of current sediment sources is not yet available.

Regional Water board staff are also currently developing the implementation plan for the sediment TMDL, which will include the tasks that need to be undertaken to comprehensively control human-caused excess sediment in the Freshwater Creek watershed. The following is a list of tasks that are likely to be included in the implementation plan for the Freshwater Creek Sediment TMDL. However, until the sediment source analysis and the TMDL are completed, it is unknown if additional tasks might be needed. The tasks may be revised as conditions change and more information is available.

<b>Table 23</b>	
<b>Freshwater Creek Tasks</b>	
1	Fund excess sediment control projects.
2	Continue to implement CAOs for PALCO.
3	Continue to implement watershed-wide WDRs for PALCO.
4	Develop the sediment TMDL.
5	Assist small landowners develop NPS Pollution Prevention Plans.
6	Identify most egregious excess sediment sources.
7	Use progressive enforcement or develop WDRs or conditional waivers.
8	Work with Humboldt County & City of Eureka to improve stormwater requirements.
9	Work with landowners on flood nuisance abatement.

**Freshwater Creek Task 1**  
**Fund Excess Sediment Control Projects**

Task            Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

**Freshwater Creek Task 2**  
**Continue to Implement Cleanup and Abatement Orders for Pacific Lumber Company**

Task            Continue to implement cleanup and abatement orders for Pacific Lumber Company (PALCO) to control existing excess sediment on their land in the Freshwater Creek watershed. Modify cleanup and abatement orders as necessary based on the TMDL and other new information and data.

**Freshwater Creek Task 3**  
**Continue to Implement Watershed-wide WDRs for Pacific Lumber Company**

Task            Continue to implement watershed-wide WDRs for PALCO to ensure current and future land disturbing activities prevent excess sediment. Modify watershed-wide WDRs based on the TMDL and other new information and data.

**Freshwater Creek Task 4**  
**Develop the Sediment TMDL**

Task            Develop the sediment TMDL for the Freshwater Creek watershed, including the implementation plan, and bring it to the Regional Water Board for their consideration.

**Freshwater Creek Task 5**  
**Assist Small Landowners Develop and Implement NPS Pollution Prevention Plans**

Task            Assist small landowners in the lower Freshwater Creek watershed to obtain grant funding for the development of NPS Pollution Prevention Plans. Assist in the development, implementation, and monitoring of the plans.

**Freshwater Creek Task 6**  
**Identify Most Egregious Excess Sediment Sources**

Task            Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

**Freshwater Creek Task 7**  
**Use Progressive Enforcement or Develop and Implement WDRs or Conditional Waivers**

Task            For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

**Freshwater Creek Task 8**  
**Work with Humboldt County and City of Eureka to Improve Storm Water Requirements**

Task            Work with Humboldt County and the City of Eureka on improving the storm water requirements for rural residential developments.

Task            Work with the City of Eureka to ensure their municipal storm water permit adequately and effectively controls excess sediment.

**Freshwater Creek Task 9**

**Work with Landowners to Develop and Implement Strategy for Flood Nuisance Abatement**

Task            Issue Cleanup and Abatement Order(s) to responsible parties for flood nuisance abatement.

Task            Work with landowners to develop watershed groups and restoration strategies to facilitate beneficial use restoration and nuisance abatement.

## GARCIA RIVER WATERSHED SEDIMENT CONTROL TASKS

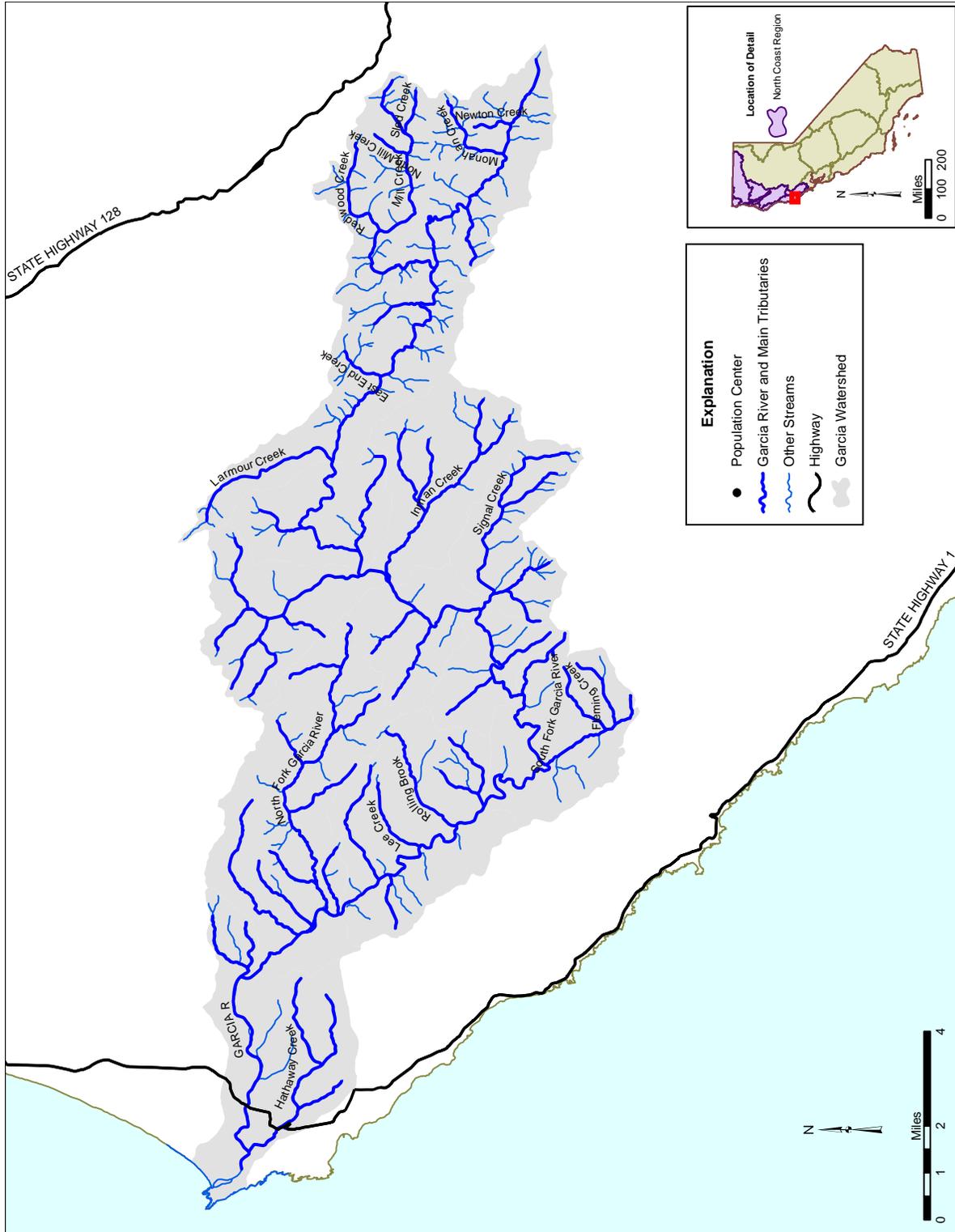


Figure 25. Garcia River Watershed Map.

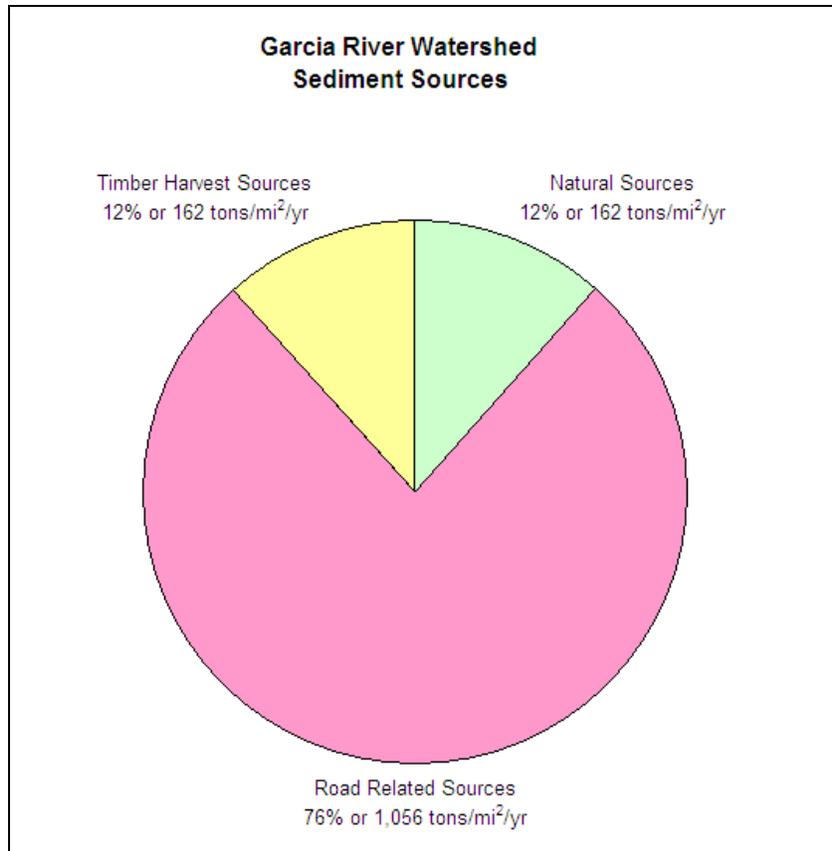


Figure 26. Garcia River Watershed Sediment Sources. From: Action Plan for the Garcia River Watershed Sediment Total Maximum Daily Load in the Water Quality Control Plan for the North Coast Region (NCRWQCB 2007).

Table 24 Garcia River Watershed Sediment Sources			
	Sediment Source	tons/mi <sup>2</sup> /yr *	
Natural	Mass Wasting (Landslides)	162	162
	Fluvial Erosion	Insufficient Data	
	Surface Erosion	Insufficient Data	
Anthropogenic	Roads: Mass Wasting	486	1,218
	Roads: Fluvial Erosion	532	
	Roads: Surface Erosion	38	
	Timber Harvest: Mass Wasting	162	
	Timber Harvest: Fluvial Erosion	Insufficient Data	
	Timber Harvest: Surface Erosion	Insufficient Data	
	Ag. Operations: Mass Wasting	Insufficient Data	
	Ag. Operations: Fluvial Erosion	Insufficient Data	
	Ag. Operations: Surface Erosion	Insufficient Data	
	Total of All Sources	1,380	

This section describes the task that is necessary to comprehensively control excess sediment throughout the Garcia River watershed. Regional Water Board staff are already working on this task. The task is an estimate of the work that needs to be done, and is based on current information and staff's best professional judgement. The task may be revised as conditions change and more tasks may be added.

<b>Table 25</b> <b>Garcia River Tasks</b>
--

1 Continue to implement the Garcia River TMDL Action Plan
---

### **Garcia River Task 1**

#### **Continue to Implement the Garcia River TMDL Action Plan**

**Background** Implementation actions to control excess sediment in the Garcia River have already been developed and are currently being executed under the Action Plan for the Garcia River Watershed Sediment Total Maximum Daily Load. The Action Plan is already a part of the Basin Plan and includes the sediment TMDL, implementation plan, and monitoring plan for the Garcia River watershed. The Action Plan has been in effect since January 3, 2002. Jonathan Warmerdam is the lead staff on the implementation effort and progress is being made, including significant land owner participation.

**Task** Continue to implement the Garcia River TMDL Action Plan.



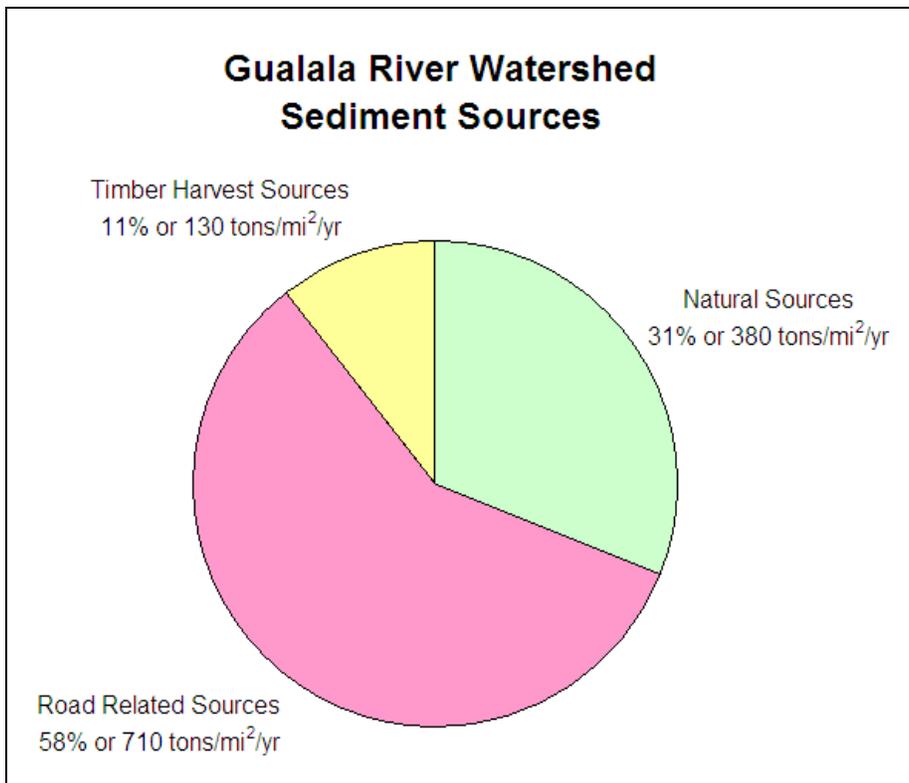


Figure 28. Gualala River Watershed Sediment Sources. Data from: Gualala River TMDL (U.S. EPA 2001c).

<b>Table 26</b>			
<b>Gualala River Watershed Sediment Sources</b>			
	Sediment Source	tons/mi <sup>2</sup> /yr *	
Natural	Landslides	180	380
	Stream Bank Erosion	200	
Anthropogenic	Harvest Related Sources	100	840
	Skid Trail Surface Erosion	30	
	Road Related Landslides	370	
	Road Related Surface Erosion	140	
	Road-Stream Crossing Failures	50	
	Road Related Gullies	150	
Total of All Sources		1,220	

\* Current load from 1978 to 2000.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Gualala River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

**Table 27**  
**Gualala River Tasks**

1	Identify and work with key stakeholders
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control, road restoration, and LWD placement projects.
4	Encourage the Gualala River Watershed Council and/or Soyotome RCD to develop a third-party NPS control program.
5	Identify most egregious excess sediment sources.
6	Use progressive enforcement or develop WDRs or conditional waivers.
7	Regulate instream gravel mining operations.
8	Work with Coastal Ridges to ensure compliance with the Measures to Control Excess Sediment Prohibition.
9	Develop ownership-wide WDRs for Gualala Redwoods Inc.
10	Develop ownership-wide WDRs for Mendocino Redwood Company.
11	Develop ownership-wide WDRs for Preservation Ranch.
12	Develop WDRs for county roads in Mendocino and Sonoma counties.

**Gualala River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Gualala River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Gualala River watersheds are listed here.

*The Gualala River Watershed Council (GRWC)*

The GRWC is a group of landowners, resource managers, public agency representatives, and interested citizens working on restoration and research projects in the Gualala River watershed. They have helped to control excess sediment with road restoration projects, and have also been involved with instream monitoring efforts. Their sediment control efforts in the Fuller Creek watershed have proven successful.

*Sotoyome Resource Conservation District (RCD)*

The Sotoyome RCD's district includes the portion of the Gualala River watershed within Sonoma County, which is the majority of the watershed. The RCD has worked with the GRWC in the past and has helped with grant funding.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the

Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Gualala River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Gualala River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Gualala River Task 3**

#### **Fund Excess Sediment Control, Road Restoration, and LWD Placement Projects.**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

Fund road restoration work. High priority locations for road restoration work include Robinson Creek, Stewart Creek, McGann Gulch, mainstem North Fork, Little Creek, Franchini Creek, Grasshopper Creek, Osher Creek, Haupt Creek, Tobacco Creek, lower to middle reaches of Tombs, Wolf, and Elk creeks, unnamed tributaries to mainstem Wheatfield Fork upstream of Tombs Creek, larger tributaries in the lower reaches of House Creek, middle to upper reaches of House, Pepperwood, Danfield, and Cedar creeks; central and upper reaches of McKenzie Creek, and the lower reaches of Marshal Creek, including Palmer Canyon and Wild Hog creeks.

Fund large woody debris (LWD) placement. High priority locations for LWD placement projects include the North Fork Subbasin, Mainstem/South Fork Subbasin, Rockpile Creek, Buckeye Creek, and Wheatfield Fork Subbasin.

### **Gualala River Task 4**

#### **Encourage the Gualala River Watershed Council and/or Sotoyome RCD to Develop a Third-Party NPS Control Program**

Task Encourage and work with the GRWC and/or Sotoyome RCD to develop and implement an official Third-Party NPS Control Program, as described by the NPS Policy. As a third-party, the GRWC/RCD would be an intermediary between the Regional Water Board and smaller landowners. The GRWC/RCD would coordinate the inventory, prioritization, scheduling, repair, monitoring, and

adaptive management of excess sediment sites from roads and other sources owned by smaller landowners. The GRWC/RCD would also help landowners develop management practices that will prevent and reduce future discharges from their activities. Landowners who work with the GRWC/RCD under this program would be in compliance with the Regional Excess Sediment Prohibition (if and once they take effect).

Task Continue to fund the GRWC's and Sotoyome RCD's restoration and monitoring efforts through grants.

### **Gualala River Task 5 Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the Little North Fork and North Fork Gualala River watersheds, as these watersheds have the most potential salmonid refugia.

### **Gualala River Task 6 Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Gualala River watershed, this task, in tandem with Gualala River Task 5 above, is expected to be especially useful for controlling excess sediment from smaller landowners (hundreds of acres in size or smaller) and mid-sized landowners (hundreds to thousands of acres). Smaller parcels are often rural residences and smaller ranches. Clusters of these smaller parcels are found around Annapolis, in the Fuller Creek watershed, and in the southern part of the Gualala River watershed. Mid-sized parcels are often vacation ranches. They are

located sporadically throughout the Gualala River watershed with a cluster in the upper North Fork and upper Rockpile Creek watersheds.

### **Gualala River Task 7**

#### **Regulate Instream Gravel Mining Operations**

**Background** New instream gravel mining activities in the Gualala River are being proposed as of the time of this writing.

**Task** Permit gravel mining operations through 401 Certifications. Ensure mining activities are conducted in a manner that (1) prevents and reduces excess sediment; (2) ensures existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored; (3) ensures adaptive management occurs; (3) protects and restores the shapes, slopes, and planforms of stream channels that are necessary to balance sediment loads and water discharges in streams and to prevent excessive erosion or deposition of sediment; (4) protects and restores the connectivity between streams and their floodplains; and (5) protects and restores riparian vegetation. Ensure instream impacts are mitigated with stream restoration projects or other mitigation projects when specifically called for in a 401 Certification permit.

**Task** Use industrial stormwater permits to regulate stormwater runoff from gravel processing plants and haul roads in the Gualala River watershed. Ensure activities are conducted so as to prevent and minimize future excess sediment discharges. Ensure existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored. Focus on adaptive management occurs. Increase the prevention and control of excess sediment from access and haul roads.

### **Gualala River Task 8**

#### **Work with Coastal Ridges to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Task** Work with Coastal Ridges LLC to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should Coastal Ridges choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

Stormer Feiler is currently working with Coastal Ridges to develop an ownership-wide road plan. Regional Water Board staff are also evaluating the potential impacts from renewed timber harvest activities on this property after a hiatus of several years. Staff are considering possible actions in responses to concerns over the rate and intensity of ground disturbance.

**Gualala River Task 9**  
**Develop Ownership-Wide WDRs for Gualala Redwoods Inc.**

**Task**            Develop ownership-wide WDRs for Gualala Redwoods Inc. to address excess sediment and other water quality concerns on their ownership. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The scope of the ROWD and WDR is currently being developed by Jim Burke. The ROWD is expected to be submitted in summer 2007. The WDR will intensely focus on roads and road-caused excess sediment sites.

**Gualala River Task 10**  
**Develop Ownership-Wide WDRs for Mendocino Redwood Company**

**Background**    On June 14, 2007, the Regional Water Board adopted Resolution R1-2007-0034, which describes the collaborative effort to develop ownership-wide WDRs for timber harvesting activities conducted by Mendocino Redwood Company (MRC) on their lands in Mendocino and Sonoma counties. The primary purpose of this resolution is to set forth MRC's and the Regional Water Board's shared understanding of the intent and key elements of their collaboration to develop an ownership-wide approach to compliance with the Porter-Cologne Act, the Basin Plan, and Clean Water Act based on the Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) that MRC is close to completing.

**Task**            Following completion of the HCP/NCCP, develop ownership-wide WDRs for Mendocino Redwood Company to address excess sediment and other water quality concerns. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

Include in the ownership-wide WDRs the water quality control measures contained in the HCP/NCCP. Strive to develop the ownership-wide WDRs within eight months of the signing of the HCP/NCCP Implementation Agreement.

### **Gualala River Task 11**

#### **Develop Ownership-Wide WDRs for Preservation Ranch**

**Background** Preservation Ranch is a 19,000 ac. timberland to vineyard conversion project in the Gualala River watershed. The project is currently going through the permitting process.

**Task** Develop ownership-wide WDRs for Preservation Ranch to control excess sediment and other water quality impacts. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Scott Gergus is currently lead staff for this project.

### **Gualala River Task 12**

#### **Develop WDRs for County Roads in Mendocino and Sonoma Counties**

**Task** Develop, adopt, and implement WDRs for Mendocino and Sonoma counties to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Gualala River watershed, focus on Stewarts Point/Skaggs Springs Road and Annapolis Road.

## JACOBY CREEK WATERSHED SEDIMENT CONTROL TASKS

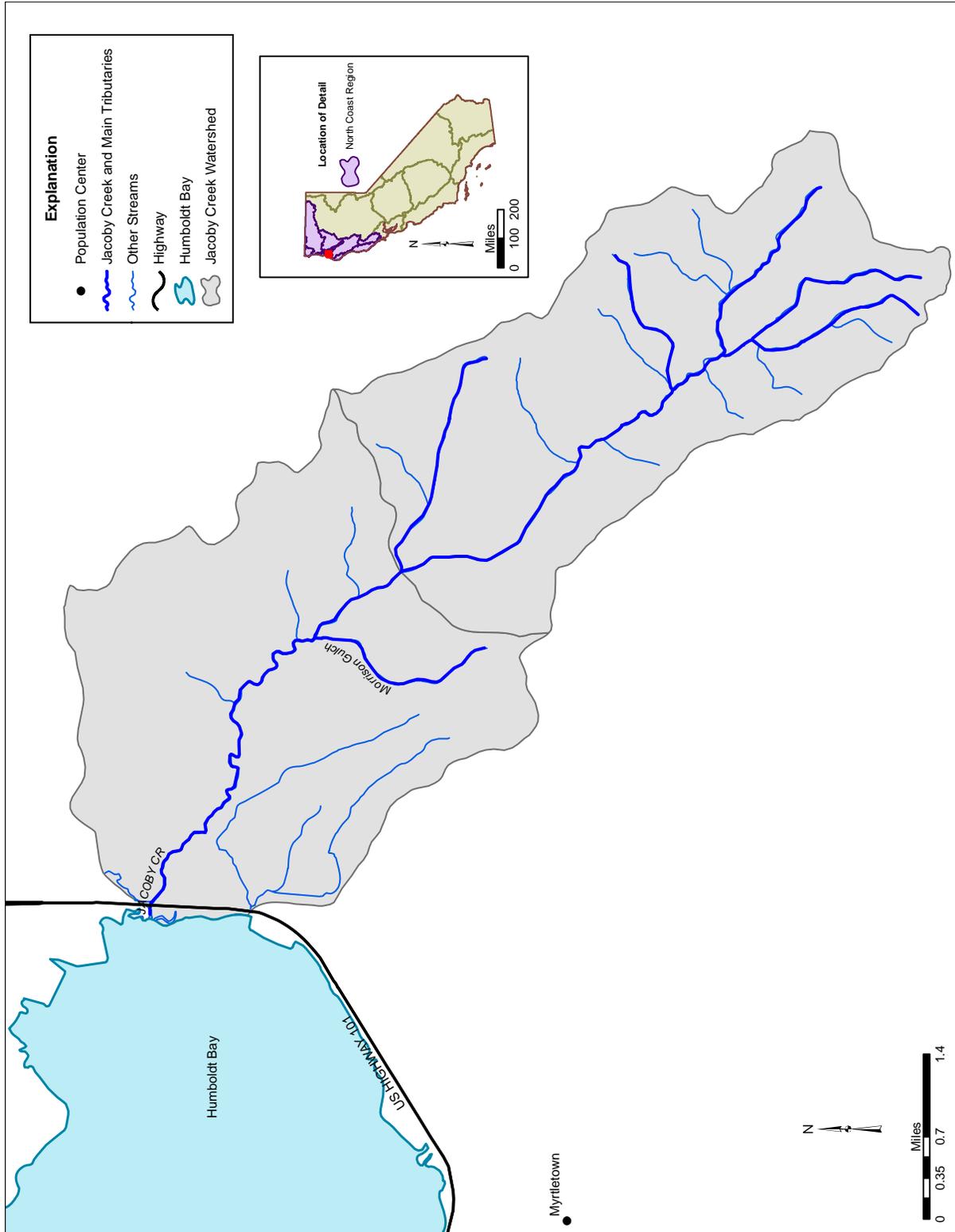


Figure 29. Jacoby Creek Watershed Map

The sediment TMDL for the Jacoby Creek watershed has not been developed and an estimate of all sediment sources is not available.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Van Duzen River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. . However, until the sediment source analysis and the TMDL are completed, it is unknown if additional tasks might be needed. The tasks may be revised as conditions change and more information becomes available.

**Table 28**  
**Jacoby Creek Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or conditional waivers.
6	Work with Sierra Pacific Industries to ensure compliance with Measures to Control Excess Sediment Prohibition.
7	Work with the City of Arcata and Humboldt County to improve storm water requirements.
8	Work with the City of Arcata on Jacoby Creek Forest.
9	Develop ownership-wide WDRs for Green Diamond.

**Jacoby Creek Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Jacoby Creek watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Jacoby Creek watershed are listed here.

*Jacoby Creek Land Trust*

The Jacoby Creek Land Trust is dedicated to the preservation of land in the Jacoby Creek watershed. As of 2004, they had acquired over 250 acres and placed easements on over twenty acres of forest and riparian habitat.

*Bayside Grange*

The Bayside Grange is a community center that promotes sustainable agriculture, cultural events and local education and outreach.

### *Jacoby Creek Protection Association*

The Jacoby Creek Protection Association reviews timber harvest plans filed in the watershed.

### *Jacoby Creek School*

The Jacoby Creek School conducts student stream monitoring with the help of local hydrologists.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

## **Jacoby Creek Task 2**

### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Jacoby Creek watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

## **Jacoby Creek Task 3**

### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

## **Jacoby Creek Task 4**

### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

### **Jacoby Creek Task 5**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

- Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:
- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
  - Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
  - Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
  - Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Jacoby Creek watershed, this task, in tandem with Jacoby Creek Task 4 above, is expected to be especially useful for controlling excess sediment from private land in agricultural uses and the rural residential land along Greenwood Heights Drive along the southern ridge of the watershed and Fickle Hill on the northern rim.

### **Jacoby Creek Task 6**

#### **Work with Sierra Pacific Industries to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

- Task Work with Sierra Pacific Industries to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should Sierra Pacific Industries choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Jacoby Creek Task 7**

#### **Work with the City of Arcata and Humboldt County on Storm Water**

- Task Work with the City of Arcata to ensure their municipal storm water permit adequately and effectively controls excess sediment (see Regional Task 19 for more information).
- Task Work with Humboldt County and the City of Arcata to improve storm water requirements for rural residential developments.

### **Jacoby Creek Task 8**

#### **Work with the City of Arcata on Jacoby Creek Forest**

Task Encourage City of Arcata to continue to implement excess sediment control projects in Jacoby Creek Forest, including the removal of culverts, Humboldt crossings, and fill material from stream zones.

### **Jacoby Creek Task 9**

#### **Develop Ownership-wide WDRs for Green Diamond**

Task Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership in the Jacoby Creek watershed (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property within the Jacoby Creek watershed.

### KLAMATH RIVER WATERSHED DOWNSTREAM OF WEITCHPEC SEDIMENT CONTROL TASKS

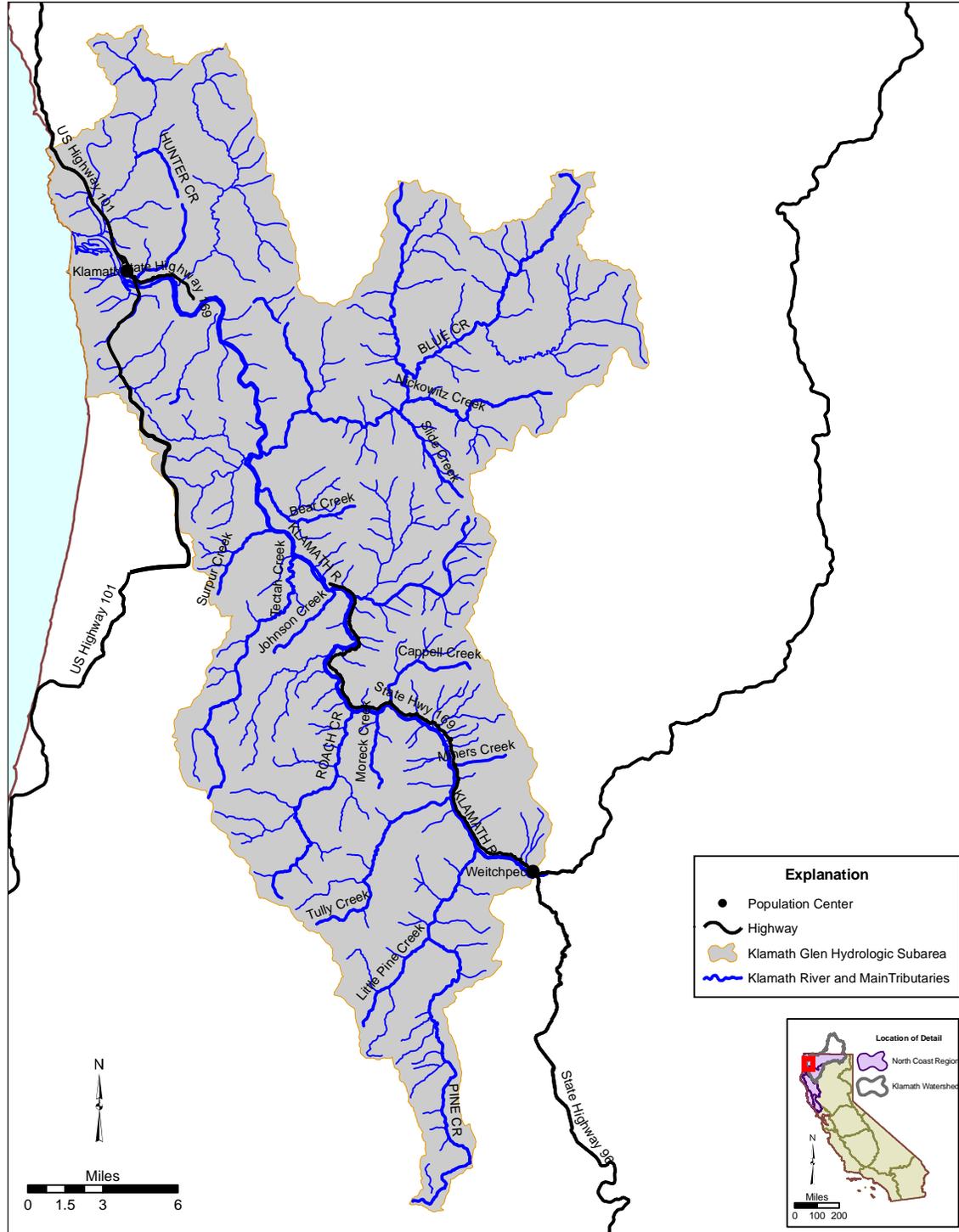


Figure 30. Klamath Glen Hydrologic Subarea Map.

For the mainstem Klamath River, this Work Plan only addresses excess sediment control tasks for the watershed that drains into the mainstem Klamath River downstream of the confluence with the Trinity River, around the town of Weitchpec. This area is also known as the Klamath Glen Hydrologic Sub-Area. This Work Plan does not apply to the areas that are within the boundaries of any Native American reservation, such as tribal land belonging to the Hoopa and the Yurok tribes.

The sediment TMDL for the mainstem Klamath River downstream of Weitchpec has not been developed and an estimate of all sediment sources is not available. However, Regional Water Board staff are currently developing nutrient, temperature, and dissolved oxygen TMDLs for the entire mainstem Klamath River (within the State of California) and will be including implementation actions that address excess sediment due to the influence that sediment loads have on water temperatures and nutrient concentrations.

The following excess sediment control tasks are likely to be included in the implementation plan for the mainstem Klamath River Nutrient, Temperature, and Dissolved Oxygen TMDLs and apply to the Klamath Glen Hydrologic Sub-Area. Until the sediment source analysis and sediment TMDL are completed, however, it is unknown if additional tasks might be needed. The tasks may be revised as conditions change and more information is available.

<b>Table 29</b>	
<b>Klamath Glen HSA Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Coordinate sediment control efforts with the Yurok and Hoopa Valley Tribes.
5	Identify most egregious excess sediment sources.
6	Use progressive enforcement or develop WDRs or conditional waivers.
7	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
8	Develop ownership-wide WDRs for Green Diamond.
9	Work with Caltrans on Hwy 169.

**Klamath Glen HSA Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Klamath Glen HSA, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board’s excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Klamath Glen HSA Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Klamath Glen HSA, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Klamath Glenn HAS Task 3**

#### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Klamath Glen HSA Task 4**

#### **Coordinate Sediment Control Efforts with the Yurok and Hoopa Valley Tribes**

Task Coordinate excess sediment control efforts with the Yurok Tribe and the Hoopa Valley Tribe. Offer to share resources, data, and techniques.

### **Klamath Glen HSA Task 5**

#### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

### **Klamath Glen HSA Task 6**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).

- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Klamath Glen Hydrologic Sub-Area, this task, in tandem with Klamath Glen HSA Task 4 above, is expected to be especially useful for controlling excess sediment from private land that is not owned by Green Diamond, the United States, or the tribes.

### **Klamath Glen HSA Task 7**

#### **Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

**Background** Parts of the Six Rivers National Forest and Siskiyou Wilderness lie within the Klamath Glen Hydrologic Sub-Area, most of which drains to Blue Creek.

**Task** Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment and other water quality concerns in the Klamath Glen Hydrologic Sub-Area. The WDRs or the conditional waiver may apply to all USFS land in the North Coast Region, to just the Six Rivers National Forest and the Siskiyou Wilderness, or to just the land within the boundaries of the Klamath Glen Hydrologic Sub-Area.

The Klamath River Nutrient, Temperature, and Dissolved Oxygen TMDL Action Plan will contain specific requirements to address excess sediment. These requirements will be incorporated into the WDRs or the conditional waiver.

### **Klamath Glen HSA Task 8**

#### **Develop Ownership-Wide WDRs for Green Diamond**

**Background** Green Diamond Resources Company owns the majority of the private land in the Klamath Glen Hydrologic Sub-Area.

**Task** Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership (Regional Task 11). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property in the Klamath Glen Hydrologic Sub-Area.

**Klamath Glen HSA Task 9**  
**Work with Caltrans on Highway 169**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highway 169 and other state highways in the Klamath Glen Hydrologic Sub-Area. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## MAD RIVER WATERSHED SEDIMENT CONTROL TASKS

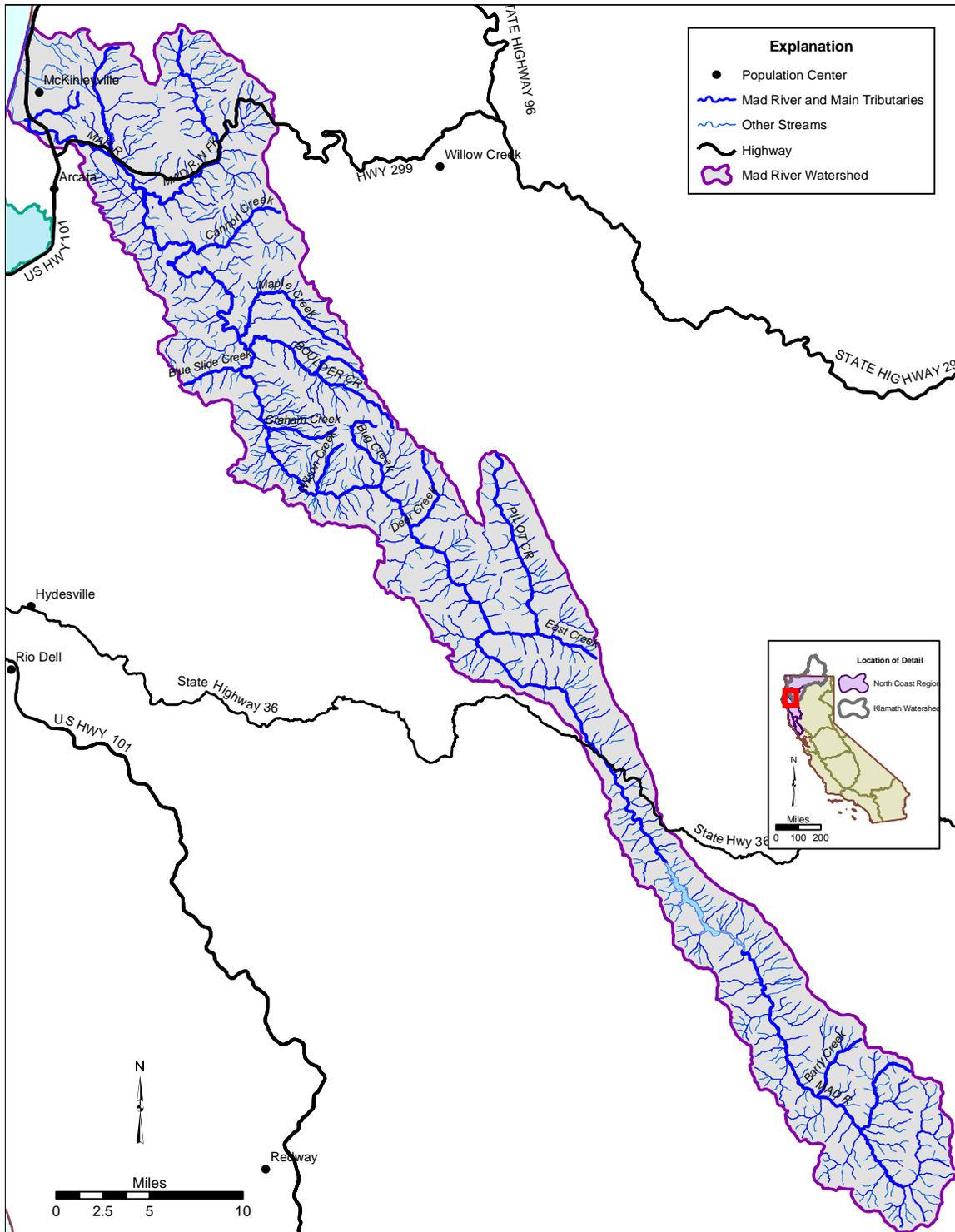


Figure 31. Mad River Watershed Map.

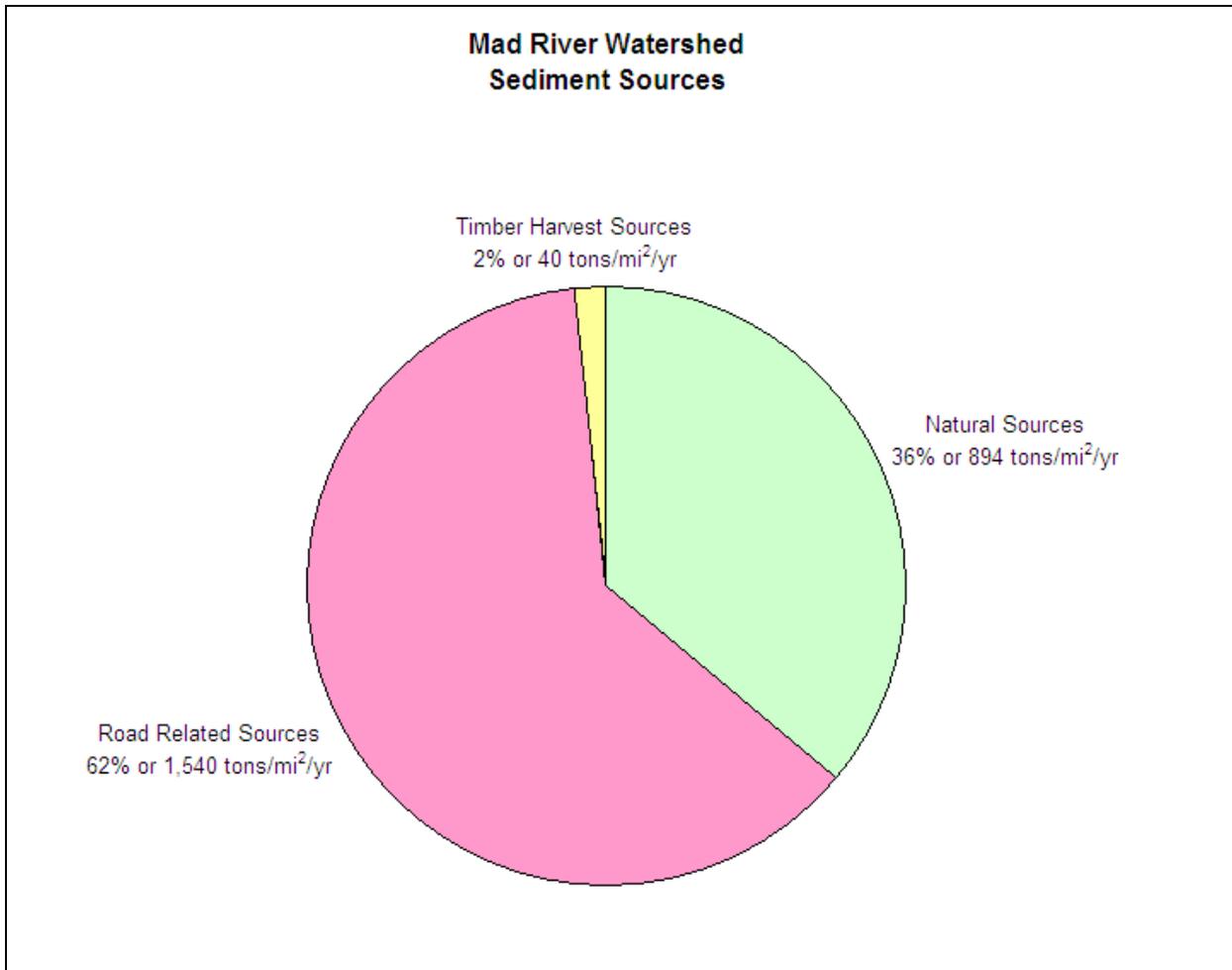


Figure 32: Mad River Watershed Sediment Sources. From: TMDL (U.S. EPA 2007b)

Sediment Source		tons/mi <sup>2</sup> /yr *	
Natural	Landslides	551	894
	Creep	317	
	Bank Erosion	26	
Anthropogenic	Roads – Landslides	1,298	1,580
	Roads – Surface Erosion and Small Sources	242	
	Timber Harvest – Landslides	38	
	Timber Harvest – Surface Erosion and Small Sources	2	
Total of All Sources		2,474	

\* Total sediment load estimate from 1976 to 2006. Data from: U.S. EPA 2007b.

The sediment TMDL for the Mad River is being developed by the U.S. EPA, and is currently available as a draft.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Mad River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

<b>Table 31 Mad River Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund sediment waste discharge control projects.
4	Work with the Natural Resources Services of the Redwood Community Action Agency.
5	Coordinate sediment control efforts with Blue Lake Rancheria.
6	Continue to regulate instream gravel mining operations.
7	Identify most egregious excess sediment sources.
8	Use progressive enforcement or develop WDRs or conditional waivers.
9	Work with Humboldt County and City of McKinleyville to reduce storm water pollution.
10	Work with Pacific Lumber Company to ensure compliance with the Measures to Control Excess Sediment Prohibition.
11	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
12	Develop ownership-wide WDRs for Green Diamond.
13	Develop WDRs for county roads for Humboldt and Trinity counties.
14	Work with Caltrans on Hwys 299, 36, and 101.

**Mad River Task 1  
Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Mad River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not the only, key stakeholder in the Mad River watershed is listed here.

*Redwood Community Action Agency, Natural Resources Services*

The Natural Resources Services (NRS), a division of Redwood Community Action Agency, is a non-profit organization dedicated to sustainable development, protection, and restoration of natural resources in northern California. Since 1982, the Natural Resources Services has designed and implemented several hundred fisheries, riparian, and wetland restoration projects in the north coast region, in addition to providing a variety of resource analysis and management services to private landowners, businesses, and public agencies. See Mad River Task 4 for more information on the NRS.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Mad River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Mad River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Mad River Task 3**

#### **Fund Excess Sediment Control Projects**

Background The Regional Water Board is involved with providing approximately \$355,000 to the Natural Resources Services, a division of Redwood Community Action Agency, to conduct an initial watershed assessment and develop the Mad River Watershed Management Plan.

Task Continue to fund and seek additional funding for excess sediment control projects in the Mad River watershed through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Mad River Task 4**

#### **Work with the Natural Resources Services of the Redwood Community Action Agency**

Background The Natural Resources Services, a division of Redwood Community Action Agency, is currently working under grant funding to develop a Mad River Watershed Management Plan. The Plan will provide a set of stakeholder-developed measures to control excess sediment that the Regional Water Board can fold into sediment TMDL implementation efforts. Specifically, the Plan will include a watershed assessment that will assess the impact on excessive sediment on the aquatic and riparian habitats and associated species. The Plan will also identify and evaluate past and existing programs, measures, and practices for controlling excess sediment. Responsible parties to implement these measures will be identified and a schedule for implementation and monitoring will be included. The Plan will be developed with participation from the Stakeholder

Advisory Group, which is comprised of large to medium scale landowners, and the Public Advisory Group, which is comprised of small landowners and interested stakeholders.

- Task Participate as appropriate in the advisory groups, and assist as appropriate in the development of the Mad River Watershed Management Plan.
- Task Work with the Natural Resources Services to coordinate excess sediment control efforts.
- Task Evaluate the Mad River Watershed Management Plan, including excess sediment control measures, for inclusion into future versions of this Work Plan as specific tasks.

**Mad River Task 5**  
**Coordinate Sediment Control Efforts with Blue Lake Rancheria**

Background Blue Lake Rancheria owns 42 acres of land in Blue Lake.

- Task Coordinate excess sediment control efforts with the Blue Lake Rancheria. Offer to share resources, data, and techniques.

**Mad River Task 6**  
**Continue to Regulate Instream Gravel Mining Operations**

Background Gravel mining operations are located at least ten sites along the lower mainstem Mad River. In 2000, approximately 150,000 yd<sup>3</sup> of instream sand and gravel were extracted.

- Task Continue to permit gravel mining operations through 401 Certifications. Ensure mining activities are conducted in a manner that (1) prevents and reduces excess sediment discharges; (2) ensures existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored; (3) ensures adaptive management occurs; (4) protects and restores the shapes, slopes, and planforms of stream channels that are necessary to balance sediment loads and water discharges in streams and to prevent excessive erosion or deposition of sediment; (5) protects and restores the connectivity between streams and their floodplains; and (6) protects and restores riparian vegetation. Ensure instream impacts are mitigated with stream restoration projects or other mitigation projects when specifically called for in a 401 Certification permit.
- Task Use industrial stormwater permits to regulate stormwater runoff from gravel processing plants and haul roads in the Mad River watershed. Ensure activities are conducted so as to prevent and minimize future excess sediment discharges.

Ensure existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored. Ensure adaptive management occurs. Increase the prevention and control of excess sediment from access and haul roads.

### **Mad River Task 7**

#### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, sediment source analyses developed for the TMDL, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in Cañon Creek, Dry Creek, and the North Fork Mad River watersheds as these watersheds are identified in the Coho Recovery Strategy (CDFG 2004) as areas where sediment aggradation is, in part, restricting coho salmon passage.

### **Mad River Task 8**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Consult with the Natural Resources Services of the Redwood Community Action Agency to determine if excess sediment sites are identified in the Mad River Watershed Management Plan and if control work is underway or scheduled.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Mad River watershed, this task, in tandem with Mad River Task 7 above, is expected to be especially useful for controlling excess sediment from the private ranches, rural residences, and smaller timber operations in the watershed. These private holdings are primarily located in the lower and middle reaches of the watershed. Private in-holdings are also found along the upper mainstem Mad River, where they are surrounded by the Six Rivers National Forest.

### **Mad River Task 9**

#### **Work with Humboldt County and City of McKinleyville to Reduce Storm Water Pollution**

- Task Work with Humboldt County and the City of McKinleyville on improving the storm water requirements for rural residential developments.
- Task Continue to use the municipal storm water program to control excess sediment from the City of McKinleyville (see Regional Task 19 for more information).

### **Mad River Task 10**

#### **Work with Pacific Lumber Company to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

- Task Work with Pacific Lumber Company to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should Pacific Lumber Company choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Mad River Task 11**

#### **Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

- Background Approximately 30% of the entire Mad River watershed falls within the boundaries of the Six Rivers National Forest. Most of the USFS land is located in the upper and middle portions of the watershed.
- Task Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment and other water quality concerns in the Mad River watershed.

### **Mad River Task 12**

#### **Develop Ownership-wide WDRs for Green Diamond**

- Background Green Diamond Resources Company is the largest private landowner in the Mad River watershed, with approximately 42% of the private land.

Task            Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership in the Mad River watershed (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property within Mad River watershed.

**Mad River Task 13**

**Develop WDRs for County Roads in Humboldt and Trinity Counties**

Task            Develop WDRs for Humboldt and Trinity counties to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

**Mad River Task 14**

**Work with Caltrans on Highways 299, 36, and 101.**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highway 299, Highway 36, Highway 101, and other state highways in the Mad River watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## MATTOLE RIVER WATERSHED SEDIMENT CONTROL TASKS



Figure 33. Mattole River Watershed Map.

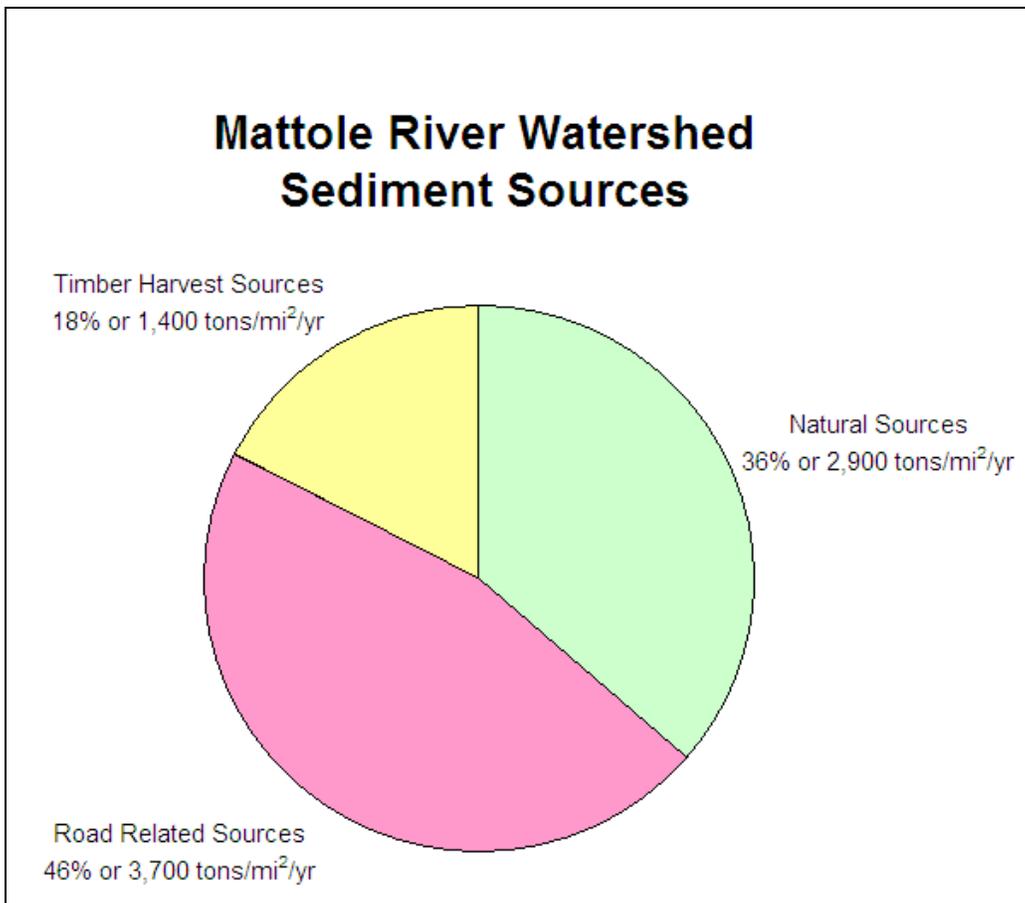


Figure 34. Mattole River Watershed Sediment Sources. Data from: Mattole River TMDLs (U.S. EPA 2003a).

<b>Table 32</b>			
<b>Mattole River Watershed Sediment Sources</b>			
	Sediment Source	tons/mi <sup>2</sup> /yr *	
Natural	Mass Wasting (Landslides)	2,400	2,900
	Stream Bank Erosion	460	
Anthropogenic	Harvest Related Sources	700	5,100
	Skid Trail Related Sources	710	
	Road Related Mass Wasting (Landslides)	2,900	
	Road Related Surface Erosion	540	
	Road-Stream Crossing Failures	50	
	Road Related Gullyng	170	
<b>Total of All Sources</b>		<b>8,000</b>	

\* Current load estimate from 1984 to 2000.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Mattole River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

**Table 33**  
**Mattole River Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control, road restoration, and LWD placement projects.
4	Work with the Mattole Restoration Council and consider developing WDRs and conditional waivers.
5	Identify most egregious excess sediment sources.
6	Investigate China Creek Road.
7	Use progressive enforcement or develop WDRs or conditional waivers.
8	Meet with Humboldt County planning staff to discuss evasion of their permit process.
9	Work with Barnum Timber, Pacific Lumber Company, and Sierra Pacific Industries to ensure compliance with the Measures to Control Excess Sediment Prohibition.
10	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
11	Develop WDRs for county roads in Humboldt County.

**Mattole River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Mattole River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not the only, key stakeholder in the Mattole River watershed is the Mattole Restoration Council.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**Mattole River Task 2**  
**Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with stakeholders and watershed groups to promote excess sediment control in the Mattole River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Mattole River Task 3**

#### **Fund Excess Sediment Control Projects, Road Restoration, and LWD Placement Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

Fund road restoration work and the relocation of roads to more stable areas. High priority locations for road restoration and relocation work include Middle, Westlund, Gilham, Gilham Creek Tributary, Sholes, Blue Slide, and Fire creeks in the Eastern Subbasin; South Fork Vanauken Creek, the Upper Mattole River, Stanley Creek, Thompson Creek, and Yew Creek in the Southern Subbasin; and Mill Creek (RM 2.8) and Bear Trap Creek in the Western Subbasin.

Fund large woody debris (LWD) placement work. High priority locations include Sulphur Creek Tributary #1, Conklin, and Green Ridge creeks in the Northern Subbasin; Dry, Middle, Westlund, Gilham Creek Tributary, Fourmile, North Fork Fourmile, Grindstone, Little Grindstone, Blue Slide, McKee Creek Tributary, and Painter creeks in the Eastern Subbasin; and Mill Creek (RM 2.8) Tributary #1 and South Fork Big Finley Creek in the Western Subbasin.

### **Mattole River Task 4**

#### **Work with the Mattole Restoration Council and Consider Developing WDRs and Waivers.**

Background *The Mattole Restoration Council*

The Mattole Restoration Council (MRC) is a community based watershed restoration group that is actively working on road restoration, reforestation, public outreach, ecological restoration, water conservation, and hazardous fuels reduction issues in the Mattole River watershed.

The following two programs run by MRC are focused on excess sediment control:

*Good Roads, Clear Creeks.* Under this program, MRC intends to treat sediment problems in each fish-bearing tributary of the Mattole River over the next ten years. MRC offers landowners an evaluation of potential sediment delivery sites on roads, stream banks, and hillsides and recommends treatment options for each site. MRC also offers the opportunity to fix sediment sources at reduced or no cost to the landowner.

*Mattole Program Timberland Environmental Impact Report (PTEIR).* Under this program, MRC is beginning to develop a PTEIR for the entire Mattole River watershed, with completion expected in 2009. The PTEIR is authorized under the Forest Practice Rules and will include a comprehensive environmental review for timber harvest activities in the Mattole River watershed. Once a PTEIR is

completed, landowners can file Program THPs if they use the practices described by the PTEIR, with far less paperwork and cost than a regular THP. MRC will also attempt to use the PTEIR to meet other permit requirements, such as WDRs, streambed alteration permits (CDFG 1600 permits), and biological opinions under the ESA.

As of April 2007, the Regional Water Board is involved in providing the following grant funding for work in the Mattole River watershed:

\$500,000 to MRC for the Mattole River / Range Partnership Implementation 319(h) Grant Project.

Approximately \$990,000 to MRC for the Good Roads, Clear Creek Program under a 319(h) agriculture water quality grant.

Approximately \$3,280,000 to MRC for the Mattole River Watershed Management Initiative.

- Task Continue to fund MRC's Good Roads, Clear Creeks program, educational and outreach efforts, and the Mattole PTEIR (Regional Task 21). At the time of this writing, MRC has received five Water Board grants totaling more than \$4.5 million for sediment control work, riparian habitat restoration, and the Mattole PTEIR. MRC is currently funded for another \$1.5 million plus through the Integrated Regional Water Management Program.
- Task Work with MRC to refine several road restoration standards of the Good Roads, Clear Creeks program. Refinements include using more experienced operators or better training and oversight of local operators, and improved road compression techniques.
- Task Consider developing a conditional waiver of WDRs for excess sediment from road restoration work under the Good Roads, Clear Creek. Bring the conditional waiver to the Regional Water Board for their consideration. Implement if approved.
- Task Work with MRC to develop the Mattole PTEIR. Consider developing WDRs for timber harvest activities under the Mattole PTEIR. Bring the WDRs to the Regional Water Board for their consideration. Implement if approved.

### **Mattole River Task 5 Identify Most Egregious Excess Sediment Sources**

- Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the watersheds with the highest quality salmonid habitat, including Bear Creek (the best in the Mattole River watershed), South Fork of Vanauken Creek, Mill Creek at Mattole river-mile 56.2 (RM 56.2), Stanley Creek, Thompson Creek, Yew Creek, Lost Man Creek Tributary, and Harrow Creek. Also focus initial reconnaissance efforts in areas of dense rural residential development.

### **Mattole River Task 6**

#### **Investigate China Creek Road**

**Task** Investigate excess sediment discharges from China Creek Road. Determine need for enforcement actions and use progressive enforcement as necessary. Publicize sediment control efforts on this road in the Mattole River and South Fork Eel River watersheds, neighboring watersheds, and the Eureka area.

Since China Creek Road is managed by a road association, it is expected that this task will take a significant amount of staff and legal time. Reports from Regional Water Board staff indicate that the road is one of the worst excess sediment dischargers in the northern part of the Region.

China Creek Road runs through both the South Fork Eel River and Mattole River watersheds. This task is discussed in the chapters for both watersheds.

### **Mattole River Task 7**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

**Task** For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Mattole River watershed, this task is expected to be especially useful for controlling excess sediment from the smaller residential parcels (40 ac. or less in size) and from the small to large private ranches.

### **Mattole River Task 8**

#### **Meet with Humboldt County Planning Staff to Discuss Public Evasion of County Permit Process**

Task            Meet with Humboldt County planning staff to discuss the tendency of some Mattole River watershed residents to not go through the County's permit process when developing and building rural residences and ranches. Discuss the Alternative Owner Builder Ordinance that allows unpermitted residences if those residences are never to be sold or rented. Discuss possible solutions, including outreach/education efforts and increased enforcement.

### **Mattole River Task 9**

#### **Work with Barnum Timber, Pacific Lumber Company, and Sierra Pacific Industries to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

Task            Work with Barnum Timber, Pacific Lumber Company, and Sierra Pacific Industries to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Mattole River Task 10**

#### **Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

Task            Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment in the King Range National Conservation Area.

### **Mattole River Task 11**

#### **Develop WDRs for County Roads in Humboldt County**

Task            Develop WDRs for Humboldt County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

## NAVARRO RIVER WATERSHED SEDIMENT CONTROL TASKS

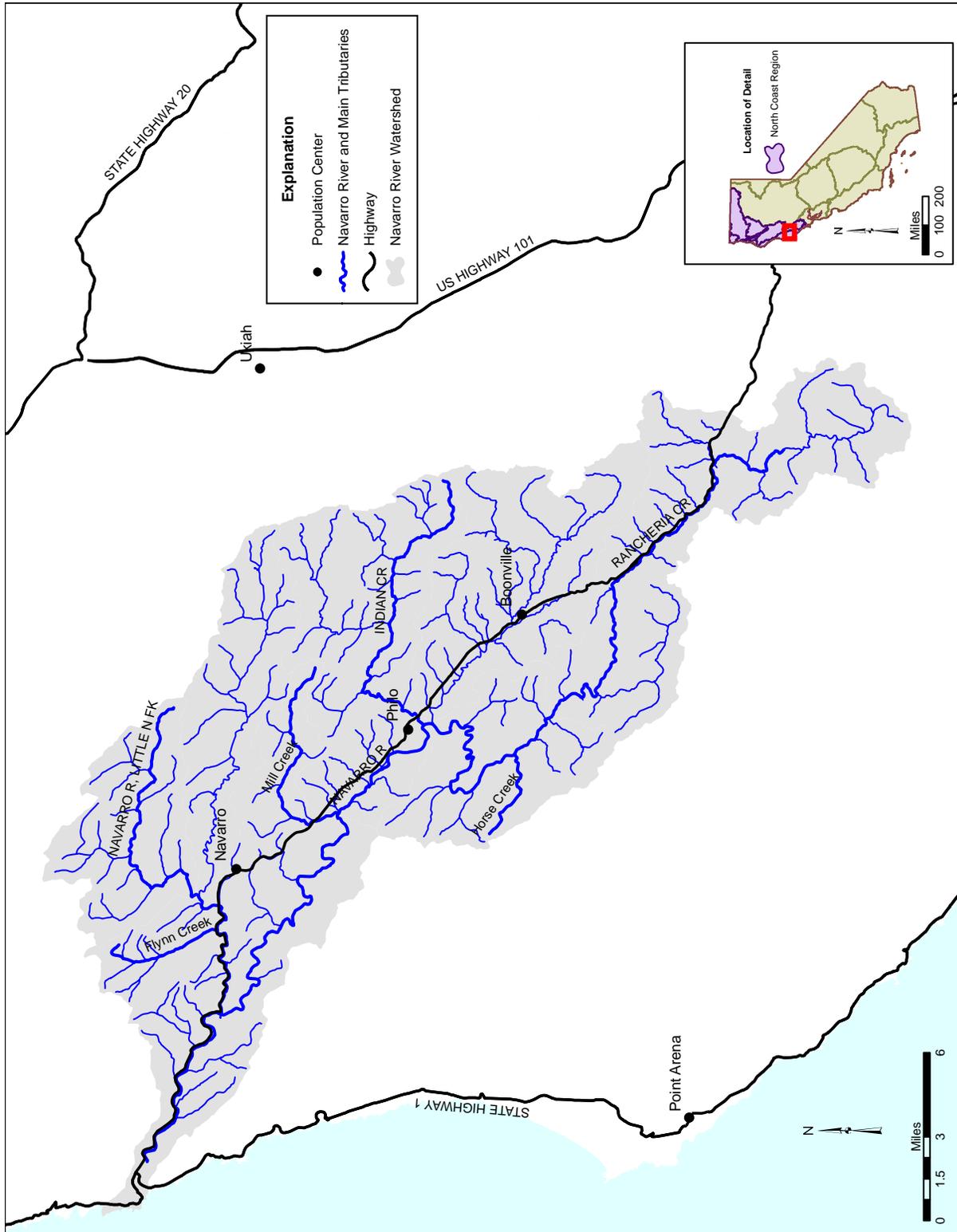


Figure 35. Navarro River Watershed Map.

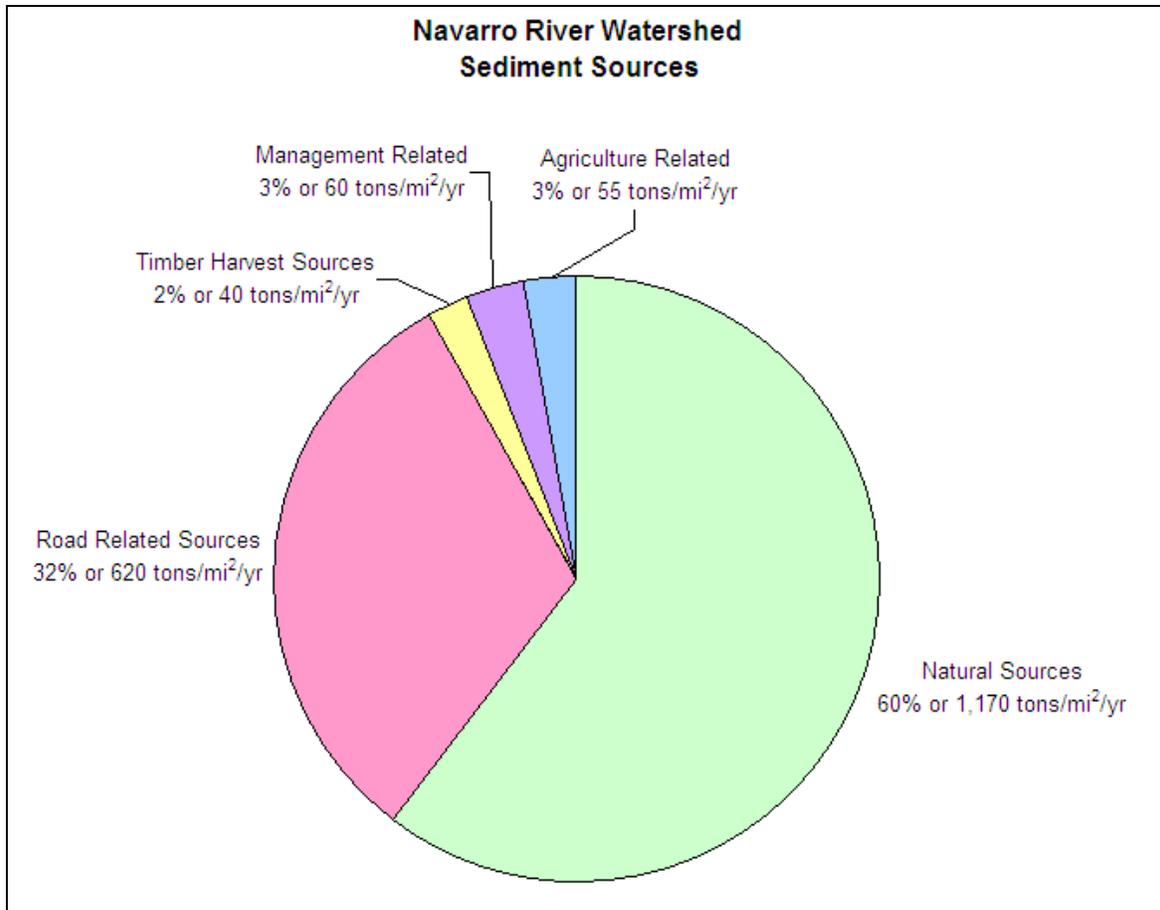


Figure 36. Navarro River Watershed Sediment Sources. Data from: Navarro River Watershed TMDL (U.S. EPA 2000a).

Sediment Source		tons/mi <sup>2</sup> /yr *	
Natural	Shallow Landslides	180	1,170
	Deep-seated Landslides	90	
	Gullies	250	
	Bank Erosion	60	
	Inner Gorge / Stream-side Delivery	590	
Anthropogenic	Roads: Stream Crossing Failures	130	775
	Roads: Mass Wasting	120	
	Roads: Gullying	120	
	Skid Trail Erosion	40	
	Vineyard Erosion	55	
	Management-related Mass Wasting	60	
Total of All Sources		1,945	

\* Current load estimate from 1984 to 1996.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Navarro River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

<b>Table 35</b> <b>Navarro River Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or conditional waivers.
6	Work with road associations.
7	Implement the general WDRs and a general conditional waiver for vineyards.
8	Develop ownership-wide WDRs for Mendocino Redwood Company.
9	Develop WDRs for county roads in Mendocino County.
10	Work with Caltrans on Hwy 128 and Hwy 253.

**Navarro River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Navarro River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Navarro River watersheds are listed here.

*The Navarro Watershed Working Group*

The Navarro Watershed Working Group is a community-based watershed group that meets monthly to help implement the Navarro Watershed Restoration Plan.

*Mendocino County Resource Conservation District (RCD)*

The Mendocino County RCD offers technical and financial support for projects which improve erosion control, water quality, and fishery habitat restoration. They have been involved in the development and implementation of the Navarro Coordinated Permit Program, which simplifies the permit process for restoration projects in the Navarro River watershed.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

Task Continue to work with Mendocino County RCD to implement the Navarro Coordinated Permit Program for restoration projects.

Task Work with the key stakeholders to implement the Navarro Watershed Restoration Plan.

### **Navarro River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with stakeholders and watershed groups to promote excess sediment control in the Navarro River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Navarro River Task 3**

#### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Navarro River Task 4**

#### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the North Fork Navarro River watershed, as this watershed supports the largest population of coho salmon. Also focus on rural subdivisions such as Navarro Woods and the Nash Mill Road area to determine their relative sediment threat to water quality.

### **Navarro River Task 5**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Navarro River watershed, this task, in tandem with Navarro River Task 4 above, is expected to be especially useful for controlling excess sediment from private landowners and ranches in the hills surrounding Anderson Valley and in the upper portions of the watershed.

### **Navarro River Task 6**

#### **Work with Road Associations**

- Task            Meet with the Nash Mill Road Association and other road associations to determine what sediment control work has already been done and what more needs to be accomplished. For example, Pacific Watershed Associates has storm-proofed sections of Nash Mill Road in the last few years.
- Task            Give workshops and presentations to the Nash Mill Road Association and other road associations as part of the outreach effort (Regional Task 5).
- Task            If reconnaissance efforts determine that Nash Mill Road or other roads with road associations are discharging significant amounts of excess sediment, work with the road association to encourage self-determined sediment control prior to using progressive enforcement.

### **Navarro River Task 7**

#### **Implement General WDRs and a General Conditional Waiver for Vineyards**

- Task            Following their development as described in Regional Task 7, implement the general WDRs and the general conditional waiver for excess sediment from vineyard.
- Task            Encourage enrollment in Fish Friendly Farming and the conditional waiver once it is developed. Focus efforts in the Anderson Creek watershed and mainstem Navarro River watershed within Anderson Valley.

Many vineyards are already working with Fish Friendly Farming, including but not limited to, Greenwood Ridge Winery, Husch Winery and Vineyards, Meyer

Family Cellars, Navarro Winery, Scharfeenburger Estate Vineyards, and Yorkville Cellars.

### **Navarro River Task 8**

#### **Develop Ownership-Wide WDRs for Mendocino Redwood Company**

**Background** On June 14, 2007, the Regional Water Board adopted Resolution R1-2007-0034, which describes the collaborative effort to develop ownership-wide WDRs for timber harvesting activities conducted by Mendocino Redwood Company (MRC) on their lands in Mendocino and Sonoma counties. The primary purpose of this resolution is to set forth MRC's and the Regional Water Board's shared understanding of the intent and key elements of their collaboration to develop an ownership-wide approach to compliance with the Porter-Cologne Act, the Basin Plan, and Clean Water Act based on the Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) that MRC is close to completing.

**Task** Following completion of the HCP/NCCP, develop ownership-wide WDRs for Mendocino Redwood Company to address excess sediment and other water quality concerns. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Include in the ownership-wide WDRs the water quality control measures contained in the HCP/NCCP. Strive to develop the ownership-wide WDRs within eight months of the signing of the HCP/NCCP Implementation Agreement.

### **Navarro River Task 9**

#### **Develop WDRs for County Roads in Mendocino County**

**Task** Develop WDRs for Mendocino County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Navarro River watershed, focus on Greenview Road, Mountain View Road, Navarro Ridge Road (probably the most significant sediment discharger), Peachland Road, and Flynn Creek Road.

### **Navarro River Task 10**

#### **Work with Caltrans on Hwy 128 and Hwy 253**

**Task** Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highways 128 and 253 in the Navarro River watershed. Work with Caltrans to ensure their management practices prevent future sediment discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).



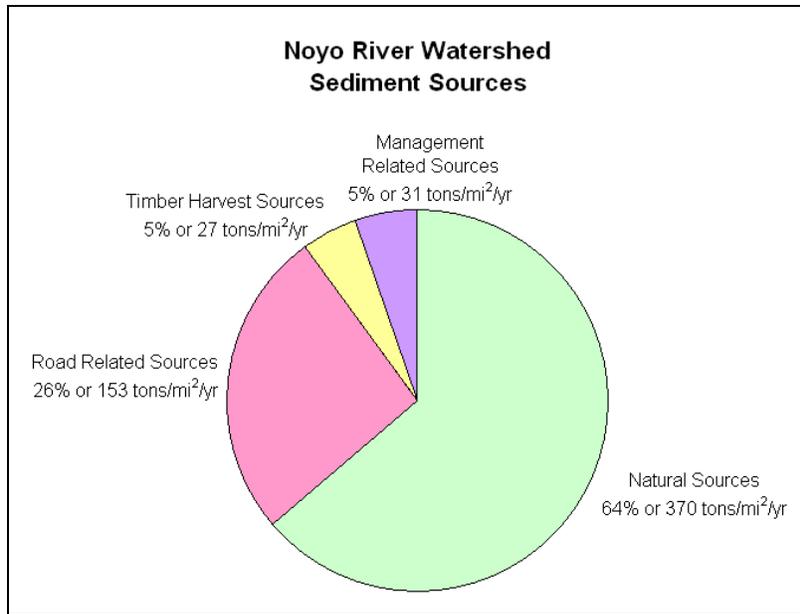


Figure 38. Noyo River Watershed Sediment Sources. Data from: Noyo River TMDL (U.S. EPA 1999b).

<b>Table 36. Noyo River Watershed Sediment Sources</b>			
<b>Natural Sources*</b>			
	Natural Sediment Source	tons/mi <sup>2</sup> /yr	
Entire Noyo Watershed	Landslides	92	370
	Surface Erosion	75	
	Fluvial & Stream Bank Erosion	200	
<b>Anthropogenic Sources**</b>			
	Anthropogenic Sediment Source	tons/mi <sup>2</sup> /yr	
Headwaters	Harvest Related Landslides	8	302
	Skid Trail Related Surface Erosion	17	
	Road Related Erosion	268	
	Railroad Related Landslides	9	
North Fork	Harvest Related Landslides	5	314
	Skid Trail Related Surface Erosion	21	
	Road Related Erosion	288	
	Railroad Related Landslides	0	
South Fork	Harvest Related Landslides	5	184
	Skid Trail Related Surface Erosion	13	
	Road Related Erosion	166	
	Railroad Related Landslides	0	
Mainstem	Harvest Related Landslides	53	355
	Skid Trail Related Surface Erosion	13	
	Road Related Erosion	277	
	Railroad Related Landslides	12	

\* Background inputs are based on the full sediment source analysis study period of 1933 to 1999.

\*\* Anthropogenic inputs are based on the most current sediment source analysis study period of 1979 to 1999.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Noyo River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

**Table 37**  
**Noyo River Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or conditional waivers.
6	Work with the Irmulco Road Associations.
7	Work with Mendocino Co. & Fort Bragg to improve storm water requirements.
8	Work with Barnum Timber, Jackson Demonstration State Forest, Sierra Railroad, and Soper Wheeler to ensure compliance with the Measures to Control Excess Sediment Prohibition.
9	Develop ownership-wide WDRs for Mendocino Redwood Company.
10	Develop ownership-wide WDRs for Campbell/Hawthorne.
11	Develop WDRs for county roads in Mendocino County.
12	Work with Caltrans on Hwy 20.

**Noyo River Task 1**

**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Noyo River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Noyo River watershed are listed here.

*The Noyo Watershed Alliance*

The Noyo Watershed Alliance is a stakeholder group that was formed in 2001 with the mission of improving the Noyo River watershed's fish habitat, water quality, and related resources while considering the region's ecological and socio-economic needs. Members include representatives from the City of Fort Bragg, the Noyo Harbor District, Cal FIRE working in JDSF, Campbell Timberland Management, and Mendocino Redwood Company. The last contact had by Regional Water Board staff with the Noyo Watershed Alliance was in 2003.

*Trout Unlimited*

Trout Unlimited is a national organization whose mission is to conserve, protect and restore North America's coldwater fisheries and their watersheds. In 1998, Trout Unlimited began the North Coast Coho Project which involves implementing cooperative projects with private landowners to restore and monitor

watersheds for coho salmon and steelhead. Activities in 2006 included work in the Noyo River.

In 2003 and 2004, there was an effort by Trout Unlimited and other parties to develop a Noyo River Watershed Enhancement Plan that would identify key restoration projects, prioritize the projects, develop timelines, and include cost estimates. The status of this plan is unknown.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

Task Re-establish contact with the Noyo Watershed Alliance and Trout Unlimited to determine status of the groups, the Noyo River Enhancement Plan, and the North Coast Coho Project..

### **Noyo River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Noyo River watershed. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Noyo River Task 3**

#### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Noyo River Task 4**

#### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the watersheds that drain to the Little North Fork Noyo River, the South Fork Noyo River, Kass Creek, the North Fork South Fork Noyo River, Parlin Creek, the North Fork Noyo River, and Hayworth Creek. These creeks and rivers are identified as priority streams with relatively high quality habitat conditions (Albin 2006). Also focus initial reconnaissance efforts in the upper Noyo River sub-basin, which is a priority for sediment treatment in order to help treat poor sediment conditions downstream in the middle mainstem Noyo River (Albin 2006).

### **Noyo River Task 5**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

- Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:
- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
  - Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
  - Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
  - Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Noyo River watershed, this task, in tandem with Noyo River Task 4 above, is expected to be especially useful for controlling excess sediment from the private ranches and non-industrial timber operators in uppers reaches of the watershed, around Irmulco Road, around Northspur, and the Camp Noyo Boy Scout Camp owned by the San Francisco Boys and Girls Club.

### **Noyo River Task 6**

#### **Work with the Irmulco Road Association**

Background Irmulco Road is a dirt road located off Highway 20 near Northspur. The Irmulco Road Association is a group of primarily residential landowners that use the road for access to their homes. In order to address excess sediment from 28 miles of Irmulco Road and neighboring roads, the group worked with Pacific Watershed Associates on the Irmulco Road Corporation Watershed Inventory and Implementation Planning Project.

Task Contact the Irmulco Road Association to determine status of excess sediment inventory, planning, control, and monitoring efforts.

Task Determine need for Regional Water Board assistance and regulation. Formal requirements may not be necessary if adequate progress is being made to control

excess sediment in compliance with the proposed Measures to Control Excess Sediment Prohibitions (Regional Task 6).

### **Noyo River Task 7**

#### **Work with Mendocino County & Fort Bragg to Improve Storm Water Requirements**

**Background** Municipal storm water discharges from the City of Fort Bragg and the unincorporated areas of Mendocino County around Fort Bragg are regulated by existing municipal separate storm sewer system permits.

**Task** Continue to use the municipal storm water program to control excess sediment discharges from municipal storm water.

**Task** Work with the County of Mendocino and the City of Fort Bragg to control storm water discharges from rural residential land in the Noyo River watershed.

### **Noyo River Task 8**

#### **Work with Barnum, Jackson Demonstration State Forest, Sierra Railroad, and Soper Wheeler to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Background** Barnum Timber and Soper Wheeler own significant amounts of industrial timber land in the Noyo River watershed. The Sierra Railroad operates the Skunk Train, which runs along the mainstem Noyo River from Fort Bragg to Willits.

Jackson Demonstration State Forest (JDSF) is owned by the State of California and managed by Cal FIRE. JDSF is 48,652 acres in size and is located in the Big River and Noyo River watersheds. Cal FIRE has developed the Draft Forest Management Plan and a Draft Environmental Impact Report that describes the proposed future management approach, including timber harvest activities, recreational uses, hillslope management guidelines, and a road management plan. These documents have been the subject of litigation which has resulted in little activity and no timber harvesting in JDSF since 2003. The Board of Forestry should consider adoption of the Draft Forest Management Plan and the Draft EIR in the next year.

**Task** Work with Barnum Timber, Jackson Demonstration State Forest, Sierra Railroad, and Soper Wheeler to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with

the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Noyo River Task 9**

#### **Develop Ownership-Wide WDRs for Mendocino Redwood Company**

**Background** On June 14, 2007, the Regional Water Board adopted Resolution R1-2007-0034, which describes the collaborative effort to develop ownership-wide WDRs for timber harvesting activities conducted by Mendocino Redwood Company (MRC) on their lands in Mendocino and Sonoma counties. The primary purpose of this resolution is to set forth MRC's and the Regional Water Board's shared understanding of the intent and key elements of their collaboration to develop an ownership-wide approach to compliance with the Porter-Cologne Act, the Basin Plan, and Clean Water Act based on the Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) that MRC is close to completing.

**Task** Following completion of the HCP/NCCP, develop ownership-wide WDRs for Mendocino Redwood Company to address excess sediment and other water quality concerns. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

Include in the ownership-wide WDRs the water quality control measures contained in the HCP/NCCP. Strive to develop the ownership-wide WDRs within eight months of the signing of the HCP/NCCP Implementation Agreement.

### **Noyo River Task 10**

#### **Develop Ownership-Wide WDRs for Campbell Timberland Management/ Hawthorne Timber Company**

**Background** Campbell Timberland Management, LLC manages timberland within the Noyo River watershed on behalf of landowner, Hawthorne Timber Company, LLC.

**Task** Develop ownership-wide WDRs for Campbell Timberland Management / Hawthorne Timber Company to address excess sediment and other water quality concerns on their property. Bring the WDRs to the Regional Water Board for their consideration. Should they be adopted by the Board, implement the WDRs.

### **Noyo River Task 11**

#### **Develop WDRs for County Roads in Mendocino County**

**Task** Work with Mendocino County to develop WDRs to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board

for their consideration. If adopted, implement the WDRs. Within the Noyo River watershed, focus on the Sherwood-Fort Bragg Road.

**Noyo River Task 12**

**Work with Caltrans on Hwy 20**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highway 20. Work with Caltrans to ensure their management practices prevent future excess sediment discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## REDWOOD CREEK WATERSHED SEDIMENT CONTROL TASKS

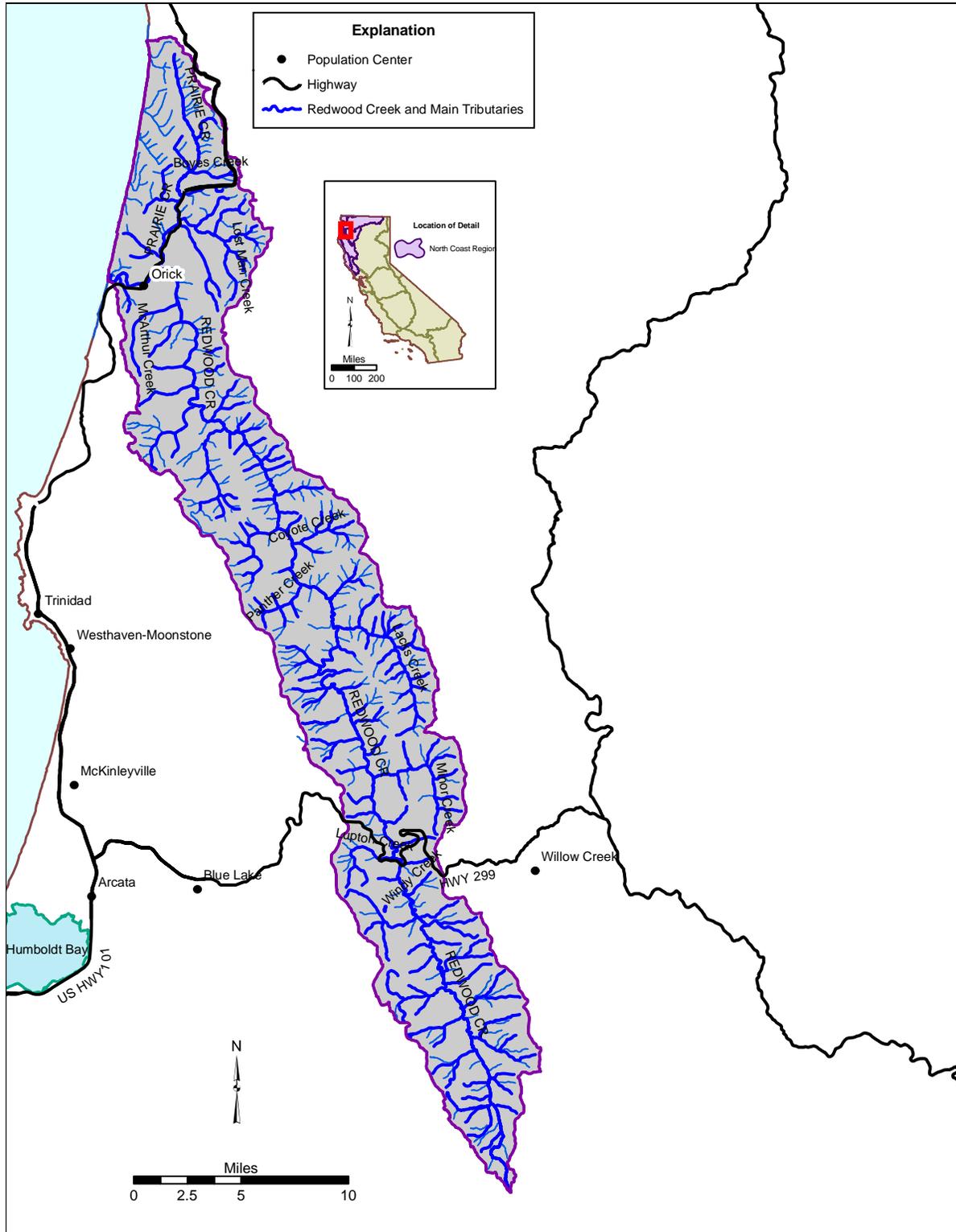


Figure 39. Redwood Creek Watershed Map.

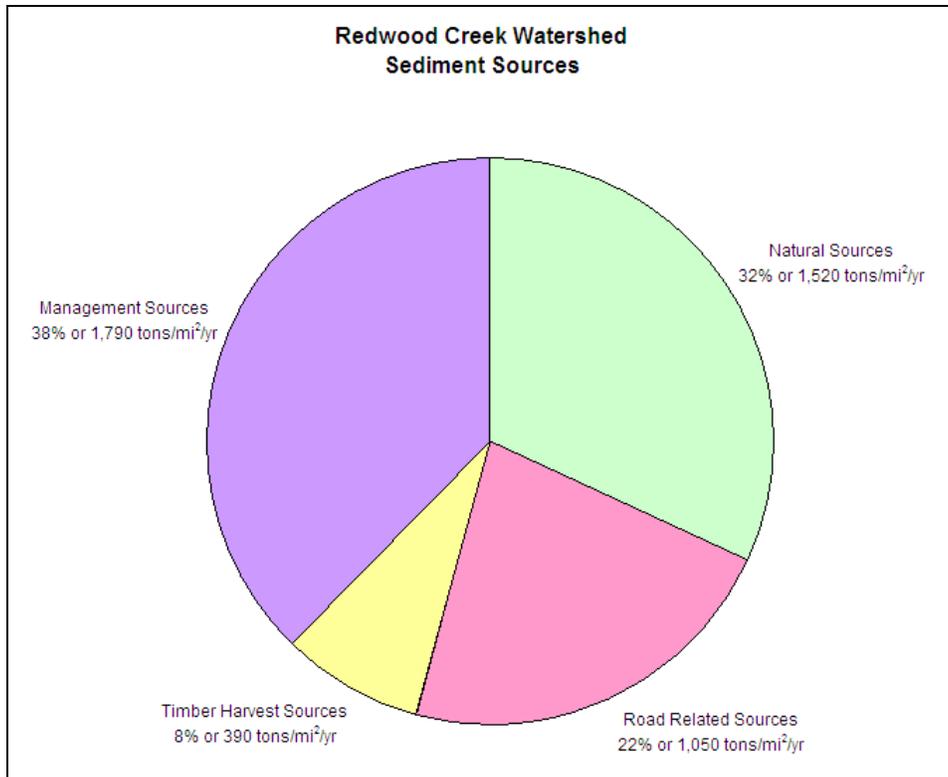


Figure 40. Redwood Creek Watershed Sediment Sources. Data from: Redwood Creek TMDL (U.S. EPA 1998a).

<b>Table 38</b>		
<b>Redwood Creek Watershed Sediment Sources</b>		
	Sediment Source	tons/mi <sup>2</sup> /yr *
Natural	Gully Erosion	150
	Bare Ground Erosion	60
	Stream Bank Erosion	380
	Tributary Landslides	210
	Mainstem Landslides	490
	Other Mass Movements	180
	Debris Torrents	50
Anthropogenic	Roads, Landings, & Skid Trail Erosion	690
	Road Related Tributary Landslides	360
	Harvest Related Tributary Landslides	390
	Mainstem Landslides	320
	Gully Erosion	870
	Bare Ground Erosion	340
	Stream Bank Erosion	210
	Debris Torrents	50
	<b>Total of All Sources</b>	<b>4,750</b>

\* Estimated historic sediment load.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Redwood Creek watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff’s best professional judgement. The tasks may be revised as conditions change.

<b>Table 39</b>	
<b>Redwood Creek Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund sediment waste discharge control projects.
4	Work with stakeholders on channel and riparian improvement projects in the estuary.
5	Identify most egregious excess sediment sources.
6	Use progressive enforcement or develop WDRs or conditional waivers
7	Work with Humboldt State University.
8	Work with Barnum Timber Company, Prairie Creek State Park, Redwood National Park, and Sierra Pacific Industries to ensure compliance with the Measures to Control Excess Sediment Prohibition.
9	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
10	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
11	Develop ownership-wide conditional waiver for the National Park Service.
12	Develop ownership-wide WDRs for Green Diamond.
13	Develop WDRs for county roads in Humboldt County.
14	Work with Caltrans on Hwy 101 and Hwy 299.

**Redwood Creek Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Redwood Creek watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not necessarily all, of the key stakeholders in the Redwood Creek watershed are listed here.

*Redwood Creek Landowners Association*

The Redwood Creek Landowners Association is comprised of ten private landowners who own and manage lands in the middle and upper subbasins of the Redwood Creek watershed, including Barnum Timber Company, Green Diamond Resources Company, Sierra Pacific Industries, the Estate of Herb Russ, Kahn Properties, Russ Ranch, and the Stover Ranch. Seven of these landowners, all with more than 3,000 acres, own approximately 90% of the private land in the Redwood Creek watershed. The Association has a history of planning and implementing erosion control and excess sediment prevention work.

*Redwood Creek Watershed Group*

The Redwood Creek Watershed Group is a collaborative watershed partnership whose purpose is to improve watershed conditions in Redwood Creek, preserve

current land uses, and provide economic opportunity for the Orick community. Membership includes private landowners, and local and federal agencies that manage more than 90% of the Redwood Creek watershed. Membership also includes non-profit organizations and agencies with regulatory or scientific interest in the watershed.

The Redwood Creek Watershed Group developed the Redwood Creek Integrated Watershed Strategy (June 22, 2006) to improve and protect water quality, water supply, and aquatic and riparian habitat throughout the Redwood Creek watershed, including the estuary and coastal areas. The Strategy addresses water quality issues by proposing the following projects:

- Short-Term Flood Control
- Long-Term Flood Control
- Restoration of the Redwood Creek Estuary
- Wastewater Treatment for the Orick Community
- Strawberry Creek Restoration
- Erosion Control and Prevention on Private and Public Lands
- Inner Gorge Protection and Restoration
- Restoration of Riparian Areas along Redwood Creek and its major tributaries

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Redwood Creek Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Redwood Creek watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops. In addition to the workshop content listed in Regional Task 5, include workshop material on road maintenance and repair, cattle grazing management, and riparian management.

### **Redwood Creek Task 3**

#### **Fund Excess Sediment Control Projects**

Background As of April 2007, the Regional Water Board is involved in providing roughly \$1,920,000 of grant funding for work in the Redwood Creek watershed.

Task Continue to fund excess sediment control projects in the Redwood Creek watershed through available nonpoint source and watershed protection grants and loans (Regional Task 21).

#### **Redwood Creek Task 4**

##### **Work with Stakeholders on Channel and Riparian Improvement Projects in the Estuary**

Task Work with the Redwood Creek Watershed Group, Redwood National and State Parks, and other stakeholders on channel and riparian improvement projects in the estuary subbasin to benefit salmonids, reduce excess sediment, and offer flood control protection to the town of Orick and pasturelands surrounding the estuary. Restoration projects should achieve more natural flood plain characteristics and increase the depth and area of the lower embayment while increasing connectivity, circulation between the main channel and slough channels, and instream salmonid habitat shelter.

#### **Redwood Creek Task 5**

##### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the middle and upper subbasins and in the area around Highway 299.

#### **Redwood Creek Task 6**

##### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Redwood Creek watershed, this task, in tandem with Redwood Creek Task 5 above, is expected to be especially useful for controlling excess sediment from private landowners and ranches in the middle and upper subbasins and around Highway 299.

### **Redwood Creek Task 7**

#### **Work with Humboldt State University to Coordinate Research**

- Task Meet with appropriate faculty and staff of Humboldt State University to identify current and future sediment control actions and sediment-related research that HSU is working on in the Redwood Creek watershed. Offer assistance. Coordinated efforts.
- Task Consider working with Caltrans to carry out this task. Caltrans has requirements to conduct outreach and education in association with their storm water program, and has offered to partner with the Regional Water Board.

### **Redwood Creek Task 8**

#### **Work with Barnum Timber Company, Prairie Creek State Park, Redwood National Park, and Sierra Pacific Industries to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

Background Redwood National Park and Prairie Creek State Park are known as the Redwood National and State Parks, which are managed by the U.S. National Park Service and California Department of Parks and Recreation under a joint management agreement signed in 1994. The parks were established to preserve significant examples of primeval coastal redwood forest, and the streams and seashore with which they are associated. The parks manage about 40% of the Redwood Creek watershed, all in the lower portion of the watershed. Redwood National and State Parks have done a significant amount of work to survey road systems, identify problems, and implement road removals and upgrades that should result in reduced excess sediment.

Barnum Timber Company and Sierra Pacific Industries each own a significant number of acres in the upper Redwood Creek watershed.

- Task Work with Barnum Timber Company, Prairie Creek State Park, Redwood National Park, and Sierra Pacific Industries to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the

landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

Task For timber harvest activities, ensure excess sediment control efforts undertaken to comply with the Measures to Control Excess Sediment Prohibition include the following activities. These activities are taken from the Redwood Creek Basin Assessment (Cannata et al. 2006).

- Management on slopes with high landslide potential should first involve a risk assessment or be avoided.
- On steep or potentially unstable slopes (in many cases, slopes > 35%) use lower impact silvicultural prescriptions and use cable or helicopter yarding.
- Minimize the use of fire for site preparation purposes on schist soils during warm, dry periods (late summer and fall).
- Roads located on unstable slopes and roads near streams should receive high priority for surveys, upgrades, and decommissioning projects.
- Avoid or mitigate for risks of excessive erosion when planning, building, or removing roads in or near deep-seated landslides and earthflows.

### **Redwood Creek Task 9**

#### **Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

Task Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment in Six Rivers National Forest within the Redwood Creek watershed.

### **Redwood Creek Task 10**

#### **Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

Task Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment within the Redwood Creek watershed. The WDRs or the conditional waiver may be applicable to all BLM land in the North Coast Region, to all BLM land within the South Fork Eel River watershed, or to the land managed by a given field office.

### **Redwood Creek Task 11**

#### **Develop an Ownership-wide Conditional Waiver for the National Park Service**

**Background** The National Park Service is planning on harvesting their second growth trees in Redwood National Park with the goal of restoring big tree forests. Harvesting is expected to begin in summer 2008.

**Task** Develop an ownership-wide conditional waiver for the National Park Service for timber harvesting activities in Redwood National Park. Bring the waiver to the Regional Water Board for their consideration. If adopted, implement the waiver.

### **Redwood Creek Task 12**

#### **Develop Ownership-Wide WDRs for Green Diamond**

**Task** Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property in the Redwood Creek watershed.

In addition to the likely contents of WDRs described in Regional Task 11, WDRs for timber harvest activities in the Redwood Creek watershed should include the following erosion and sediment delivery reduction activities. These activities are taken from the Redwood Creek Basin Assessment (Cannata et al. 2006).

- Management on slopes with high landslide potential should first involve a risk assessment or be avoided.
- On steep or potentially unstable slopes (in many cases, slopes > 35%) use lower impact silvicultural prescriptions and use cable or helicopter yarding.
- Minimize the use of fire for site preparation purposes on schist soils during warm, dry periods (late summer and fall).
- Roads located on unstable slopes and roads near streams should receive high priority for surveys, upgrades, and decommissioning projects.
- Avoid or mitigate for risks of excessive erosion when planning, building, or removing roads in or near deep-seated landslides and earthflows.

### **Redwood Creek Task 13**

#### **Develop WDRs for County Roads in Humboldt County**

**Task** Develop WDRs for Humboldt County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

**Redwood Creek Task 14**  
**Work with Caltrans on Hwy 101 and Hwy 299**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highways 101 and 128 in the Redwood Creek watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## RUSSIAN RIVER WATERSHED SEDIMENT CONTROL TASKS



Figure 41. Russian River Watershed Map.

The sediment TMDL for the Russian River watershed, which includes the Laguna de Santa Rosa and Santa Rosa Creek watersheds, has not been developed and an estimate of sediment sources is not available.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Russian River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. However, until the sediment source analysis and the TMDL are completed, it is unknown if additional tasks might be needed. The tasks may be revised as conditions change and more information becomes available.

**Table 40**  
**Russian River Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Develop dairy-focused outreach and education program.
4	Continue to fund sediment waste discharge control projects.
5	Continue to use the municipal storm water program and improve requirements.
6	Continue to regulate instream gravel mining operations.
7	Address downcutting from Warm Springs and Coyote dams.
8	Identify most egregious excess sediment sources.
9	Use progressive enforcement or develop WDRs or conditional waivers.
10	Work with road associations.
11	Work with the North Coast Railroad Authority
12	Work with the Depart. of Parks and Recreation to ensure compliance with the Measures to Control Excess Sediment Prohibition.
13	Implement the general WDRs and a general conditional waiver for vineyards.
14	Implement the general WDRs and a general conditional waiver for dairies.
15	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
16	Develop ownership-wide WDRs for Mendocino Redwood Company.
17	Develop WDRs for county roads in Mendocino and Sonoma counties.
18	Work with Caltrans on state highways.

**Russian River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Russian River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Russian River watershed are listed here.

*Alexander Valley Landowners*

Many landowners within Alexander Valley are interested in this Work Plan, the Regional Water Board's excess sediment control efforts, gravel bar skimming, bank stabilization, and flood control.

*Atascadero Creek and Green Valley Creek Watershed Council*

The mission of the Atascadero Creek and Green Valley Creek Watershed Council is to bring together the people who live and work in our watershed to help each other in taking responsibility for impacts on the watershed through protection, restoration and education.

*Blucher Creek Watershed Council*

The Blucher Creek Watershed Council is a citizens group formed in the early 1990s to protect the natural environment of the watershed and the quality of life of its inhabitants. The group holds monthly educational meetings, conducts a well-monitoring program, and is in the process of applying for grants to fund erosion repair and prevention activities.

*Community Clean Water Institute*

The Community Clean Water Institute (CCWI) is a non-profit group whose primary objective is to promote watershed stewardship and protection through water quality monitoring. CCWI works with volunteer citizen monitors and watershed groups to organize and implement water quality monitoring throughout Sonoma County.

*Friends of the Mark West Watershed*

Friends of the Mark West Watershed was formed in 2003 in opposition to a major development. Their current activities include road and creek cleanups, educational outreach, and water quality and quantity monitoring.

*Gold Ridge Resource Conservation District*

The boundaries of the Gold Ridge Resource Conservation District (RCD) comprises the lower Russian River, including Atascadero Creek, Green Valley Creek, Blucher Creek, Willow Creek, and portions of the Laguna de Santa Rosa. Gold Ridge RCD's mission is to assist landowners in addressing their environmental concerns by maintaining a presence in natural resources conservation work, by helping to involve landowners in NRCS projects, and by providing a conduit to state and federal monies.

*Gravel Mining Companies*

Shamrock Materials, Inc., Syar Industries, Inc., and Bohan and Canelis are actively mining gravel from the Russian River.

*Laguna de Santa Rosa Foundation*

Founded in 1989, the Laguna de Santa Rosa Foundation's mission is to preserve, restore and enhance the Laguna de Santa Rosa, and to inspire greater public understanding and appreciation of the Laguna. The foundations' programs include science and research, education, and restoration. They are currently developing a Conceptual Model of Laguna water quality.

*Landpaths*

Landpaths is a stewardship group whose goal is to foster appreciation of the land in the local community. Their programs include education, networking of interested parties, and providing public access to the land. Their access program includes monitoring and restoration projects such as road repair to improve salmonid habitat.

*Mendocino County Resource Conservation District*

The Mendocino County RCD works with the community to restore water quality, with recent and current projects including stream assessment and road and streambank restoration in the Russian River watershed.

*Russian River Property Owners Association*

The Russian River Property Owners Association is a stewardship organization focused on protecting river, tributary, and watershed property rights. The organization has 125 members including vineyard owners, cattle ranchers, homeowners, and gravel companies who own 22 of the 36 miles of riverfront property between Wohler Bridge and Cloverdale.

*Russian River Watershed Association*

The Russian River Watershed Association (RRWA) is an group of eleven cities, counties, and special districts in the Russian River watershed that have come together to coordinate regional programs for clean water, fisheries restoration, and watershed enhancement. The members are the cities of Cloverdale, Cotati, Healdsburg, Rohnert Park, Santa Rosa, Ukiah, and Windsor; the County of Sonoma; Mendocino County Water Agency, Sonoma County Water Agency, and the Mendocino County Inland Water and Power Commission.

*Russian River Watershed Council*

The Russian River Watershed Council (RRWC) is a stakeholder group that was formed in 1998 with a mission to protect, restore, and enhance the biological health of the Russian River and its watershed through a community-based

process, which facilitates communication and collaboration among all interested parties.

In 2002, the RRWC, in conjunction with the Army Corps of Engineers, completed a Plan of Action for the Russian River. The Plan of Action identifies the following critical issues for the Russian River Watershed:

- Rising or fluctuating water temperature.
- Disturbances to the stream channel.
- Non-beneficial bank erosion and deposit of fine sediment.
- Introduction of invasive, exotic species.

The Plan of Action identifies the following potential actions to address these critical issues:

- Restore the stream corridor through a variety of stream corridor protection and watershed management methods (e.g., meander corridor setbacks, floodplain and wetland protection, and riparian revegetation).
- Seek an appropriate balance for riparian vegetative cover throughout the watershed.
- Work with organizations that can hold conservation easements to develop standard easement definitions and evaluation protocols for establishing riparian habitat and corridors in sensitive areas.
- Determine the feasibility and need for a basin-wide and reach specific gravel budget that is based on stream hydrology and identifies the gravel recruitment needs for healthy fisheries.
- Create a toolbox of non-toxic removal and replacement methods for exotic species that can be easily disseminated for application by private property owners, stewardship groups, resource agencies, and local municipalities.

The RRWC is also currently taking part in the development of the Russian River Watershed Adaptive Management Plan in conjunction with the Corps of Engineers, the California Resource Agency, and the Sonoma and Mendocino County Water Agencies. In partnership with the Corps of Engineers and the Resource Agency, the RRWC also continues work on the Russian River Interactive Information System, an online resource for information on the Russian River Watershed.

#### *Russian River Watershed Protection Committee*

The Russian River Watershed Protection Committee (RRWPC) is a nonprofit corporation established in 1980, organized to work in the public interest on river protection issues. The organization consists of a seven member board of directors and a mailing list of about 1,200 names. The RRWPC produces a bi-monthly newsletter focused on current issues facing the Russian River Watershed, including tracking Santa Rosa wastewater issues.

*Russian Riverkeeper*

Russian Riverkeeper is a citizens group whose mission is to preserve, restore and enhance the natural systems of the Russian River through citizen action, scientific research, and expert advocacy. Their programs include water quality monitoring, issues advocacy, restoration projects, educational programs, and patrolling the river for potential problems and violations.

*Sonoma County Agricultural Preservation and Open Space District*

The Sonoma County Agricultural Preservation and Open Space District is responsible for the preservation of almost 70,000 acres of open space and agricultural land, including properties owned by the district and conservation easements. The District's stewardship activities include constructing and implementing management plans appropriate to each individual property, as well as monitoring these properties.

*Sonoma County Salmon Coalition*

The Sonoma County Salmon Coalition is a group of landowners and agencies working towards creating a conservation agreement to promote the recovery and maintenance of salmonid populations while providing economic viability and regulatory certainty. The Salmon Coalition is focused on Alexander Valley, Dry Creek Valley, and Knights Valley.

*Sotoyome Resource Conservation District*

The Sotoyome RCD implements stewardship and education programs to further their goal of improving the sustainability of natural resources. Their stewardship program includes monitoring of water quality, including sedimentation, as well as identification and implementation of possible restoration projects.

*Trout Unlimited*

Trout Unlimited is a national organization whose mission is to conserve, protect, and restore North America's coldwater fisheries and their watersheds. In 1998, Trout Unlimited began the North Coast Coho Project which involves implementing cooperative projects with private landowners to restore and minor watersheds for coho salmon and steelhead. In 2003, the North Coast Coho Project expanded into the Russian River watershed with the implementation of the Lower Austin Creek Migration Improvement Project (LACMIP), which included the installation of root wads and boulders to 4,000 feet of lower Austin Creek.

Future activities identified by Trout Unlimited include working with private landowners in the upper Austin Creek watershed to reduce sediment loading and restore stream habitat and participation in the Captive Broodstock Program.

**Task** Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**Russian River Task 2**  
**Conduct Outreach and Education and Work with Interested Stakeholders**

**Task** Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Russian River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

**Russian River Task 3**  
**Develop Dairy-Focused Outreach and Education Program**

**Background** Dairies are primarily concentrated in the Laguna de Santa Rosa watershed. The Animal Resource Management Committee is run by the Sonoma County Farm Bureau to help dairy, horse, poultry, and livestock producers address animal waste management issues, and encourage environmental compliance and protection of

**Task** Work with the Animal Resource Management Committee, Sonoma County Farm Bureau, Western United Dairymen, dairy operators, and stakeholders to develop and implement a collaborative outreach and education program for dairy water quality. Attend meetings of the Animal Resource Management Committee. Outreach and education program components should include photos and examples of active excess sediment sources, natural sources, excess sediment sources that are healing, control projects and measures, and the inclusion of technical experts.

**Russian River Task 4**  
**Continue to Fund Excess Sediment Control Projects**

**Background** As of April 2007, the Regional Water Board is involved in providing grant funds for the following projects in the Russian River Watershed.

- \$400,000 to the Land Partners Stewardship for the Willow Creek Restoration Project under the Proposition 13 grant program.

- Approximately \$396,000 to the City of Santa Rosa for the Santa Rosa Creek B Street Outfall Retrofit Project under the 319(h) Nonpoint Source Implementation grant program.

Task Continue to fund excess sediment control projects in the Russian River watershed through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Russian River Task 5**

#### **Continue to Use the Municipal Storm Water Program & Improve Requirements**

Background Within the Russian River watershed, the municipalities of Graton, Healdsburg, Ukiah and the unincorporated areas around Ukiah, Rohnert Park, Santa Rosa, Sebastopol, and Windsor all have storm water management plans and are regulated by the municipal separate storm sewer system program.

Task Continue to use the municipal storm water program to control excess sediment from municipalities in the Russian River watershed (Regional Task 19). Ensure excess sediment is adequately and effectively controlled.

Task Work with Mendocino and Sonoma counties on improving storm water requirements for rural residential developments.

Task Develop and distribute education materials on storm water control practices.

### **Russian River Task 6**

#### **Continue to Regulate Instream Gravel Mining Operations**

Background Instream gravel mining is currently ongoing in several reaches of the Russian River and in Austin Creek. Syar Industries, Inc. is active in the middle reach and Alexander Valley reach. Shamrock is also active near Cloverdale in the upper Alexander Valley reach. Bohan and Canelis is mining aggregate in lower Austin Creek. In Sonoma County, gravel removal must be by gravel bar skimming during the summer above the water level and outside the flowing channel.

The Regional Water Board regulates all instream gravel mining operations through 401 certifications and industrial storm water permits. The 401 certifications are revised and reconsidered every year to every five years.

Instream gravel mining is also regulated by Sonoma County's Surface Mining and Reclamation Ordinance and the Aggregate Resources Management Plan. Sonoma County has also hired a Scientific Review Committee which makes recommendations on grading and vegetation issues related to instream gravel mining.

- Task Continue to use 401 Certifications to regulate instream gravel mining operations in the Russian River watershed. Ensure activities are conducted in a manner that (1) prevents and reduces excess sediment discharges; (2) ensures existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored; (3) ensures adaptive management occurs; (4) protects and restores the shapes, slopes, and planforms of stream channels that are necessary to balance sediment loads and water discharges in streams and to prevent excessive erosion or deposition of sediment; (5) protects and restores the connectivity between streams and their floodplains; and (6) protects and restores riparian vegetation. Ensure instream impacts are mitigated with stream restoration projects or other mitigation projects when specifically called for in a 401 Certification permit.
- Task Continue to use industrial stormwater permits to regulate stormwater runoff from gravel processing plants and haul roads in the Russian River watershed. Ensure activities are conducted so as to prevent and minimize future excess sediment discharges. Ensure existing excess sediment discharges are inventoried, prioritized, scheduled, fixed, and monitored. Ensure adaptive management occurs. Focus on the prevention and control of excess sediment from access and haul roads.
- Task Incorporate recommendations from the Scientific Review Committee into 401 certifications and storm water permits as appropriate.

**Russian River Task 7**  
**Address Downcutting from Warm Springs & Coyote Dams**

- Background The mainstem Russian River has downcut approximately 18 feet through Ukiah Valley, approximately 12 feet in Alexander Valley, and up to 20 feet in the Middle Reach according to data collected from 1979 to 1994 (NCRWQCB 2006). Coyote Dam / Lake Mendocino and Warm Springs Dam / Lake Sonoma are two of the leading causes of the downcutting in the mainstem Russian River (gravel mining is the other leading anthropogenic cause) as the “hungry” water released from the reservoirs is sediment deficient, has higher energy, and scours out fine sediments and gravels from the downstream channel as it seeks to establish equilibrium. Downcutting leads to bank erosion, channel widening, the disconnection between the channel and the floodplain, and the armoring of the streambed with large cobbles, boulders, or bedrock that may be too coarse for salmonid spawning.
- Task Identify, research, and analyze more recent data on downcutting in the mainstem Russian River.
- Task If more recent data does not exist, ensure data is gathered and analyzed. It is likely that this work, if needed, will be contracted out.

**Task** If the analysis of data shows that downcutting in the mainstem Russian River has continued, restore the balance between coarse sediment (gravels and cobbles) supply and coarse sediment transport. Begin by developing a plan to determine (1) if mechanically adding coarse sediment downstream of the dams will be beneficial, (2) the volume of coarse sediment necessary to add to the river downstream of the dams during different types of water years (e.g., wet, normal, dry) if needed, (3) if high flushing flows from the dams will be beneficial, (4) the amount of flushing flows and their frequency if needed, and (5) other measures that might restore the necessary coarse sediment balance. Ensure the plan is implemented. Ensure monitoring and adaptive management are conducted.

**Russian River Task 8**  
**Identify Most Egregious Excess Sediment Sources**

**Task** Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts on watersheds that currently support coho salmon, which is limited to the mainstem Russian River downstream of Coyote Dam and the following tributaries: Austin Creek, Dry Creek, Dutch Bill Creek, Fife Creek, Forsythe Creek, Freezeout Creek, Green Valley Creek, Jenner Gulch, Maacama Creek, Mark West Creek, Mill Creek, Mission Creek, Sheephouse Creek, Turtle Creek, Willow Creek, and York Creek.

**Russian River Task 9**  
**Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

**Task** For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Russian River watershed, this task, in tandem with Russian River Task 8 above, is expected to be especially useful for controlling excess sediment from

private landowners, rural residences, and ranches in the Russian River watershed outside of the cities and towns.

### **Russian River Task 10**

#### **Work with Road Associations**

- Task Meet with road associations to determine what sediment control work has already been done and what more needs to be accomplished.
- Task Give workshops and presentations to road associations as part of the outreach effort (Regional Task 5).
- Task If reconnaissance efforts determine that roads with road associations are discharging significant amounts of excess sediment, work with the road association to encourage self-determined sediment control prior to using progressive enforcement.

### **Russian River Task 11**

#### **Work with the North Coast Railroad Authority**

- Background The North Coast Railroad Authority owns the Northwestern Pacific Railroad that runs parallel to the Eel River. The Regional Water Board, in cooperation with CDFG and DTSC, is working with the North Coast Railroad Authority to address excess sediment and other water quality concerns (primarily toxic waste and soil contamination issues) from the railroad. Under a court-established consent decree, the North Coast Railroad Authority inventoried all threatened and existing discharges, but the inventory is now old and out-of-date. The consent decree also set dates for the control of discharges. In addition, WDRs and CAOs have been adopted. Many requirements of the consent decree and Regional Water Board orders have not been met because of the lack of money. The North Coast Railroad Authority currently has funding to focus on re-opening the stretch of track from Marin County to Willits, and they are working on an EIR for their activities along this stretch.
- Task Continue to work cooperatively with CDFG and DTSC to ensure the North Coast Railroad Authority implements existing WDRs, CAOs, and the consent decree.
- Task Continue to work with the North Coast Railroad Authority on their EIR to (1) ensure existing excess sediment discharges are identified, prioritized, controlled; (2) ensure future operations are conducted in a manner that prevents and minimizes additional excess sediment discharges; and (3) ensure monitoring occurs.

Task Revise existing WDRs that allow for the sidecast of sediment during emergencies to allow for train passage. Ensure sediment is not discharged into a water body.

### **Russian River Task 12**

#### **Work with the Department of Parks and Recreation to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

Background The California Department of Parks and Recreation manages several parks and recreation areas in the Russian River watershed, including Sonoma Coast State Park, Armstrong Grove State Reserve, Austin Creek State Recreation area, Annadel State Park, and Robert Louis Stevenson State Park.

Task Work with the California Department of Parks and Recreation to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the Department choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Russian River Task 13**

#### **Implement General WDRs and a General Conditional Waiver for Vineyards**

Task Following their development and adoption (as described in Regional Task 7), implement the general WDRs and the general conditional waiver for excess sediment from vineyards.

Task Encourage enrollment in Fish Friendly Farming and the conditional waiver once it is developed. Many vineyards and wineries within the Russian River watershed are already working with Fish Friendly Farming.

### **Russian River Task 14**

#### **Implement General WDRs and a General Conditional Waiver for Dairies**

Background Approximately 100 dairies are located in the Santa Rosa Plain, which drains to the Laguna de Santa Rosa.

Task Following their development and adoption (as described in Regional Task 8), implement the general WDRs and the general conditional waiver for dairies for excess sediment and other water quality concerns.

### **Russian River Task 15**

#### **Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

**Background** The Bureau of Land Management (BLM) manages several holdings throughout the Russian River watershed; the largest of which is Cow Mountain in Mendocino County.

**Task** Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment on BLM land in the Russian River watershed.

### **Russian River Task 16**

#### **Develop Ownership-Wide WDRs for Mendocino Redwood Company**

**Background** The Mendocino Redwood Company (MRC) owns a relatively small portion of land in the Russian River watershed, which includes property in the Freezeout Creek watershed and in the upper western corner of the Russian River watershed, west of Ukiah.

On June 14, 2007, the Regional Water Board adopted Resolution R1-2007-0034, which describes the collaborative effort to develop ownership-wide WDRs for timber harvesting activities conducted by MRC on their lands in Mendocino and Sonoma counties. The primary purpose of this resolution is to set forth MRC's and the Regional Water Board's shared understanding of the intent and key elements of their collaboration to develop an ownership-wide approach to compliance with the Porter-Cologne Act, the Basin Plan, and Clean Water Act based on the Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) that MRC is close to completing.

**Task** Following completion of the HCP/NCCP, develop ownership-wide WDRs for Mendocino Redwood Company to address excess sediment and other water quality concerns. Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Include in the ownership-wide WDRs the water quality control measures contained in the HCP/NCCP. Strive to develop the ownership-wide WDRs within eight months of the signing of the HCP/NCCP Implementation Agreement.

### **Russian River Task 17**

#### **Develop WDRs for Mendocino and Sonoma Counties for County Roads**

**Task** Develop WDRs for Mendocino County and Sonoma County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

**Russian River Task 18**  
**Work with Caltrans on State Highways**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highways 1, 12 and Bodega Highway, 20, 101, 128, 175, and other State Highways in the Russian River watershed. Work with Caltrans to ensure their management practices prevent future sediment discharges. Accomplish this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## SCOTT RIVER WATERSHED SEDIMENT CONTROL TASKS

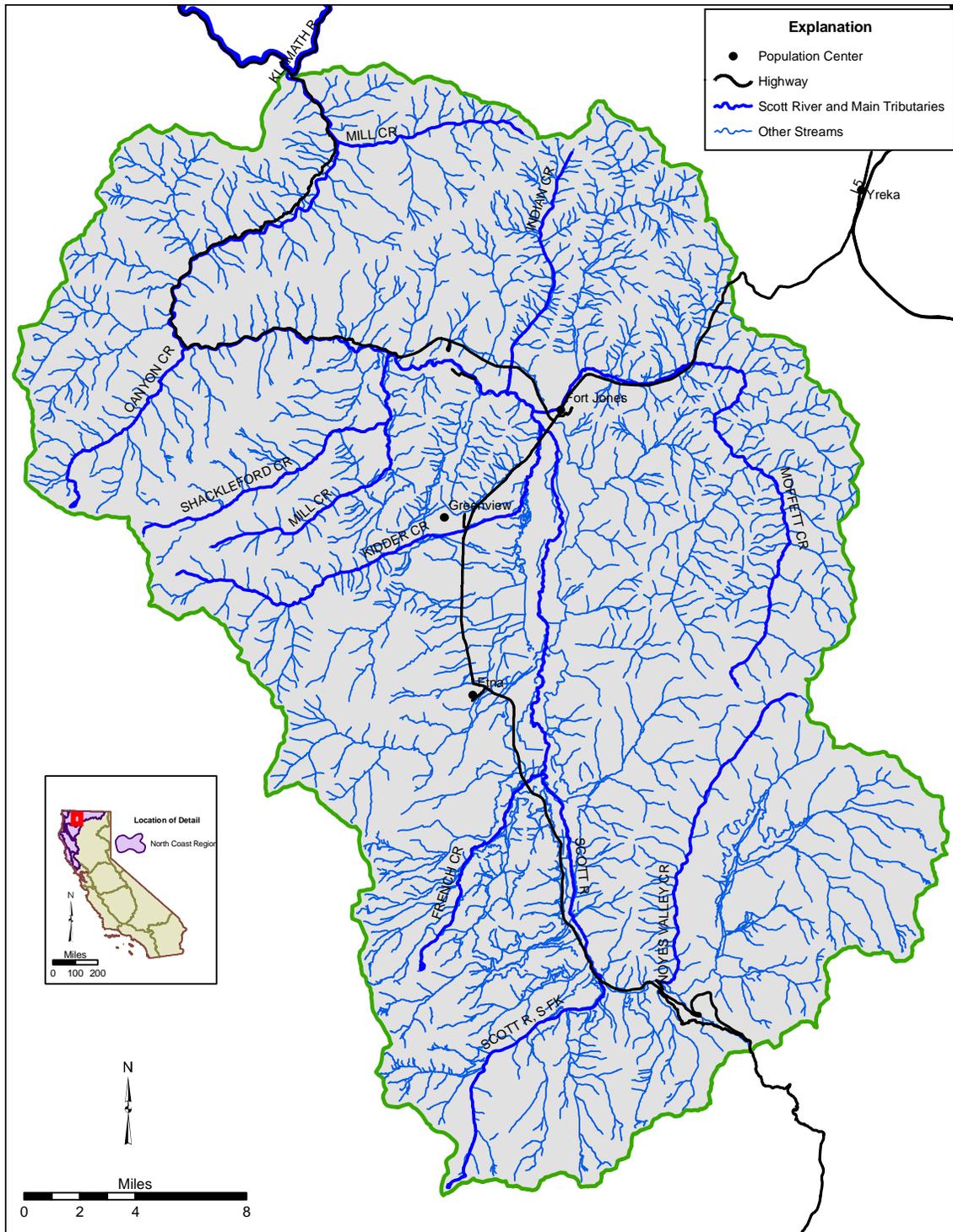


Figure 42. Scott River Watershed Map.

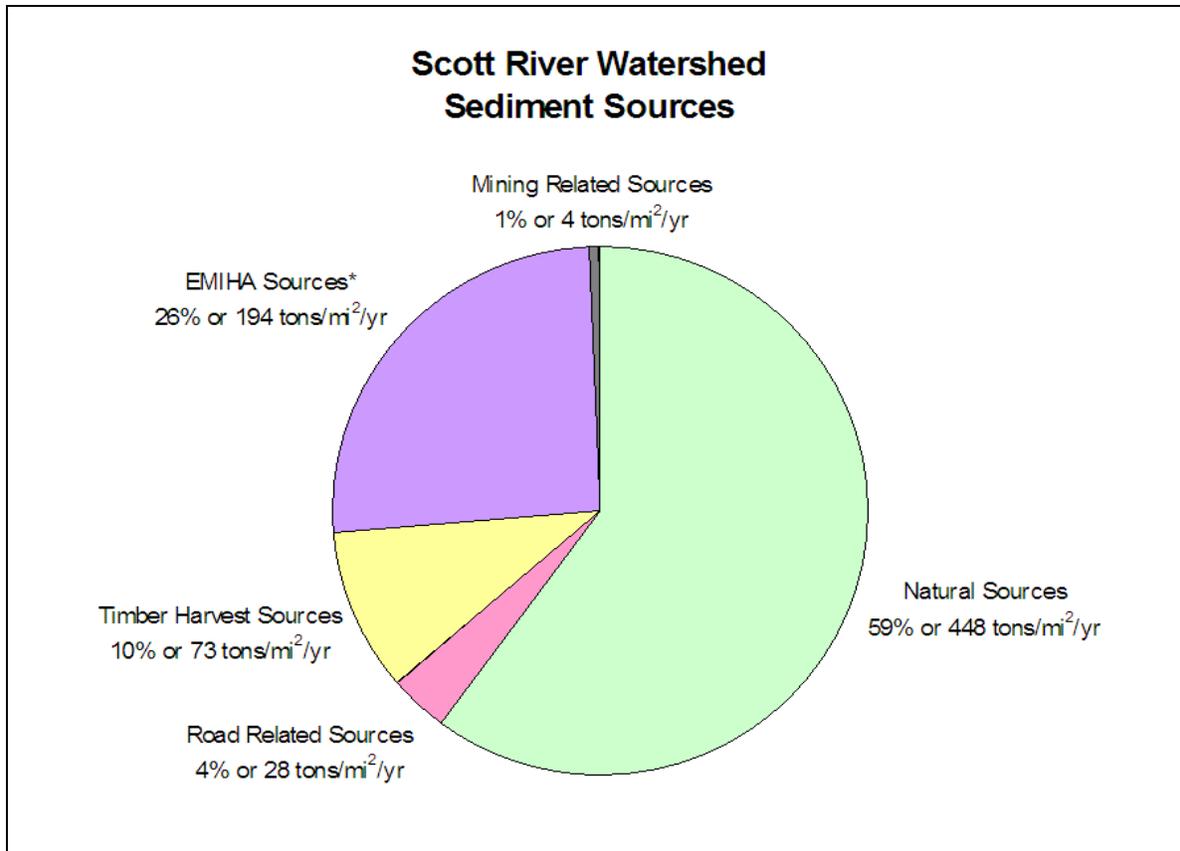


Figure 43. Scott River Watershed Sediment Sources. Data from the Action Plan for the Scott River TMDL (NCRWQCB 2007). EMIHA = Effects of Multiple Interacting Human Activities

Table 41 Scott River Watershed Sediment Sources			
	Sediment Source	tons/mi <sup>2</sup> /yr	
Natural	Landslides	23	448
	Streamside Sediment Features	424	
Anthropogenic	Road Related Sources	28	299
	Timber Harvest Landslides	19	
	Timber Harvest Streamside Sediment Sources	54	
	Mining Related Landslides	2	
	Mining Related Streamside Sediment Sources	2	
	EMIHA* Sources	194	
	Total of All Sources	747	

\* EMIHA = Effects of Multiple Interacting Human Activities

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Scott River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change. Almost all of these tasks are taken directly from the Scott River TMDL Implementation Work Plan, dated February 28, 2007.

**Table 42**  
**Scott River Tasks**

1	Fund excess sediment control projects.
2	Address private roads and sediment waste discharges.
3	Address Caltrans' roads and improve the Caltrans Storm Water Program.
4	Work with Siskiyou County on county roads.
5	Encourage Siskiyou County to develop and implement a grading ordinance.
6	Address sediment waste discharges from dredge mining activities.
7	Address sediment waste discharges from flood control and bank stabilization activities.
8	Address sediment waste discharges from timber harvest activities.
9	Work with Fruitgrower's Supply Company, Roseburg Timber Company, Timbervest, and Timber Products to ensure compliance with the Measures to Control Excess Sediment Prohibition.
10	Develop a MOU/MAA and WDRs with the USFS and BLM.
11	Address sediment waste discharges from grazing activities.
12	Work with Siskiyou RCD and the Scott River Watershed Council.
13	Work with NRCS and UCCE.
14	Work with CDFG.

**Scott River Task 1**

**Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

**Scott River Task 2**

**Address Private Roads and Excess Sediment**

Task Find out specifically through landowners, the RCD, NRCS, 5-County Program, or others whether and how private roads and other excess sediment sites are being addressed (NPS). Short term (FY 06/07).

Task Require submittal and implementation of individual Erosion Control Plans (ECPs) for sites with significant sediment discharges, as appropriate. Short term (FY 06/07) and mid term (FY 07/08).

Task Identify discharging sites. Mid Term (FY 07/08).

- Task Evaluate and determine appropriate method to address excess sediment sites from roads and other sources based on extent of discharge and the level of proactive involvement on the part of responsible parties. Mid Term (FY 07/08).
- Task Research what the County and other responsible or cooperating parties/groups have done, what they plan to do next to address road and excess sediment discharges, how they intend to prioritize their actions, and an implementation schedule for proposed actions. The Regional Water Board may formalize these plans in MOU(s), general conditional waiver or WDRs requiring individual property owners to prepare and implement site-specific erosion control plans, etc. Mid Term (FY 07/08).
- Task Recommend to the Board action(s) for regulating road and excess sediment discharges. Oversee implementation of adopted action(s). Long Term (FY 08/09 and beyond).

### **Scott River Task 3**

#### **Address Caltrans' Roads & Improve the Caltrans Storm Water Program**

- Task In coordination with Core Regulatory unit, review statewide Caltrans permit in light of TMDL for consistency; also assess adequacy and effectiveness of the statewide permit in preventing sediment discharges and elevated water temperatures in waters throughout the North Coast Region (Regional Task 14). Short/Mid Term (06/07 through 08/09).
- Task Determine Caltrans' planned efforts and schedule to comply with the Scott River TMDL (Regional Task 14). Short/Mid Term (06/07 through 08/09).
- Task Draft memo identifying gaps in statewide permit for water quality protection regionwide, as well as gaps in specific proposed TMDL compliance efforts in the Scott. Short/Mid Term (06/07 through 08/09).
- Task Determine and recommend to the Board regulatory actions(s) to ensure that Caltrans' activities and discharges throughout the Region, including those within the Scott River watershed, comply with the Basin Plan (Regional Task 14). Long Term (09/10 and beyond).

### **Scott River Task 4**

#### **Work with Siskiyou County on County Roads**

- Task Initiate dialog with Siskiyou County to develop a MOU that includes the elements listed in Table 4 of the Action Plan for the Scott River Sediment and Temperature Total Maximum Daily Loads. Note that a portion of the required elements may

already be wholly or partially satisfied by the 5C road maintenance manual and other existing 5C efforts. Short/Mid Term (06/07 and 07/08).

Task Work with Siskiyou County on MOU development. Short/Mid Term (06/07 and 07/08).

Task Implement progressive enforcement on specific discharging sites, as needed. Short/Mid Term (06/07 and 07/08).

Task Manage Lower Scott River sediment reduction grant. Short/Mid Term (06/07 and 07/08).

Task Finalize MOU. If Regional Water Board and County are unable to reach agreement on draft MOU, consider and determine appropriate regulatory actions (e.g., conditional waiver, WDRs, etc.) to direct compliance with the TMDL and Basin Plan; recommend to Board; oversee implementation. Long Term (08/09 and beyond).

#### **Scott River Task 5**

##### **Encourage Siskiyou County to Develop and Implement a Grading Ordinance**

Task Initiate dialog and work with Siskiyou County regarding development of a grading ordinance (Regional Task 25). Short/Mid Term (06/07 and 07/08).

Task Implement progressive enforcement on specific discharging sites, as needed. Short/Mid Term (06/07 and 07/08).

Task Assess progress in developing the grading ordinance (or other appropriate mechanism); determine whether regulatory action by the Board is warranted; make recommendation(s) to the Board; implement adopted action(s) as necessary. Long Term (08/09 and beyond).

#### **Scott River Task 6**

##### **Address Excess Sediment from Dredge Mining Activities**

Background Current mining activities in the Scott River watershed primarily consist of recreational stream bank mining and section dredge mining in select tributaries and reaches of the mainstem Scott River. Most of these activities take place on USFS land in the lower Scott River watershed.

The State Water Board is currently considering suction dredge mining issues on a state-wide level. They held a workshop in June 2007 to hear public comments regarding the effects of suction dredge mining. The State Water Board is

currently considering a possible further course of action, which might include a state-wide general permit.

- Task Work with legal counsel to identify issues. Short/Mid Term (06/07 through 08/09).
- Task Inspect dredge mining sites and/or collect water quality samples to evaluate water quality impacts associated with dredge mining. Short/Mid Term (06/07 through 08/09).
- Task Implement progressive enforcement on specific discharging sites, as needed. Short/Mid Term (06/07 through 08/09).
- Task Participate in the State Water Board's effort regarding suction dredge mining. Ensure water quality and excess sediment issues specific to the North Coast Region and the Scott River watershed are considered by the State Water Board.
- Task Make recommendation(s) to the Regional Water Board as to appropriate regulatory action(s). Long Term (09/10 and beyond).
- Task Oversee implementation of adopted action(s). Long Term (09/10 and beyond).

### **Scott River Task 7**

#### **Address Excess Sediment from Flood Control and Bank Stabilization Activities**

- Task Coordinate with Regional Water Board 401 staff to understand where there are opportunities and conflicts for advancing TMDL goals. Short Term (06/07).
- Task Start a process with CDFG to get a post-flood response plan in place to avoid channel realignment after major flood events. Short/Mid Term (06/07 through 08/09).
- Task Work with the Scott River Watershed Council to develop and implement a strategy to reduce the potential for adverse impacts resulting from flooding events. Short/Mid Term (06/07 through 08/09).
- Task Work with CDFG and other involved agencies to ensure activities and policies within the watershed pertaining to channel restoration or stabilization projects do not create adverse effects with respect to water quality, downstream channel conditions, etc. Short/Mid Term (06/07 through 08/09).
- Task Work with the Scott River Watershed Council, CDFG, RCDs, landowners and others to educate watershed residents and increase awareness of instream work regulations, including most emergency repair notification requirements. Short/Mid Term (06/07 through 08/09).

Task Take appropriate enforcement action for cases of unauthorized activities in watercourses, wetlands, or other waters of the State. Short/Mid Term (06/07 through 08/09).

### **Scott River Task 8**

#### **Address Excess Sediment from Timber Harvest Activities**

Task Meet with Timber Division staff to develop common understanding of TMDL results and applications, and to transfer information and tools used and/or submitted during the TMDL process, including the SHALSTAB slope stability model. Short Term (06/07).

Task Participate with Timber Division staff in HCP process(es). Short/Mid Term (06/07 and beyond).

Task Periodically meet with Timber Division and Non Point Source implementation staff to discuss TMDL implementation on timber lands, to develop strategies to address timber-related water quality concerns, and to fine tune efforts as necessary. Mid/Long Term (07/08 and beyond).

### **Scott River Task 9**

#### **Work with Fruitgrowers Supply Co., Roseburg Timber Company, Timbervest, and Timber Products to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

Task Work with Fruitgrowers Supply Company, Roseburg Timber Company, Timbervest, and Timber Products to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition, once it is adopted and in effect. This task will likely include making contact with the landowner or landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowner choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Scott River Task 10**

#### **Develop a MOU/MAA and WDRs with the USFS and BLM**

Background Regional Water Board staff are currently working with the USFS to develop a MOU for implementation of the Salmon River TMDL; it is likely that we will be

able to use this as a template for developing MOUs both with USFS and the BLM in the Scott River watershed

- Task Identify contact at BLM. Short Term (06/07).
- Task Agree on scope of USFS MOU relative to Scott: determine if scope should be limited to just the Scott River watershed or to all of the Klamath National Forest. Short Term (06/07).
- Task Begin USFS and BLM MOU development. Short/Mid Term (06/07 through 07/08).
- Task Finalize MOUs or, if unable to reach agreement, make recommendations to the Regional Board as to possible regulatory action(s). Mid/Long Term (07/08 and beyond).
- Task Implement adopted action(s) and/or periodically assess compliance with and effectiveness of MOU measures; recommend revisions as necessary. Mid/Long Term (07/08 and beyond).

**Scott River Task 11**  
**Address Excess Sediment from Grazing Activities**

- Task Work with RCDs, NRCS, Scott River Watershed Council, etc. to identify current conservation efforts, needs, and to develop a strategy and implementation schedule to address water quality impacts associated with grazing. Short/Mid Term (06/07 and 07/08).
- Task Develop an agreement with the Scott River Watershed Council and others formalizing their strategy to protect water quality from grazing-related impacts. Short/Mid Term (06/07 and 07/08).
- Task Implement progressive enforcement action on specific sites, as needed. Short/Mid Term (06/07 and 07/08).
- Task Evaluate and determine appropriate regulatory mechanisms, based on extent of grazing and water quality impacts associated with grazing activities and the level of proactive involvement on the part of responsible parties. Mechanisms will most likely include conditional waivers and/or WDRs requiring individual property owners to prepare and implement site-specific Grazing and Riparian Management Plans. Short/Mid Term (06/07 and 07/08).
- Task Recommend to the Regional Water Board action(s) for regulating grazing activities. Oversee implementation of adopted actions. Long Term (FY 08/09 and beyond).

**Scott River Task 12**

**Work with Siskiyou RCD and Scott River Watershed Council**

Task            Work with Siskiyou RCD and the Scott River Watershed Council throughout the implementation of this Work Plan. Assist in prioritizing the Watershed Council's future excess sediment control efforts.

**Scott River Task 13**

**Work with the NRCS and the UCCE**

Task            Work with the Natural Resources Conservation Service (NRCS) and the University of California Cooperative Extension (UCCE) throughout the implementation of this Work Plan.

**Scott River Task 14**

**Work with CDFG**

Task            Work the California Department of Fish and Game (CDFG) throughout the implementation of this Work Plan. Coordinate with CDFG and NOAA Fisheries on Habitat Conservation Plans (HCPs) and Incidental Take Permits (ITPs).

## STEMPLE CREEK & ESTERO DE SAN ANTONIO WATERSHEDS SEDIMENT CONTROL TASKS

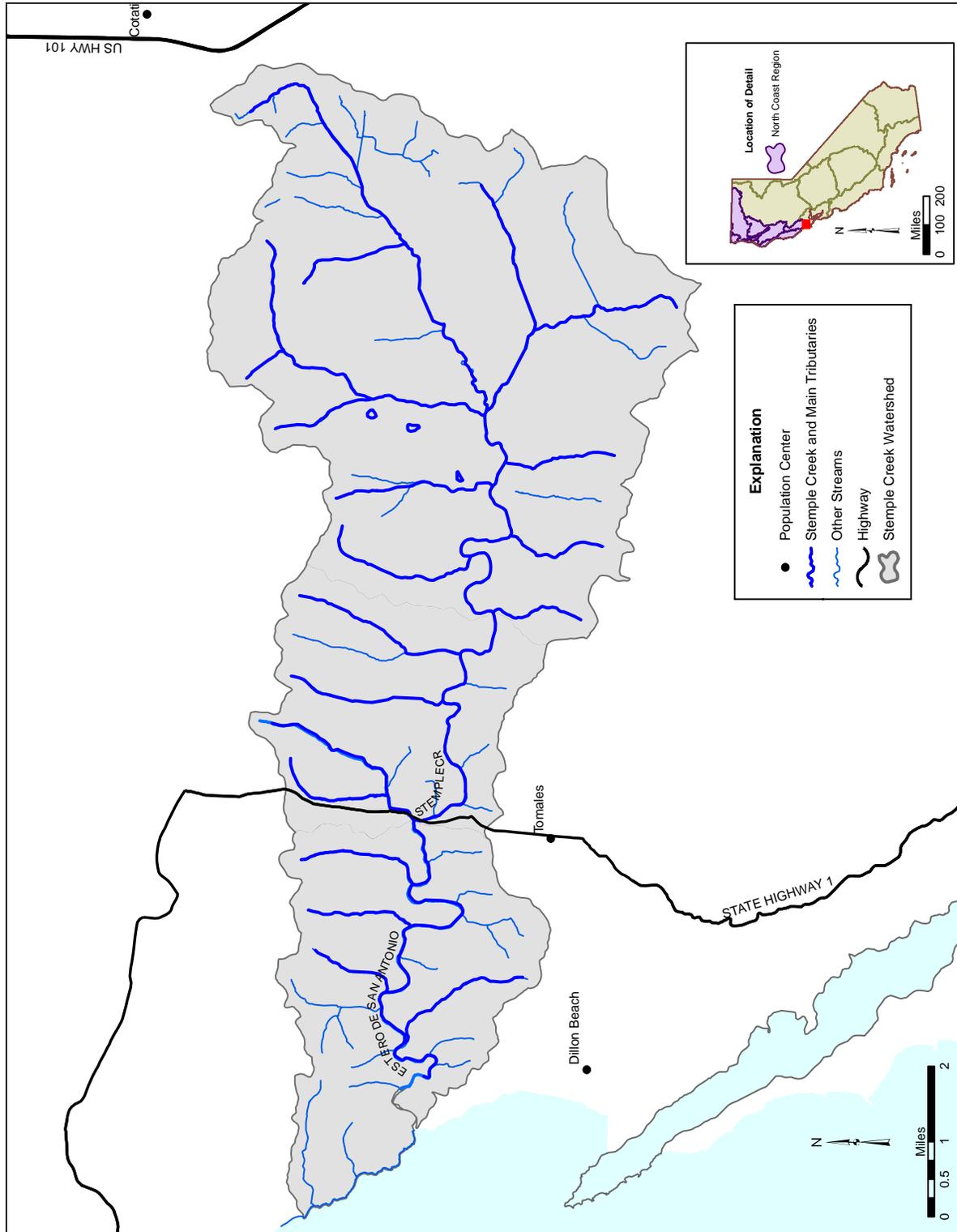


Figure 44. Stemple Creek Watershed Map.

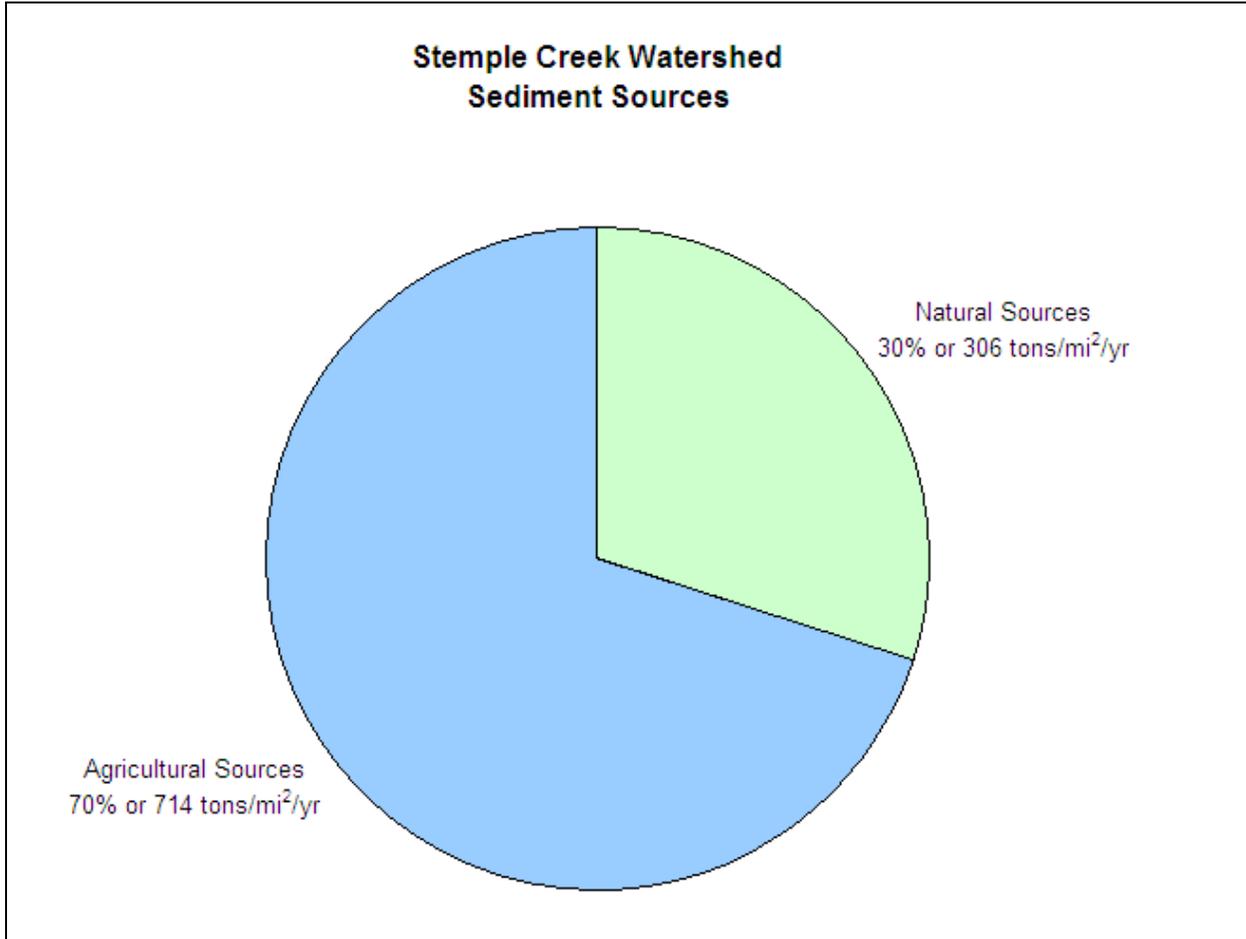


Figure 45. Stemple Creek Watershed Sediment Sources. Data from: Stemple Creek TMDL (NCRWQCB 1997).

<b>Table 43</b>		
<b>Stemple Creek Watershed Sediment Sources</b>		
Sediment Source	tons/mi <sup>2</sup> /yr	
Natural Sources	306	1,020
Agricultural Sources	714	
Total of All Sources	1,020	

The Stemple Creek watershed includes the Estero de San Antonio. The “Total Maximum Daily Load and Attainment Strategy for the Stemple Creek Watershed” addresses excess sediment, along with nutrient (ammonia), pH, temperature, and dissolved oxygen. The TMDL was adopted by the Regional Water Board as an amendment to the Basin Plan in December 1997, but it was never finalized nor took effect. The TMDL was not heard and adopted by the State Water Board and was not approved by the State Office of Administrative Law. However, the U.S. EPA did approve the TMDL

The TMDL includes an implementation plan which states that landowners will be encouraged to develop and implement a comprehensive ranch management plan that will include an inventory of problem areas and a time schedule for control. The water quality components of the ranch plans are to be submitted to the Regional Water Board. If they are not submitted or are inadequate, the Regional Water Board will adopt WDRs or issue cleanup and abatement orders.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Stemple Creek watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff’s best professional judgement. The tasks may be revised as conditions change. . These tasks include some of the requirements of the TMDL implementation plan plus additional tasks that have become necessary since the TMDL was adopted by the Regional Water Board in 1997.

**Table 44**  
**Stemple Creek Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Develop dairy-focuses outreach and education program.
4	Fund sediment waste discharge control projects.
5	Encourage landowners to develop and implement ranch management plans.
6	Implement general WDRs and a conditional waiver for dairies.
7	Implement the Stemple Creek / Estero de San Antonio Watershed Enhancement Plan.
8	Identify most egregious excess sediment sources.
9	Require ranch management plans, use progressive enforcement, or develop WDRs or conditional waivers.
10	Continue to implement WDRs and storm water requirements for the Central Landfill.

**Stemple Creek Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Stemple Creek watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Stemple Creek watershed include the University of California Cooperative Extension, the Marin-Sonoma Animal Waste Committee, and the Marin Coastal Watershed Enhancement Project. Another key stakeholder is the Southern Sonoma County RCD and the Marin County RCD, which have been involved with riparian fencing projects and dairy conservation plans.

**Task** Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Stemple Creek Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

**Task** Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Stemple Creek watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Stemple Creek Task 3**

#### **Develop Dairy-Focused Outreach and Education Program**

**Background** The Animal Resource Management Committee is run by the Sonoma County Farm Bureau to help dairy, horse, poultry, and livestock producers address animal waste management issues, and encourage environmental compliance and protection of our environment.

**Task** Work with the Animal Resource Management Committee, Sonoma County Farm Bureau, Western United Dairymen, dairy operators, and stakeholders to develop and implement a collaborative outreach and education program for dairy water quality. Attend meetings of the Animal Resource Management Committee. Outreach and education program components should include photos and examples of active excess sediment sources, natural sources, excess sediment sources that are healing, control projects and measures, and the inclusion of technical experts.

### **Stemple Creek Task 4**

#### **Fund Excess Sediment Control Projects**

**Background** From 2000-2002, the Regional Water Board was involved in providing \$130,000 to the Southern Sonoma County RCD through a 319(h) grant to implement watershed education and restoration projects in the Stemple Creek watershed.

Task Continue to fund excess sediment control projects in the Stemple Creek watershed through available nonpoint source and watershed protection grants and loans (Regional Task 21).

### **Stemple Creek Task 5**

#### **Encourage Landowners to Develop and Implement Ranch Management Plans**

Background As discussed above, the TMDL implementation plan adopted by the Regional Water Board in 1997 states that landowners will be encouraged to develop and implement a comprehensive ranch management plan. Per the TMDL, the ranch management plan will include an inventory of problem areas and a time schedule for the control of those areas. The measures and recommendations listed in the “Stemple Creek / Estero de San Antonio Watershed Enhancement Plan” (Prunuske et al. 1994) must also be addressed.

Task Continue to encourage landowners in the Stemple Creek watershed to develop and implement ranch management plans. Ensure ranch management plans include the information necessary for landowners to be on the path toward compliance with the Measures to Control Excess Sediment Prohibition if the ranch management plan is developed and implemented. At a minimum, the ranch management plans should include (1) management practices that will prevent and minimize future excess sediment discharges such as riparian grazing management; (2) an inventory, priority list, and sediment control practices for existing excess sediment discharges such as gullies and streambank erosion sites; and (3) monitoring.

Note that this task does not include requirements for the submittal of the water quality components of landowners’ ranch management plans as is required by the TMDL. Submittal requirements are included in Stemple Creek Task 9.

### **Stemple Creek Task 6**

#### **Implement General WDRs and a General Conditional Waiver for Dairies**

Background Approximately 30% of the Stemple Creek watershed is used for dairies.

Task Implement general WDRs and a general conditional waiver for dairies for excess sediment and other water quality concerns following the development and adoption of the WDRs and waiver (as described by Regional Task 8).

### **Stemple Creek Task 7**

#### **Implement the Stemple Creek / Estero de San Antonio Watershed Enhancement Plan**

**Background** The Stemple Creek / Estero de San Antonio Watershed Enhancement Plan (Prunuske et al. 1994) was developed for the Marin County RCD and the Southern Sonoma County RCD. The Enhancement Plan includes several sediment-related enhancement recommendations. These recommendations are to:

- Reduce pollutants entering Stemple Creek and the Estero.
- Reduce soil erosion (e.g., through repairing gullies and bank erosion in the lower watershed).
- Encourage environmentally-sound management of rangeland.
- Restore the riparian corridor.
- Develop a long-term monitoring plan.
- Encourage the local community to take the lead in developing and implementing enhancement projects.

The Enhancement Plan also discusses the need for landowners in the watershed to develop and implement individual, comprehensive conservation plans.

The measures and recommendations included in the Enhancement Plan are to be included in the ranch management plans required by the TMDL implementation plan.

**Task** Seek additional funding, encourage, and assist landowners, the Southern Sonoma County RCD, the Marin County RCD, and other stakeholders to implement the recommendations listed in the Stemple Creek / Estero de San Antonio Watershed Enhancement Plan (Prunuske et al. 1994).

This task is consistent with the TMDL implementation plan adopted by the Regional Water Board in 1997.

**Task** Work with the RCDs to ensure that conservation plans developed by landowners include (1) management practices that will prevent and minimize future excess sediment discharges such as riparian grazing management; (2) an inventory, priority list, and sediment control practices for existing excess sediment discharges such as gullies and streambank erosion sites; and (3) monitoring.

### **Stemple Creek Task 8 Identify Most Egregious Excess Sediment Sources**

**Task** Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the lower watershed, which is producing approximately 82% of the anthropogenic sediment load in the Stemple Creek watershed.

### **Stemple Creek Task 9**

#### **Require Ranch Management Plans, Use Progressive Enforcement, or Develop and Implement WDRs or Conditional Waivers**

- Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:
- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
  - Require the potential discharger to submit their ranch management plan (described in Stemple Creek Task 5) if the land is used for rangeland or for a dairy. Upon submission of the ranch management plan, conduct a review of the plan and determine future action.
  - Use progressive enforcement (Regional Task 6) for violations of the Measures to Control Excess Sediment Prohibition and/or violations of the Stream and Wetland System Protection Policy. In the Stemple Creek watershed, the first step will likely be requiring the potential discharger to submit their ranch management plan.
  - Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

### **Stemple Creek Task 10**

#### **Continue to Implement WDRs and Storm Water Requirements for the Central Landfill**

Background The Central Landfill off Mecham Road is owned and operated by the County of Sonoma. The landfill is regulated by WDRs (Regional Water Board Order No. R1-2004-0040) and an industrial storm water permit. Under the WDRs, the discharge of waste, including sediment, to surface water drainage systems is prohibited.

Task Continue to implement and enforce the WDRs and the industrial storm water permit for the Central Landfill.

### TEN MILE RIVER WATERSHED SEDIMENT CONTROL TASKS

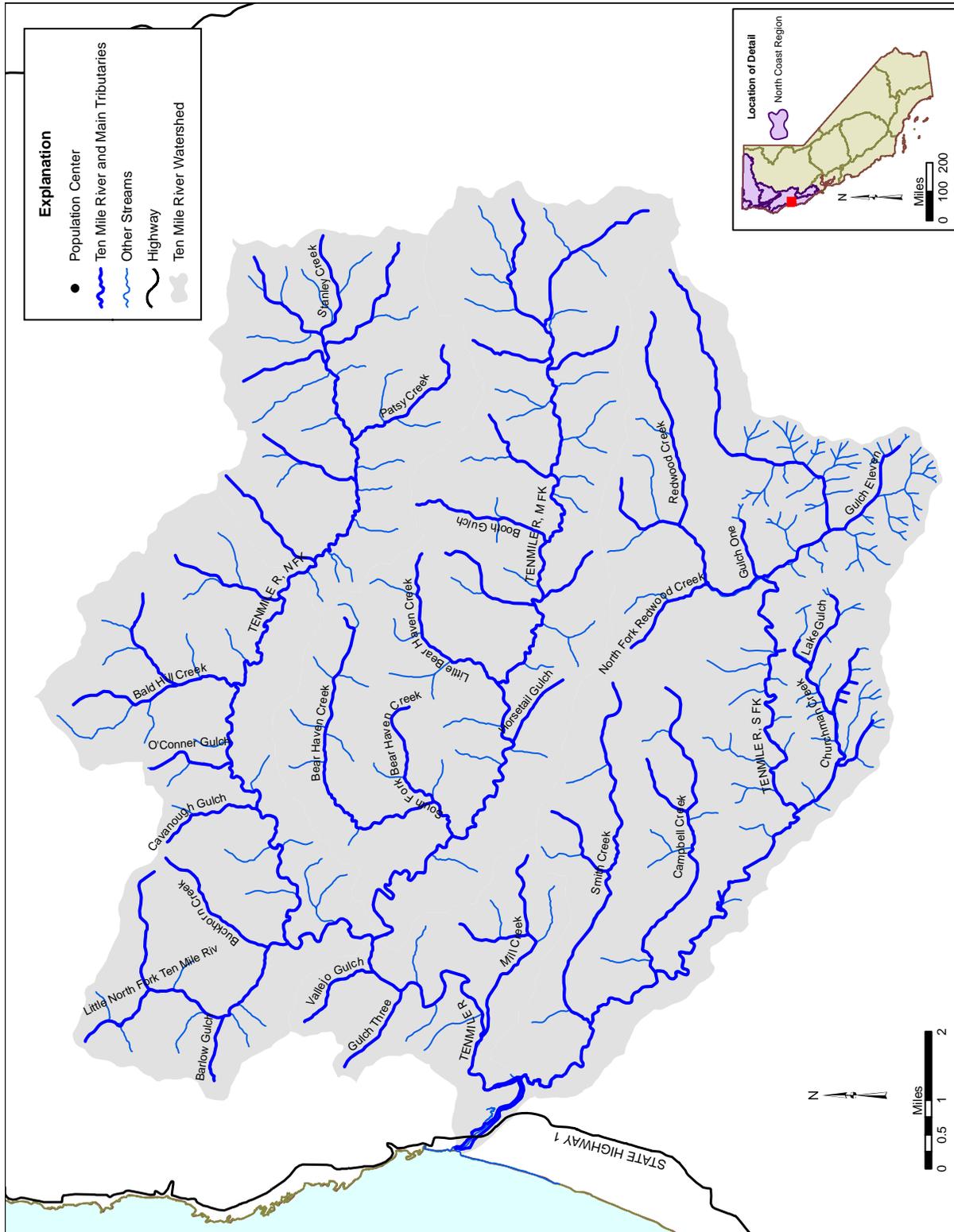


Figure 46. Ten Mile River Watershed Map.

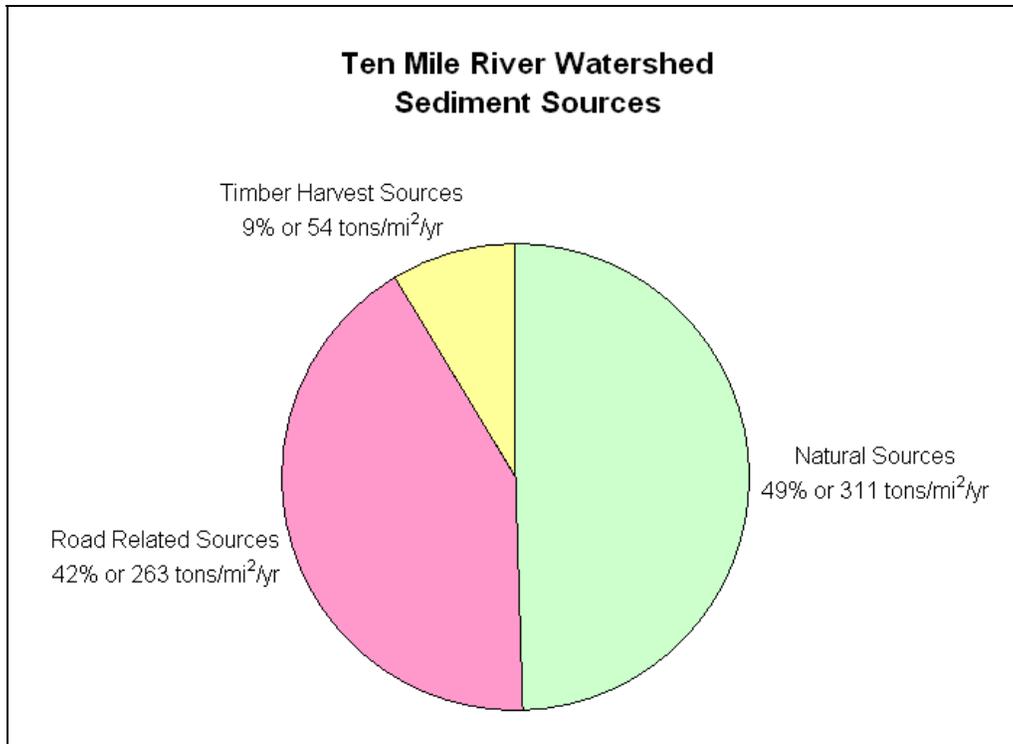


Figure 47. Ten Mile River Watershed Sediment Sources. Data from: Ten Mile River TMDL (U.S. EPA 2000b).

<b>Table 45 Ten Mile River Watershed Sediment Sources</b>			
	Sediment Source	tons/mi <sup>2</sup> /yr *	
Natural	Landslides	36	311
	Surface Erosion	75	
	Fluvial & Stream Bank Erosion	200	
Anthropogenic	Harvest Related Landslides	30	317
	Skid Trail Related Landslides	9	
	Skid Trail Related Surface Erosion	15	
	Road & Railroad Related Landslides	38	
	Road & Railroad Related Surface Erosion	225	
	Grassland Related Landslides	0	
	<b>Total of All Sources</b>	<b>628</b>	

\* Natural surface erosion and fluvial and stream bank erosion loads are based on the full sediment source analysis study period of 1933 to 1999. Anthropogenic loads are based on the most current sediment source analysis study period of 1989 to 2000.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the Ten Mile River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

**Table 46**  
**Ten Mile River Tasks**

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or conditional waivers.
6	Work with Barnum Timber Company to ensure compliance with the Measures to Control Excess Sediment Prohibition.
7	Develop ownership-wide WDRs for Campbell/Hawthorne
8	Develop WDRs for county roads in Mendocino County.

**Ten Mile River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Ten Mile River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. One, but not necessarily the only, key stakeholder in the Ten Mile River watershed is listed here.

*Trout Unlimited*

Trout Unlimited is a national organization whose mission is to conserve, protect and restore North America's coldwater fisheries and their watersheds. In 1998, Trout Unlimited began the North Coast Coho Project which involves implementing cooperative projects with private landowners to restore and monitor watersheds for coho salmon and steelhead.

Starting in 2001, Trout Unlimited worked with Campbell Timberland Management to inventory approximately 350 miles of roads in the watershed for sites with the potential to discharge excess sediment to a fish-bearing stream. A total of 1,041 sites were identified by the contractor, Pacific Watershed Associates.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

Task Re-establish contact with Trout Unlimited and solicit information on the North Coast Coho Project, Trout Unlimited's work within the Ten Mile River watershed, and the status of repair work, if any, to the 1,041 road-related excess sediment sites identified in their inventory.

### **Ten Mile River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Ten Mile River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops and meeting with stakeholders.

### **Ten Mile River Task 3**

#### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

### **Ten Mile River Task 4**

#### **Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts the Little North Fork Ten Mile River, Bear Haven Creek, Smith Creek, and Campbell Creek. These streams are the strongest coho streams in the watershed.

### **Ten Mile River Task 5**

#### **Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.

- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the Ten Mile River watershed, this task, in tandem with Ten Mile River Task 4 above, is expected to be especially useful for controlling excess sediment from the smaller private rural residences that located in the upper areas of the watershed and are associated with the Brooktrails development out of Willits. This task will also be useful for the land used for the non-industrial timber harvest and ranching in the remaining five private holdings.

### **Ten Mile River Task 6**

#### **Work with Barnum Timber Company to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Task** Work with Barnum Timber Company to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners/managers choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Ten Mile River Task 7**

#### **Develop Ownership-Wide WDRs for Campbell Timberland Management/ Hawthorne Timber Company**

**Background** Campbell Timberland Management, LLC manages approximately 85% of the entire Ten Mile River watershed. The owner of the property is Hawthorne Timber Company, LLC.

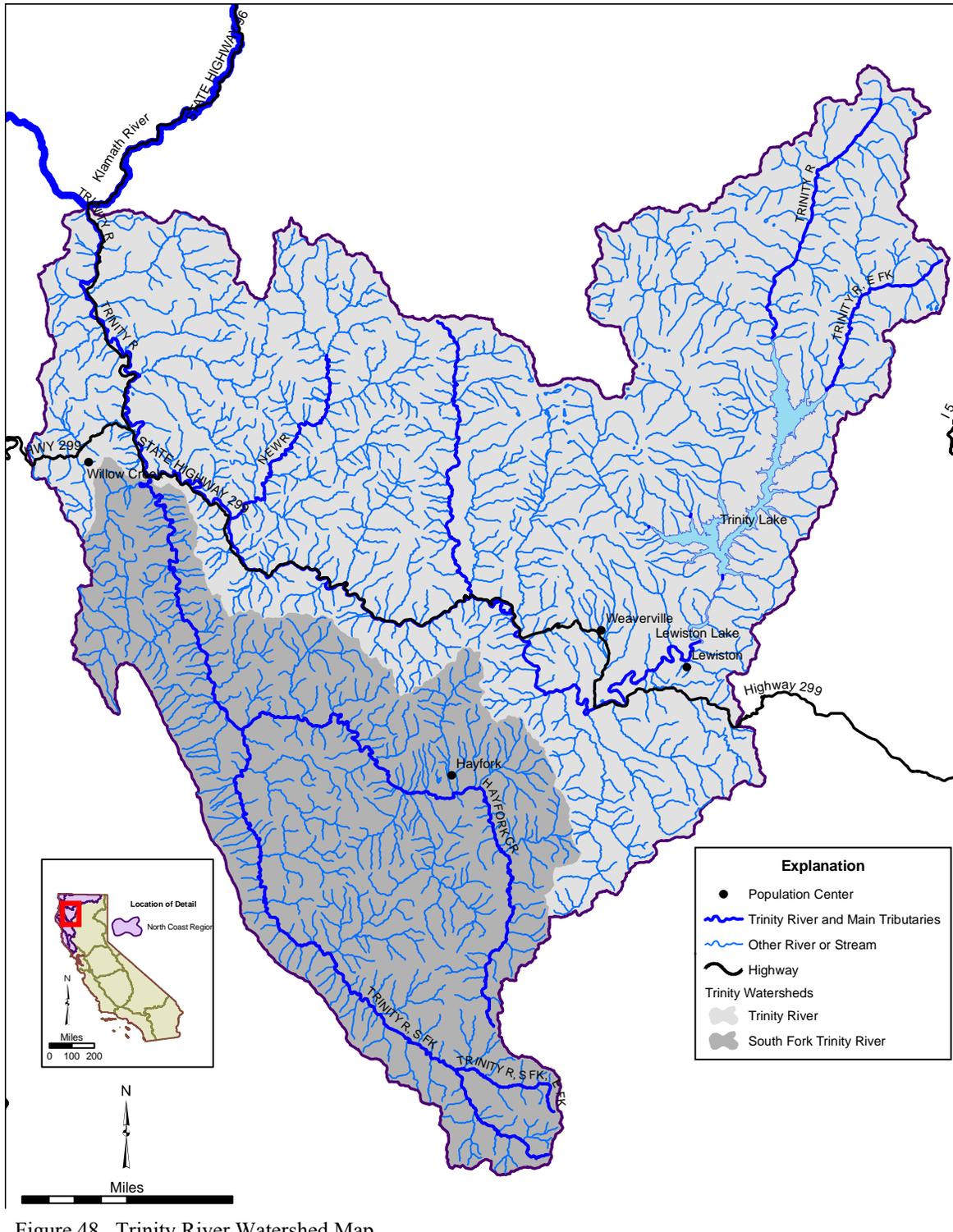
**Task** Develop ownership-wide WDRs for Campbell Timberland Management / Hawthorne Timber Company to address excess sediment and other water quality concerns on their property. Bring the WDRs to the Regional Water Board for their consideration. Should they be adopted by the Board, implement the WDRs.

**Ten Mile River Task 8**

**Develop WDRs for County Roads in Mendocino County**

Task            Work with Mendocino County to develop WDRs to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. Within the Ten Mile River watershed, focus on the Sherwood-Fort Bragg Road.

### TRINITY RIVER WATERSHED SEDIMENT CONTROL TASKS



## MAINSTEM TRINITY RIVER WATERSHED SEDIMENT CONTROL TASKS

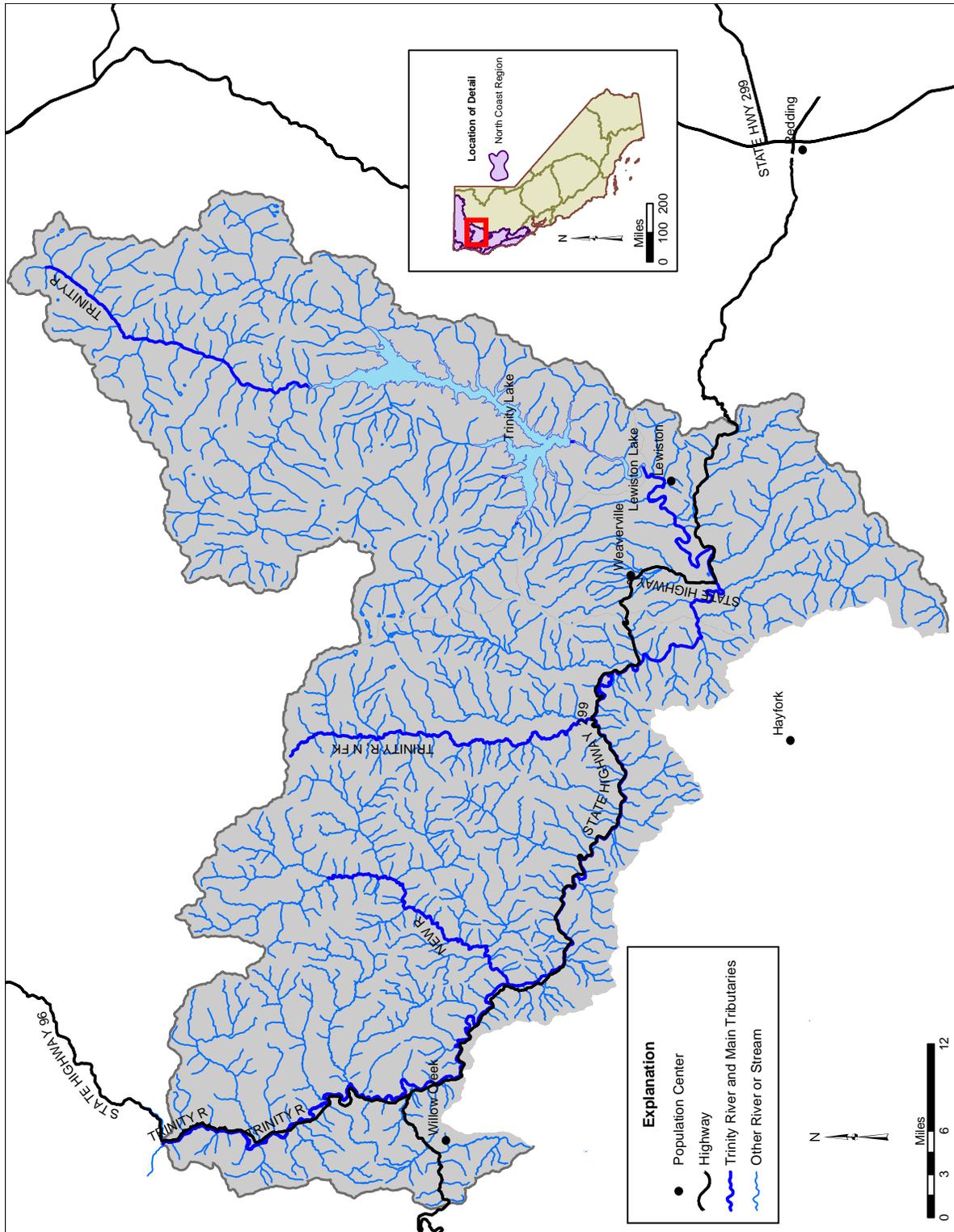


Figure 49 Mainstem Trinity River Watershed Map.

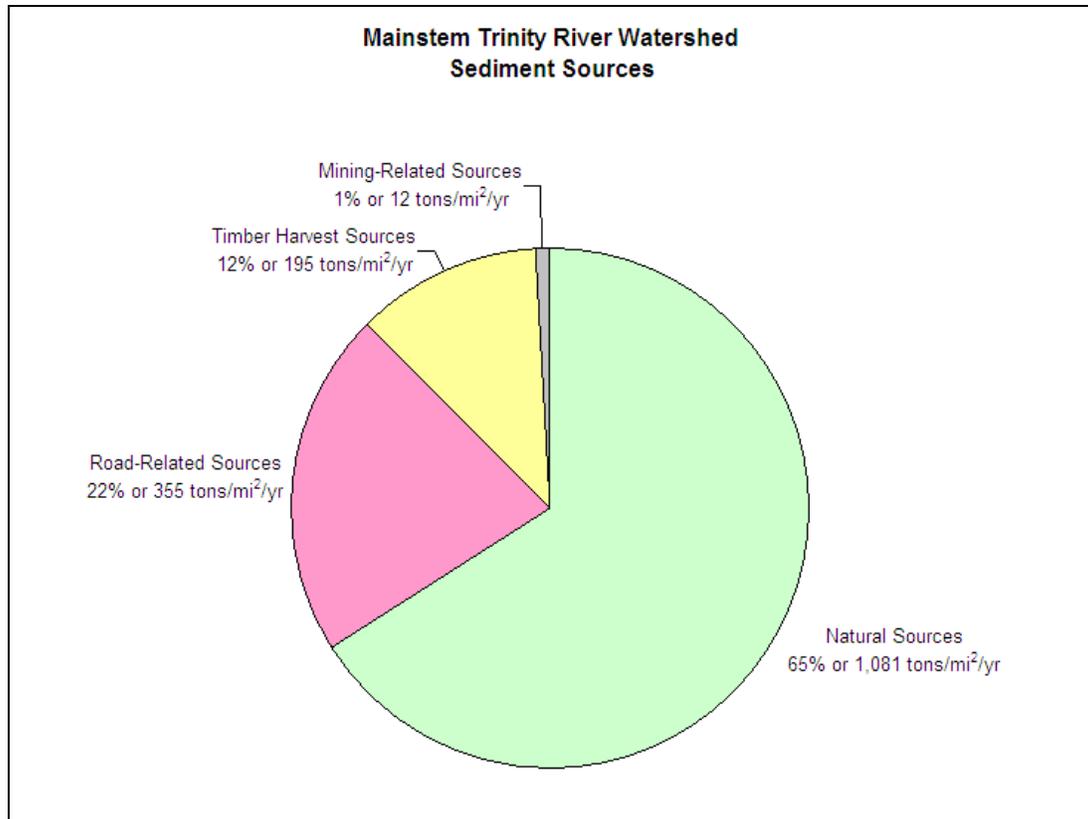


Figure 50. Mainstem Trinity River Watershed Sediment Sources. Data from: Trinity River TMDL (U.S. EPA 2001d).

Sediment Source		tons/mi <sup>2</sup> /yr	
Natural	Landsliding	881	1,081
	Bank Erosion	51	
	Soil Creep	32	
	Various Processes	118	
Anthropogenic	Roads – Landslides	281	562
	Roads – Cut Banks	20	
	Roads – Tread	24	
	Roads – Legacy/Abandoned	16	
	Roads – Other	14	
	Timber Harvest – Landslides	157	
	Timber Harvest – Surface Erosion	27	
	Timber Harvest – Various Processes	11	
	Mining – Old Hydrologic Ditch Slides & Gullies	12	
<b>Total of All Sources</b>		<b>1,643</b>	

Based on sediment load estimates from 1944 to 2000.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the mainstem Trinity River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff's best professional judgement. The tasks may be revised as conditions change.

This Work Plan does not apply to the areas of the Trinity River watershed that are within the boundaries of any Native American reservation, such as tribal land belonging to the Hoopa and the Yurok tribes.

<b>Table 48</b>	
<b>Mainstem Trinity River Tasks</b>	
1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Coordinate sediment control efforts with the Tribes.
5	Identify most egregious excess sediment sources.
6	Use progressive enforcement or develop WDRs or conditional waivers.
7	Work with Roseburg Lumber Company, Sierra Pacific Industries, and Timber Products to ensure compliance with the Measures to Control Excess Sediment Prohibition.
8	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
9	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
10	Develop ownership-wide WDRs for Green Diamond.
11	Develop WDRs for county roads in Humboldt and Trinity counties.
12	Work with Caltrans on Highways 3, 96, and 299.

**Mainstem Trinity River Task 1**  
**Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the Mainstem Trinity River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the Mainstem Trinity River watershed are listed here.

*Friends of the Trinity River*

The Friends of the Trinity River is a citizen's group focused on restoring and protecting the Trinity River by pursuing legal, administrative, and public education campaigns.

*Trinity County Resource Conservation District (RCD)*

The Trinity County RCD is actively working to control excess sediment under a \$675,000 grant for the Trinity River Watershed TMDL Implementation Project. \$225,000 of this grant is designated for the mainstem Trinity River watershed.

Project work includes road upgrade, revegetation in burned areas, education and outreach, and effectiveness monitoring.

### *Trinity River Restoration Program*

The U.S. Department of the Interior established the Trinity River Restoration Program (TRRP) with the Record of Decision in 2000 to create a strong science program, implement physical/mechanical restoration actions on the mainstem Trinity River, and increase the flow to the river downstream of the dams.

The TRRP is comprised of following four groups:

- The Trinity Management Council, which is composed of representatives from the Bureau of Reclamation, USFWS, USFS, NOAA Fisheries, DWR, CDFG, Trinity County, Hoopa Valley Tribe, and Yurok Tribe.
- The Trinity Adaptive Management Working Group, which is composed of stakeholders.
- TRRP staff .
- The Scientific Advisory Board, which is composed of five scientists.

The TRRP is currently focused on constructing 47 channel rehabilitation sites in the floodplain of the mainstem Trinity River along the 40 miles between Lewiston Dam and the North Fork Trinity River.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

### **Mainstem Trinity River Task 2**

#### **Conduct Outreach and Education and Work with Interested Stakeholders**

Task Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the Mainstem Trinity River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

### **Mainstem Trinity River Task 3**

#### **Fund Excess Sediment Control Projects**

Task Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

Task Continue to fund, seek additional funding, and assist the Trinity County RCD in implementing excess sediment control projects in the mainstem Trinity River watershed.

**Mainstem Trinity River Task 4  
Coordinate Sediment Control Efforts with the Tribes**

Background Approximately 6% of the mainstem Trinity River watershed is tribal land. The majority falls within the Hoopa Valley Tribe's reservation in the lower area of the watershed.

Task Coordinate excess sediment control efforts with the Hoopa Valley Tribe and the Yurok Tribe. Offer to share resources, data, and techniques.

**Mainstem Trinity River Task 5  
Identify Most Egregious Excess Sediment Sources**

Task Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

Focus initial reconnaissance efforts in the watersheds that drain to the North Fork Trinity River, New River, and Horse Linto Creek. These streams appears to be supporting stable or recovering populations of salmonids. Also focus initial efforts on Sharber/Peckham Creek, which has the highest number of spawning coho salmon in the lower assessment area.

**Mainstem Trinity River Task 6  
Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).
- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the mainstem Trinity River watershed, this task, in tandem with Mainstem Trinity River Task 5 above, is expected to be especially useful for controlling excess sediment from private, non-industrial timber land that makes up approximately 8% of the watershed.

### **Mainstem Trinity River Task 7**

#### **Work with Roseburg Lumber Company, Sierra Pacific Industries, and Timber Products to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Background** Sierra Pacific Industries is the largest private landowner in the mainstem Trinity River watershed. Roseburg Lumber Company and Timber Products own smaller, but still significant amounts of acres in the watershed.

**Task** Work with Roseburg Lumber Company, Sierra Pacific Industries, and Timber Products to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 6.

### **Mainstem Trinity River Task 8**

#### **Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

**Background** Approximately 67% of the mainstem Trinity River watershed is federal land managed by the USFS. The Six Rivers National Forest, the Shasta-Trinity National Forest, and the Trinity Alps Wilderness Area all lie within the watershed's boundaries. The Trinity Alps Wilderness Area alone is approximately 32% of the watershed.

**Task** Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment and other water quality concerns in the mainstem Trinity River watershed.

### **Mainstem Trinity River Task 9**

#### **Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

Background Approximately 4% of the mainstem Trinity River watershed is federal land managed by the Bureau of Land Management.

Task Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment on BLM land in the mainstem Trinity River watershed.

**Mainstem Trinity River Task 10  
Develop Ownership-wide WDRS for Green Diamond**

Task Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property in the mainstem Trinity River watershed.

**Mainstem Trinity River Task 11  
Develop WDRs for County Roads in Humboldt and Trinity Counties**

Task Develop WDRs for Humboldt County and Trinity County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

**Mainstem Trinity River Task 12  
Work with Caltrans on Highways 3, 96, and 299**

Task Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highways 3, 96, 299, and other state highways in the mainstem Trinity River watershed. Work with Caltrans to ensure their management practices prevent future discharges. Accomplish this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## SOUTH FORK TRINITY RIVER WATERSHED SEDIMENT CONTROL TASKS

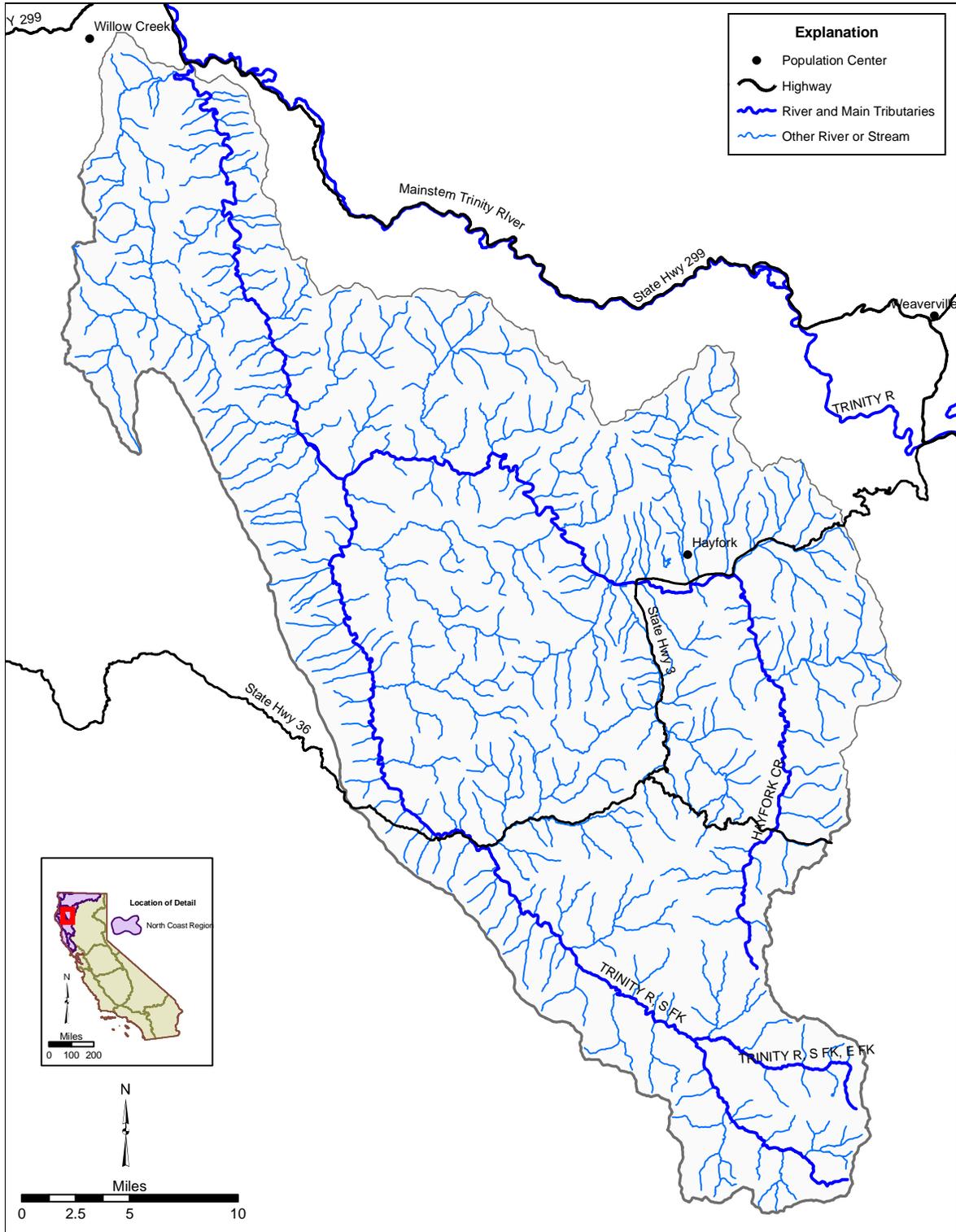


Figure 51. South Fork Trinity River Watershed Map.

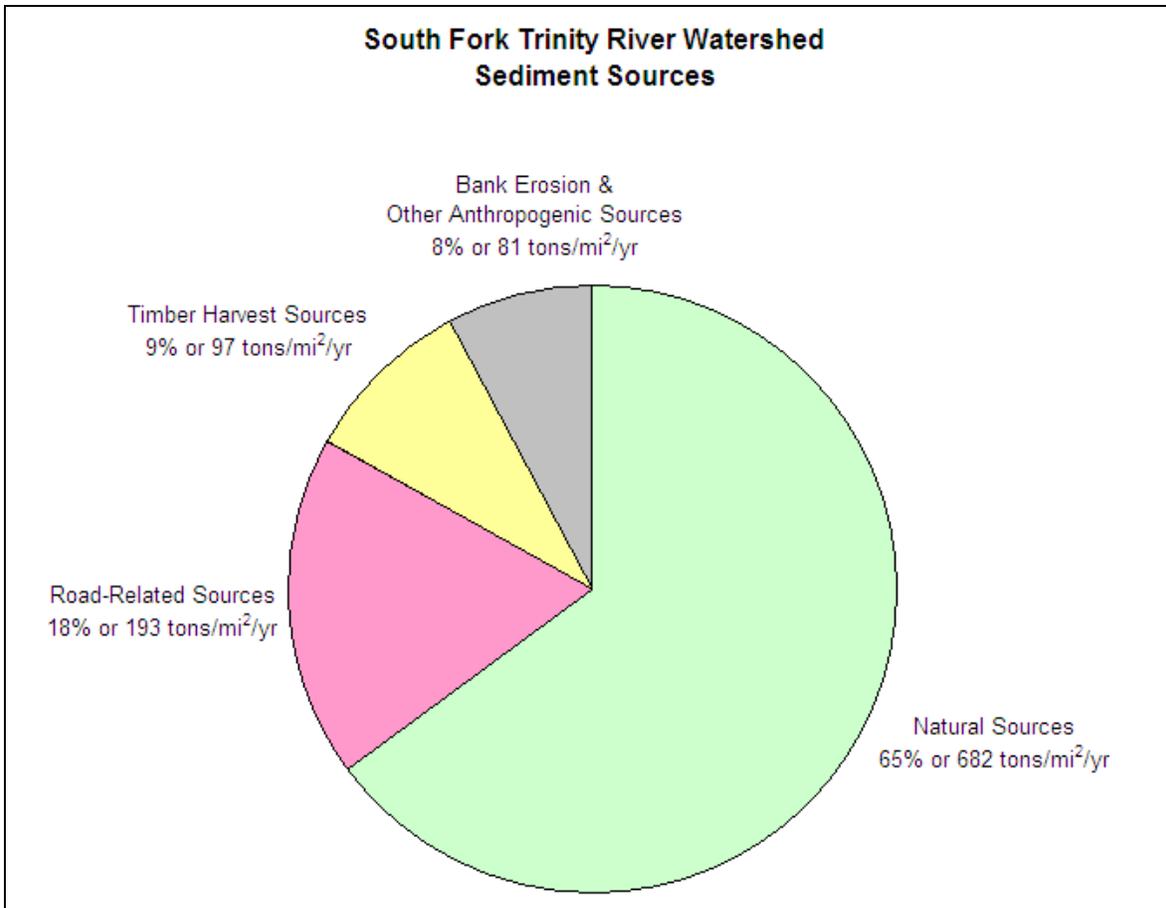


Figure 52. South Fork Trinity River Watershed Sediment Sources. Data from: South Fork Trinity River TMDL (U.S. EPA 1998b).

<b>Table 49</b>			
<b>South Fork Trinity River Watershed Sediment Sources</b>			
	Sediment Source	tons/mi <sup>2</sup> /yr	
Natural	Mass Wasting (landslides)	521	682
	Bank Erosion	145	
	Surface Erosion	16	
Anthropogenic	Roads – Mass Wasting (landslides)	80	371
	Roads – Surface Erosion	71	
	Roads – Washouts, gullies, small slides	42	
	Timber Harvest – Mass Wasting (landslides)	75	
	Timber Harvest – Surface Erosion	22	
	Bank Erosion & Other Cumulative Mass Wasting	81	
	<b>Total of All Sources</b>	<b>1,053</b>	

Based on sediment load estimates from 1944 - 1990.

This section describes the tasks that Regional Water Board staff have identified as key to comprehensively controlling excess sediment throughout the South Fork Trinity River watershed. Staff are currently working on a number of these tasks, while others are planned as future work tasks. The tasks are estimates of the work that needs to be done, and are based on current information and staff’s best professional judgement. The tasks may be revised as conditions change.

1	Identify and work with key stakeholders.
2	Conduct outreach and education and work with interested stakeholders.
3	Fund excess sediment control projects.
4	Identify most egregious excess sediment sources.
5	Use progressive enforcement or develop WDRs or conditional waivers.
6	Work with Sierra Pacific Industries and Timber Products to ensure compliance with the Measures to Control Excess Sediment Prohibition.
7	Implement WDRs or a conditional waiver for the USFS for non-timber harvest activities.
8	Implement WDRs or a conditional waiver for BLM for non-timber harvest activities.
9	Develop ownership-wide WDRs for Green Diamond.
10	Develop WDRs for county roads in Humboldt and Trinity counties.
11	Work with Caltrans on Highways 3 and 36.

**South Fork Trinity River Task 1  
Identify and Work with Key Stakeholders**

Task Determine key stakeholders in the South Fork Trinity River watershed, such as major landowners, watershed groups, interested parties, agencies, and other individuals and organizations. Some, but not all, of the key stakeholders in the South Fork Trinity River watershed are listed here.

*Trinity County RCD*

The Trinity County RCD is actively working to control excess sediment under a \$675,000 grant for the Trinity River Watershed TMDL Implementation Project. \$450,000 of this grant is designated for the South Fork Trinity River watershed. Project work includes road decommissioning, road upgrade, education and outreach, and effectiveness monitoring.

*Friends of the Trinity River*

The Friends of the Trinity River is a citizen’s group focused on restoring and protecting the Trinity River by pursuing legal, administrative, and public education campaigns.

Task Work with key stakeholders to coordinate outreach and education efforts and other excess sediment control efforts. Meet with key stakeholders to discuss the

Regional Water Board's excess sediment control efforts and solicit information on their activities. As appropriate, ask key stakeholders to support, endorse, and promote workshops and ask key stakeholders to present material during the workshops.

**South Fork Trinity River Task 2**  
**Conduct Outreach and Education and Work with Interested Stakeholders**

Task            Conduct outreach and education efforts and work with interested stakeholders and watershed groups to promote excess sediment control in the South Fork Trinity River watershed, with a focus on the smaller private landowners. See Regional Task 5 for a description of likely outreach and education efforts, such as hosting public workshops.

**South Fork Trinity River Task 3**  
**Fund Excess Sediment Control Projects**

Task            Fund excess sediment control projects through available nonpoint source and watershed protection grants and loans as appropriate (Regional Task 21).

Task            Continue to fund, seek additional funding, and assist the Trinity County RCD in implementing excess sediment control projects in the South Fork Trinity River watershed.

**South Fork Trinity River Task 4**  
**Identify Most Egregious Excess Sediment Sources**

Task            Identify most egregious sources of excess sediment and highest priority sites using aerial and road-based reconnaissance, complaints, staff observations, general knowledge, and other information. Identify the most turbid streams following storms using aerial and road-based reconnaissance (see Regional Task 23 for more information).

**South Fork Trinity River Task 5**  
**Use Progressive Enforcement or Develop WDRs or Conditional Waivers**

Task            For excess sediment sites identified through reconnaissance, complaints, or from other information, do one or more of the following:

- Deploy the storm and sediment response team to investigate and take appropriate corrective actions.
- Use progressive enforcement for violations of the Measures to Control Excess Sediment Prohibition (Regional Task 6).

- Use progressive enforcement for violations of the Stream and Wetlands System Protection Policy (Regional Task 6).
- Require ROWDs and develop individual WDRs or conditional waivers (Regional Task 11).

In the South Fork Trinity River watershed, this task, in tandem with South Fork Trinity Task 3 above, is expected to be especially useful for controlling excess sediment from the private, non-industrial timber land in the watershed.

### **South Fork Trinity River Task 6**

#### **Work with Sierra Pacific Industries and Timber Products to Ensure Compliance with the Measures to Control Excess Sediment Prohibition**

**Task** Work with Sierra Pacific Industries and Timber Products to ensure they are on the path toward compliance with the Measures to Control Excess Sediment Prohibition once it is adopted and in effect. This task will likely include making contact with the landowner or the landowner's representative, educating them on their responsibilities to control excess sediment, coming to agreements on time schedules and excess sediment control strategies, providing technical guidance, regularly checking on progress, and other cooperative efforts. Should the landowners choose not to comply with the Measures to Control Excess Sediment Prohibition, consider taking progressive enforcement actions as described in Regional Task 5.

### **South Fork Trinity River Task 7**

#### **Implement WDRs or a Conditional Waiver for the USFS for Non-Timber Harvest Activities**

**Background** Approximately 80% of the South Fork Trinity River watershed is federal land managed by the USFS, which includes the Six Rivers National Forest and the Shasta-Trinity National Forest

**Task** Following their development and adoption (as described in Regional Task 17), implement the WDRs or the conditional waiver for the USFS to control excess sediment and other water quality concerns in the South Fork Trinity River watershed.

### **South Fork Trinity River Task 8**

#### **Implement WDRs or a Conditional Waiver for BLM for Non-Timber Harvest Activities**

**Task** Following their development and adoption (as described in Regional Task 18), implement the WDRs or the conditional waiver for BLM to control excess sediment on BLM land in the South Fork Trinity River watershed.

**South Fork Trinity River Task 9**  
**Develop Ownership-wide WDRS for Green Diamond**

Task            Develop ownership-wide WDRs for Green Diamond Resources Company to address excess sediment and other water quality concerns on their ownership (see Regional Task 11 for more information). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs. The WDRs may be applicable to all of Green Diamond's property or just to their property in the South Fork Trinity River watershed.

**South Fork Trinity River Task 10**  
**Develop WDRs for County Roads in Humboldt and Trinity Counties**

Task            Develop WDRs for Humboldt County and Trinity County to control excess sediment from county roads (Regional Task 13). Bring the WDRs to the Regional Water Board for their consideration. If adopted, implement the WDRs.

**South Fork Trinity River Task 11**  
**Work with Caltrans on Highways 3 and 36**

Task            Work with Caltrans to identify, prioritize, control, and monitor existing excess sediment discharges from Highways 3, 36, and other state highways in the South Fork Trinity River watershed. Work with Caltrans to ensure their management practices prevent future discharges. Do this by reviewing the Caltrans Storm Water Program and improving it as needed (Regional Task 14).

## CHAPTER 4

### PRIORITIES

---

#### 4.1 Regional Task Priorities

The priority ranking for each regional task is listed in Appendix A. Each regional task is ranked as underway (staff are currently working on the task), very high, high, medium, or low priority. Regional Water Board staff intend to utilize the regional task priority rankings as a tool when developing annual staff work plans.

Should the Regional Water Board receive full funding to execute all the tasks, staff intend to work on the very high and high priority tasks the first year funding is available, followed by the medium priority tasks a year later, and the low priority task a year after that. If the Regional Water Board receives less than the full amount of resources necessary to execute all of the regional tasks, then staff will continue to work on the tasks that are underway, then highest priority regional tasks, and so on.

The rankings are not intended to reflect the absolute order in which tasks will be accomplished. Priority rankings may change to reflect altered direction from the Regional Water Board, or a change in conditions.

Regional Water Board staff determined the relative priorities for all the regional tasks based on best professional judgement. Staff primarily considered the effect the task could have on reducing excess sediment. The more effective the task, the higher its rank. Staff also considered ongoing regulatory obligations. For example, staff are required to implement the construction storm water program (which is deserving of a high priority ranking simply due to its success in reducing excess sediment), but are not obligated to develop an incentive program, even though it, too, is expected to produce beneficial discharge reductions. The results of available sediment source analyses from completed TMDLs were also considered in prioritizing the tasks. Tasks that focus on the largest sources were ranked as high priorities. For example, tasks that address roads (which were almost always identified as the largest human-caused sediment source) are high priorities.

#### 4.2 Watershed Priorities

The priority ranking for each of the 27 sediment-impaired watersheds is listed in the following table. The table also includes the fiscal year in which staff plan to begin work on the watershed-specific tasks. Staff plan to stagger the commencement of work, starting with the higher priority watersheds, in order to spread out the work load in fairly equal amounts each year.

<b>Rank</b>	<b>Watershed</b>	<b>Fiscal Year for Work Commencement</b>
1 <sup>st</sup>	Freshwater Creek	Underway
1 <sup>st</sup>	Russian River	Underway
2 <sup>nd</sup>	Elk River	Underway
2 <sup>nd</sup>	Klamath River	Underway
3 <sup>rd</sup>	Scott River	Underway
4 <sup>th</sup>	Garcia River	Underway
5 <sup>th</sup>	Lower Mainstem Eel River	09/10
5 <sup>th</sup>	Mad River	09/10
6 <sup>th</sup>	Redwood Creek	09/10
7 <sup>th</sup>	Mainstem Trinity River	10/11
8 <sup>th</sup>	Mattole River	10/11
9 <sup>th</sup>	South Fork Trinity River	10/11
10 <sup>th</sup>	Van Duzen River	10/11
11 <sup>th</sup>	Jacoby Creek	10/11
11 <sup>th</sup>	Gualala River	11/12
12 <sup>th</sup>	Albion River	11/12
12 <sup>th</sup>	Big River	11/12
12 <sup>th</sup>	South Fork Eel River	12/13
13 <sup>th</sup>	Noyo River	12/13
14 <sup>th</sup>	Upper Mainstem Eel River	13/14
14 <sup>th</sup>	Middle Mainstem Eel River	13/14
15 <sup>th</sup>	North Fork Eel River	13/14
15 <sup>th</sup>	Navarro River	13/14
16 <sup>th</sup>	Ten Mile River	13/14
17 <sup>th</sup>	Estero Americano	14/15
17 <sup>th</sup>	Stemple Creek	14/15
18 <sup>th</sup>	Middle Fork Eel River	14/15

### 4.3 Watershed Prioritization Criteria

Each of the 27 sediment-impaired watersheds was prioritized and ranked based on the following factors:

- The number of existing and potential beneficial uses designated in the Basin Plan.
- The use of fish in the watershed for subsistence fishing, cultural uses, or ceremonial uses.
- The impacts of the current sediment load in the watershed on drinking water supplies.
- The flood potential due to the current sediment load in the watershed.
- The number of salmonid species present in the watershed.
- The relative abundance of salmonids present in the watershed compared to the other sediment-impaired watersheds.

- The priority rank of the watershed per the *Recovery Strategy for California Coho Salmon* (CDFG 2004).
- The diversity of the aquatic assemblage (i.e., the number of non-salmonid fish and other aquatic species present) in the watershed.
- The number of ecological regions that fall within the watershed's boundaries.
- The percent of natural sediment sources to total sediment sources.
- The potential improvement to salmonid populations if the anthropogenic sediment load is reduced (e.g., if other factors like high water temperatures or nutrient loads are impacting beneficial uses, than fixing the sediment problem may not lead to increases in salmonids).
- The presence of stakeholder and watershed groups and their relative effectiveness at reducing excess sediment.
- Staff's optimism for support from the Board Members.
- Specific direction from the Regional Water Board to staff to work on sediment control efforts in the watersheds (e.g., adopted a TMDL Action Plan for sediment).

The approach of this Work Plan to prioritizing watersheds is a modified version of the system developed by an ad hoc working group sponsored by Oregon State Senator Bill Bradbury in 1995, which is found in the *Handbook for Prioritizing Watershed Protection and Restoration to Aid Recovery of Native Salmon*. The following modifications were made to the Bradbury prioritization process in order to better represent the realities and characteristics of the North Coast Region:

- "Key watersheds" were not considered because the key watershed designations in the Region are limited to just federal land in the National Forests.
- "Other ecological benefits" were not considered because, according to Bradbury, these considerations do not apply to self-contained rivers.
- "Relative integrity" and "relative risk" were modified to be the percent of natural sediment sources.
- "Degree of Optimism" was modified to be optimism for Board support.
- Factors addressing subsistence and cultural uses, other beneficial uses, drinking water and flooding impacts, stakeholder groups, the ranking from CDFG's *Coho Recovery Strategy*, and specific direction from the Board were added due to their importance in the Region.
- "Potential for Improvement if Sediment Load Reduced" was given a range of 1 to 5, instead of 1 to 3, in order to increase the relative weight of this factor, which reflects its importance.

For each watershed, a worksheet was completed that included all the factors to be considered for prioritizing a watershed. A blank worksheet is found below. Data was compiled from the individual watershed worksheets onto the "Watershed Prioritization Master Table," which is also found below.

In order to answer the questions asked on the worksheet, data was queried from several sources. These sources included the TMDL, sediment source analyses, CalFish ([www.calfish.org](http://www.calfish.org), which is a product of the California Department of Fish and Game), KRIS ([www.krisweb.com](http://www.krisweb.com)), and other watershed-specific documents and sources.

**Figure 53: Example Worksheet for Watershed Prioritization – Page 1**

**WATERSHED:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

Numbers in parenthesis refer to point values. Insert on watershed prioritization master table.

**Uses & Impacts**

**Beneficial Uses**

Total number of beneficial uses (existing and potential) designated in the Basin Plan: \_\_\_\_\_

**CUL Beneficial Use**

Are fish eaten/used to sustain a human population or culture (e.g., subsistence fishing, ceremonial uses) or is the water body designed with the Native American Culture (CUL) Beneficial Use in the Basin Plan?

- Yes (3)
- Maybe (1)
- No (0)

**Impacts to Drinking Water**

Is the current sediment load negatively impacting drinking water supplies?

- Yes. High (3)
- Yes. Medium (2)
- Yes. Low (1)
- No or Unknown(0)

**Flood Potential**

Is the current sediment load causing or threatening to cause floods?

- Yes, sediment-caused flooding is happening or has happened (3)
- Yes, sediment-caused flooding is likely to happen soon (2)
- Yes, sediment-caused flooding is somewhat likely (1)
- No (0)

**Biological & Ecological Resources**

**Salmonid Presence**

What species (coho, Chinook, steelhead) are present:

- Coho
- Spring/Summer Chinook
- Fall Chinook
- Summer Steelhead
- Fall/Winter Steelhead
- Other: \_\_\_\_\_

Data Source:

- TMDL
- CalFish
- Other: \_\_\_\_\_

Total # of species: \_\_\_\_\_

**Salmonid Abundance**

What is the relative abundance of coho, Chinook, and steelhead?

- High (3)
- Medium (2)
- Low (1)



**Figure 53: Example Worksheet for Watershed Prioritization – Page 3**

**Potential for Improvement**

**Volume of Natural Sediment Sources:**

If TMDL is complete, give % that is natural: \_\_\_\_\_

- If TMDL is not complete, rank as:
- High (1)
  - Medium (2)
  - Low (3)

**Potential for Improvement if Sediment Load Reduced**

What is the potential improvement to salmonid populations if the anthropogenic sediment load is reduced? Consider other impairments, such as temperature or nutrient listings. Consider up-watershed contributions of sediment load.

- Very High (5)
- High (4)
- Medium (3)
- Low (2)
- Very Low (1)

**Presence of Stakeholder Groups**

Are stakeholder groups present in the watershed?

- Yes, high effectiveness at reducing sediment discharges (3)
- Yes, medium effectiveness at reducing sediment discharges (2)
- Yes, low effectiveness at reducing sediment discharges (1)
- No. (0)

**Likely Board Support**

How likely is the Regional Water Board to support sediment control efforts in the watershed?

- High (3)
- Medium (2)
- Low (1)

**Board Direction**

**Board Direction**

Has the Regional Water Board specifically directed staff to work on sediment control efforts in the watershed (e.g., adopted a TMDL Action Plan for sediment)?

- Yes (10)
- No (0)

**Table 52: Watershed Prioritization Master Table – Page 1**

Watershed	County(ies)	Size (mi <sup>2</sup> )	Uses and Impacts							
			Beneficial Uses			CUL Beneficial Use	Impacts to Drinking Water	Flood Potential	Subtotal	
			#	Rank	Third				Score	Priority
<b>Albion River</b>	Mendocino	68	18	5	1	0	0	1	2	8
<b>Big River</b>	Mendocino	201	18	5	1	0	0	0	1	9
<b>Eel - North Fork Eel River</b>	Mendocino, Trinity	283	18	5	1	3	0	0	4	6
<b>Eel - Middle Fork Eel River</b>	Mendocino, Trinity, Glenn	754	18	5	1	0	0	0	1	9
<b>Eel - South Fork Eel River</b>	Mendocino, Humboldt	689	18	5	1	0	0	2	3	7
<b>Eel - Upper Mainstem Eel</b>	Mendocino, Lake, Glenn	709	18	5	1	0	0	0	1	9
<b>Eel - Middle Mainstem Eel</b>	Humboldt, Mendocino, Trinity	521	18	5	1	0	0	1	2	8
<b>Eel - Lower Mainstem Eel</b>	Humboldt	299	21	2	3	3	1	2	9	2
<b>Eel - Van Duzen River</b>	Humboldt, Trinity	428	19	4	2	3	0	1	6	4
<b>Elk River</b>	Humboldt	58	18	5	1	1	3	3	8	3
<b>Estero Americano</b>	Sonoma, Marin	39	18	5	1	0	0	0	1	9
<b>Freshwater Creek</b>	Humboldt	62	19	4	2	3	2	3	10	1
<b>Garcia River</b>	Mendocino	146	17	6	1	0	0	0	1	9
<b>Gualala River</b>	Mendocino, Sonoma	332	19	4	2	0	0	0	2	8
<b>Jacoby Creek</b>	Humboldt	47	19	4	2	3	0	1	6	4
<b>Klamath River</b>	Del Norte, Humboldt	497	22	1	3	3	0	0	6	4
<b>Mad River</b>	Humboldt, Trinity	503	21	2	3	3	3	0	9	2
<b>Mattole River</b>	Humboldt, Mendocino	373	19	4	2	0	0	1	3	7
<b>Navarro River</b>	Mendocino	316	18	5	1	0	0	0	1	9
<b>Noyo River</b>	Mendocino	166	18	5	1	0	1	0	2	8
<b>Redwood Creek</b>	Humboldt	294	19	4	2	3	0	1	6	4
<b>Russian River</b>	Mendocino, Sonoma	1,484	20	3	2	3	2	3	10	1
<b>Scott River</b>	Siskiyou	814	17	6	1	3	0	0	4	6
<b>Stemple Creek</b>	Sonoma, Marin	54	18	5	1	0	0	0	1	9
<b>Ten Mile River</b>	Mendocino	129	18	5	1	0	0	0	1	9
<b>Mainstem Trinity River</b>	Humboldt, Trinity	1,922	20	3	2	3	0	0	5	5
<b>South Fork Trinity River</b>	Humboldt, Trinity	932	18	5	1	3	0	0	4	6

**Table 52: Watershed Prioritization Master Table – Page 2**

Watershed	Biological and Ecological Resources														
	# of Salmonid Species Present			Salmonid Abundance	Coho Recovery Strategy Priority			Aquatic Assemblage Diversity			# of Ecoregions			Subtotal	
	#	Rank	Third		#	Rank	Third	#	Rank	Third	#	Rank	Third	Score	Priority
Albion River	3	3	2	2	5	1	3	15	5	3	2	5	1	11	4
Big River	3	3	2	2	5	1	3	31	1	3	2	5	1	11	4
Eel - North Fork Eel River	4	2	3	2	1	5	1	4	15	1	2	5	1	8	7
Eel - Middle Fork Eel River	4	2	3	1	1	5	1	9	11	2	3	4	2	9	6
Eel - South Fork Eel River	3	3	2	3	5	1	3	9	11	2	3	4	2	12	3
Eel - Upper Mainstem Eel	3	3	2	2	5	1	3	10	10	2	2	5	1	10	5
Eel - Middle Mainstem Eel	4	2	3	3	1	5	1	8	12	2	4	3	2	11	4
Eel - Lower Mainstem Eel	4	2	3	3	3	3	2	10	10	2	5	2	3	13	2
Eel - Van Duzen River	4	2	3	2	3	3	2	14	6	3	4	3	2	12	3
Elk River	3	3	2	2	5	1	3	7	13	1	2	5	1	9	6
Estero Americano	1	4	1	1	3	3	2	3	16	1	1	6	1	6	8
Freshwater Creek	3	3	2	2	5	1	3	11	9	2	2	5	1	10	5
Garcia River	3	3	2	2	4	2	2	14	6	3	2	5	1	10	5
Gualala River	3	3	2	2	2	4	2	13	7	2	4	3	2	10	5
Jacoby Creek	3	3	2	2	5	1	3	2	17	1	3	4	2	10	5
Klamath River	5	1	3	3	5	1	3	13	7	2	3	4	2	13	2
Mad River	4	2	3	2	5	1	3	8	12	2	5	2	3	13	2
Mattole River	4	2	3	2	5	1	3	31	1	3	1	6	1	12	3
Navarro River	3	3	2	2	4	2	2	11	9	2	2	5	1	9	6
Noyo River	3	3	2	2	4	2	2	11	9	2	3	4	2	10	5
Redwood Creek	5	1	3	2	5	1	3	23	2	3	1	6	1	12	3
Russian River	3	3	2	2	5	1	3	20	3	3	4	3	2	12	3
Scott River	4	2	3	3	4	2	2	7	13	1	3	4	2	11	4
Stemple Creek	1	4	1	1	3	3	2	5	14	1	2	5	1	6	8
Ten Mile River	3	3	2	2	4	2	2	12	8	2	2	5	1	9	6
Mainstem Trinity River	5	1	3	3	5	1	3	19	4	3	7	1	3	15	1
South Fork Trinity River	5	1	3	3	3	3	2	8	12	2	5	2	3	13	2

**Table 52: Watershed Prioritization Master Table – Page 3**

Watershed	Potential for Improvement							
	Volume of Natural Sources			Potential for Improvement if Sediment Load Reduced	Presence of Stakeholder Groups	Likely Board Support	Subtotal	
	%	Rank	Third				Score	Priority
Albion River	38	6	3	4	1	3	11	3
Big River	50	9	2	3	2	3	10	4
Eel - North Fork Eel River	68	15	1	3	0	3	7	7
Eel - Middle Fork Eel River	95	18	1	1	0	3	5	8
Eel - South Fork Eel River	53	10	2	3	1	3	9	5
Eel - Upper Mainstem Eel	68	15	1	3	2	3	9	5
Eel - Middle Mainstem Eel	69	16	1	2	1	3	7	7
Eel - Lower Mainstem Eel	48	7	2	3	2	3	10	4
Eel - Van Duzen River	79	17	1	2	2	3	8	6
Elk River			3	5	2	2	12	2
Estero Americano			2	2	3	3	10	4
Freshwater Creek			3	5	2	2	12	2
Garcia River	12	1	3	5	2	3	13	1
Gualala River	31	3	3	4	3	3	13	1
Jacoby Creek			2	3	2	2	9	5
Klamath River			2	3	3	2	10	4
Mad River	36	5	3	3	1	3	10	4
Mattole River	36	5	3	4	3	3	13	1
Navarro River	60	12	2	3	1	3	9	5
Noyo River	64	13	2	3	2	3	10	4
Redwood Creek	32	4	3	4	3	3	13	1
Russian River			3	3	2	2	10	4
Scott River	59	11	2	3	2	3	10	4
Stemple Creek	30	2	3	2	2	3	10	4
Ten Mile River	49	8	2	3	0	3	8	6
Mainstem Trinity River	65	14	1	3	3	3	10	4
South Fork Trinity River	65	14	1	3	3	3	10	4

**Table 52: Watershed Prioritization Master Table – Page 4**

Watershed	Subtotals from Above			Board Direction	Total	
	Uses & Impacts	Biological & Ecological Resources	Potential for Improvement		Total Score	Final Priority
Albion River	2	11	11	0	24	12
Big River	1	11	10	0	22	13
Eel - North Fork Eel River	4	8	7	0	19	15
Eel - Middle Fork Eel River	1	9	5	0	15	18
Eel - South Fork Eel River	3	12	9	0	24	12
Eel - Upper Mainstem Eel	1	10	9	0	20	14
Eel - Middle Mainstem Eel	2	11	7	0	20	14
Eel - Lower Mainstem Eel	9	13	10	0	32	5
Eel - Van Duzen River	6	12	8	0	26	10
Elk River	8	9	12	10	39	2
Estero Americano	1	6	10	0	17	17
Freshwater Creek	10	10	12	10	42	1
Garcia River	1	10	13	10	34	4
Gualala River	2	10	13	0	25	11
Jacoby Creek	6	10	9	0	25	11
Klamath River	6	13	10	10	39	2
Mad River	9	13	10	0	32	5
Mattole River	3	12	13	0	28	8
Navarro River	1	9	9	0	19	15
Noyo River	2	10	10	0	22	13
Redwood Creek	6	12	13	0	31	6
Russian River	10	12	10	10	42	1
Scott River	4	11	10	10	35	3
Stemple Creek	1	6	10	0	17	17
Ten Mile River	1	9	8	0	18	16
Mainstem Trinity River	5	15	10	0	30	7
South Fork Trinity River	4	13	10	0	27	9

Final Priority	
1 <sup>st</sup>	Freshwater Creek
1 <sup>st</sup>	Russian River
2 <sup>nd</sup>	Elk River
2 <sup>nd</sup>	Klamath River
3 <sup>rd</sup>	Scott River
4 <sup>th</sup>	Garcia River
5 <sup>th</sup>	Lower Mainstem Eel River
5 <sup>th</sup>	Mad River
6 <sup>th</sup>	Redwood Creek
7 <sup>th</sup>	Mainstem Trinity River
8 <sup>th</sup>	Mattole River
9 <sup>th</sup>	South Fork Trinity River
10 <sup>th</sup>	Van Duzen River
11 <sup>th</sup>	Jacoby Creek
11 <sup>th</sup>	Gualala River
12 <sup>th</sup>	Albion River
12 <sup>th</sup>	Big River
12 <sup>th</sup>	South Fork Eel River
13 <sup>th</sup>	Noyo River
14 <sup>th</sup>	Upper Mainstem Eel River
14 <sup>th</sup>	Middle Mainstem Eel River
15 <sup>th</sup>	North Fork Eel River
15 <sup>th</sup>	Navarro River
16 <sup>th</sup>	Ten Mile River
17 <sup>th</sup>	Estero Americano
17 <sup>th</sup>	Stemple Creek
18 <sup>th</sup>	Middle Fork Eel River

## CHAPTER 5

### FUNDING

#### Funding Estimates

The funding estimates for regional tasks and all watersheds are found in Appendix A.

One personnel year (PY) is equal to one staff person working full time for one year. The number of PYs needed to execute the tasks are estimates based on the best professional judgement of Regional Water Board staff. The numbers of PYs currently allocated to the tasks are taken from completed internal work plans for Fiscal Year 2007/2008.

The following table summarizes the funding estimates by fiscal year. PY estimates are rounded to the nearest tenth of a PY. See the Task Lists in Appendix A for more detailed estimates.

	<b>07/08</b>	<b>08/09</b>	<b>09/10</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
PYs Needed for Regional Tasks	16.4	16.3	31.4	32.0	31.4	30.7	30.5	30.0	29.8	29.8
PYs Needed for Watershed Tasks	8.6	8.7	14.4	13.8	14.4	15.0	14.9	15.0	14.3	13.8
Total PYs Needed to Execute All Tasks	25.0	25.0	45.8	45.8	45.8	45.7	45.4	45.0	44.0	43.6
PYs Currently Funded	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Additional PYs Needed	0.0	0.0	20.8	20.8	20.8	20.7	20.4	20.0	19.0	18.6

An estimated twenty additional permanent technical staff, plus more support (e.g., clerical) staff, are needed to execute the tasks listed in this Work Plan and thereby reduce excess sediment and improve water quality. Current Regional Water Board staff intend to actively seek these additional resources.

## CHAPTER 6

### STAFF ACTIONS

---

This chapter describes when Regional Water Board staff will execute the sediment control tasks listed in this Work Plan. These actions will be further refined in internal annual work plans prepared for each Regional Water Board unit and division.

#### **Fiscal Years 2007/2008 to 2008/2009**

During this fiscal year (2007-2008) and next (2008-2009), Regional Water Board staff will work on the sediment control tasks for which funding is currently available. These tasks are listed below.

- Regional Task 1.....Develop the Measures to Control Excess Sediment Amendment and bring it to the Board for their consideration.
- Regional Task 2.....Develop the Stream and Wetland System Protection Policy and bring it to the Board for their consideration.
- Regional Task 3.....Develop the Instream Flow Objective and bring it to the Board for their consideration.
- Regional Task 5.....Begin to conduct outreach and education.
- Regional Task 7.....Develop general WDRs and a conditional waiver for vineyards.
- Regional Task 14.....Improve the Caltrans Storm Water Program.
- Regional Task 15.....Continue to implement the general WDRs and conditional waiver for non-federal timber harvest activities.
- Regional Task 16.....Continue to implement the general WDRs and conditional waiver for federal timber harvest activities.
- Regional Task 17.....Develop WDRs or a conditional waiver for the USFS for non-timber harvest activities.
- Regional Task 19.....Continue to implement the municipal, construction, and industrial storm water programs.
- Regional Task 20.....Continue to implement the 401 Certification Program.
- Regional Task 21.....Continue to fund excess sediment control projects through grants and loans.
- Regional Task 22.....Internal management and coordination.
- Regional Task 26.....Work with counties to update their General Plans.
- Regional Task 27.....Meet regulatory with county staff.
- Multi-Watershed Task 1.....Develop ownership-wide WDRs for Green Diamond.
- Multi-Watershed Task 2.....Develop ownership-wide WDRs for Mendocino Redwood Company.
- Multi-Watershed Task 8.....Work with North Coast Railroad Authority.
- Multi-Watershed Task 15.....Develop dairy-focused outreach and education program.
- Eel - NF, MF, and  
Middle Mainstem Tasks.....Work with Round Valley Indian Tribes.
- Eel – Lower Mainstem Task 15.....Develop watershed-wide WDRs for timber harvest activities in Bear Creek.
- Eel – Lower Mainstem Task 16.....Develop watershed-wide WDRs for timber harvest activities in Jordan Creek.
- Elk River Task 2.....Continue to implement CAOs for PALCO.
- Elk River Task 3.....Continue to implement watershed-wide WDRs for PALCO.
- Elk River Task 4.....Continue to implement watershed wide WDRs for Green Diamond.

Elk River Task 6.....	Develop the sediment TMDL.
Freshwater Creek Task 2.....	Continue to implement CAOs for PALCO.
Freshwater Creek Task 3.....	Continue to implement watershed-wide WDRs for PALCO.
Freshwater Creek Task 4.....	Develop the sediment TMDL.
Garcia River Task 1.....	Continue to implement the Garcia River TMDL Action Plan.
Gualala River Task 9.....	Develop ownership-wide WDRs for Gualala Redwoods Inc.
Klamath Glen HSA Task 1.....	Identify and work with key stakeholders.
Klamath Glen HSA Task 2.....	Conduct outreach and education and work with all interested stakeholders.
Klamath Glen HSA Task 4.....	Coordinate sediment control efforts with the Yurok and Hoopa Valley Tribes.
Redwood Creek Task 11.....	Develop ownership-wide conditional waivers for the National Park Service.
Russian River Task 2.....	Conduct outreach and education and work with all interested stakeholders.
Scott River Task 2.....	Address private roads and sediment waste discharges.
Scott River Task 3.....	Address Caltrans' roads and improve the Caltrans Storm Water Program.
Scott River Task 4.....	Work with Siskiyou County on county roads.
Scott River Task 6.....	Address sediment waste from dredge mining activities.
Scott River Task 7.....	Address sediment waste from flood control and bank stabilization activities.
Scott River Task 11.....	Address sediment waste from grazing activities.
Scott River Task 12.....	Work with Siskiyou RCD and the Scott River Watershed Council.
Scott River Task 13.....	Work with NRCS and UCCE.
Scott River Task 14.....	Work with CDFG.

### **Fiscal Years 2009/2010 Onward**

Regional Water Board staff will be working to get additional funding through all possible avenues. The soonest that staff expect additional PYs to be available is July 2009 with the 2009-2010 fiscal year, and work will commence as indicated on the Task Lists if the full resources become available (see Appendix A).

If the Regional Water Board receives less than the full amount of PYs and resources necessary to execute all the tasks, staff will continue to work on the tasks that are currently funded and currently being worked on. As more resources become available, staff intend to work on the highest priority regional tasks first, likely starting with outreach and education efforts, improving the Caltrans storm water program, developing WDRs or conditional waivers for the USFS, and coordinating with CDFG and NOAA Fisheries on Habitat Conservation Plans and Incidental Take Permits. Staff intend to focus on regional tasks in general before watershed-specific tasks because regional tasks will impact almost all of the sediment impaired watersheds and are expected to be the most effective. Once most of the regional tasks are underway, staff then intends to focus on watershed-specific tasks, starting with the highest priority.

If the Regional Water Board does not receive any additional funding, staff may be forced to control excess sediment through waste discharge requirements, which will support additional staff through fees.

## REFERENCE LIST

---

- Albin, D. 2006. Assessment of Stream Habitat Conditions, and Recommendations for Improvement, in the Noyo River Hydrologic Sub-Area. California Department of Fish and Game Central Coast Region, Fort Bragg. April 2006.
- Bradbury, B., W. Nehlsen, T.E. Nickelson, K.M.S. Moore, R.M. Hughes, D. Heller, J. Nicholas, D.L. Bottom, W.E. Weaver, and R.L. Beschta. 1995. Handbook for Prioritizing Watershed Protection and Restoration to Aid Recovery of Native Salmon. Ad hoc working group sponsored by Oregon State Senator Bill Bradbury. November 1995.
- California Department of Fish and Game (CDFG). 2004. Recovery Strategy for California Coho Salmon. Report to the California Fish and Game Commission. Species Recovery Strategy 2004-1. February 2004.
- Cannata, S., R. Henly, J. Erler, J. Falls, D. McGuire, and J. Sunahara. 2006. Redwood Creek Watershed Assessment Report. Coastal Watershed Planning and Assessment Program and North Coast Watershed Assessment Program. California Resources Agency and California Environmental Protection Agency, Sacramento, California.
- Hickey, P. 2007. The Estero Americano Watershed Management Plan. A Project of the Gold Ridge Resource Conservation District with Funding from the State Water Resources Control Board. Prepared by the Gold Ridge Resource Conservation District. Version 1, February 2007.
- Klamt, R.R., C. LeDoux-Bloom, J. Clements, M. Fuller, D. Morse, and M. Scruggs (multi-disciplinary team leads). 2002. Gualala River Watershed Assessment Report. North Coast Watershed Assessment Program, 367 pp plus Appendices. California Resources Agency and California Environmental Protection Agency, Sacramento, California.
- Miles, S.R. and C.B. Goudey. 1997. Ecological Subregions of California, Section and Subsection Descriptions. United States Department of Agriculture, Forest Service. [www.fs.fed.us/r5/projects/ecoregions/title\\_page.htm](http://www.fs.fed.us/r5/projects/ecoregions/title_page.htm). Downloaded July 19, 2007.
- North Coast Regional Water Quality Control Board (NCRWQCB). 1997. Total Maximum Daily Load and Attainment Strategy for the Stemple Creek Watershed.
- North Coast Regional Water Quality Control Board (NCRWQCB). 2006. Overview of the Russian River Watershed: its Characteristics, Salmonid Populations, and Sediment and Salmonid Habitat Water Quality Concerns. August 2, 2006.
- North Coast Regional Water Quality Control Board (NCRWQCB). 2007. Water Quality Control Plan for the North Coast Region. January 2007.

- Prunuske, L., M. Cordell, S. Holve, and M. Neuman. 1994. Stemple Creek/Estero de San Antonio Watershed Enhancement Plan. Prepared for the Marin County Resource Conservation District and Southern Sonoma County Resource Conservation District. Funding from the California Coastal Conservancy, Marin Community Foundation, and Dean Witter Foundation. July 1994.
- Sommarstrom, S., A. Caneday, and T. Stophens. 2001. County Road Maintenance Manual for Northwestern California Watersheds: A Water Quality and Stream Habitat Protection Guide. Prepared by the Five Counties Salmon Conservation Process. Del Norte County Community Development Department, Humboldt County Department of Public Works, Mendocino County Department of Transportation, Siskiyou County Department of Public Works, Trinity County Department of Transportation.
- United States Environmental Protection Agency (U.S. EPA). 1998a. Redwood Creek Sediment Total Maximum Daily Load.
- United States Environmental Protection Agency (U.S. EPA). 1998b. South Fork Trinity River and Hayfork Creek Total Maximum Daily Load for Sediment.
- United States Environmental Protection Agency (U.S. EPA). 1999a. South Fork Eel River Total Maximum Daily Loads for Sediment and Temperature.
- United States Environmental Protection Agency (U.S. EPA). 1999b. Noyo River Total Maximum Daily Load for Sediment.
- United States Environmental Protection Agency (U.S. EPA). 1999c. Van Duzen River and Yager Creek Total Maximum Daily Load for Sediment.
- United States Environmental Protection Agency (U.S. EPA). 2000a. Navarro River Total Maximum Daily Loads for Temperature and Sediment.
- United States Environmental Protection Agency (U.S. EPA). 2000b. Ten Mile River Total Maximum Daily Load for Sediment.
- United States Environmental Protection Agency (U.S. EPA). 2001a. Albion River Total Maximum Daily Load for Sediment. December 2001.
- United States Environmental Protection Agency (U.S. EPA). 2001b. Big River Total Maximum Daily Load for Sediment. December 2001.
- United States Environmental Protection Agency (U.S. EPA). 2001c. Gualala River Total Maximum Daily Load for Sediment.
- United States Environmental Protection Agency (U.S. EPA). 2001d. Mainstem Trinity River Total Maximum Daily Load for Sediment.

United States Environmental Protection Agency (U.S. EPA). 2002. North Fork Eel River Total Maximum Daily Loads for Sediment and Temperature.

United States Environmental Protection Agency (U.S. EPA). 2003a. Mattole River Total Maximum Daily Loads for Sediment and Temperature.

United States Environmental Protection Agency (U.S. EPA). 2003b. Middle Fork Eel River Total Maximum Daily Loads for Temperature and Sediment.

United States Environmental Protection Agency (U.S. EPA). 2004. Upper Main Eel River and Tributaries Total Maximum Daily Loads for Temperature and Sediment.

United States Environmental Protection Agency (U.S. EPA). 2005. Middle Main Eel River and Tributaries (from Dos Rios to the South Fork) Total Maximum Daily Loads for Temperature and Sediment.

United States Environmental Protection Agency (U.S. EPA). 2007a. Lower Eel River Total Maximum Daily Loads for Temperature and Sediment. December 18, 2007.

United States Environmental Protection Agency (U.S. EPA). 2007b. Mad River Total Maximum Daily Loads for Sediment and Turbidity. December 21, 2007.