SECTION 2.5

EEL RIVER WATERSHED MANAGEMENT AREA

The following draws upon information obtained through public input, agency contacts, and experience of Regional Water Board staff. The Eel River is listed in the CWA section 303(d) list as impaired by sediment and temperature. The technical TMDLs for the North Fork, South Fork and Middle Fork of the Eel River have been completed.

MANAGEMENT AREA DESCRIPTION

The Eel River WMA encompasses roughly 3,684 square miles in highly erodable soils in the steep coastal mountains of the Region, supporting a variety of water uses including municipal and agricultural supply systems, salmonid fisheries, and recreation.
The main tributaries to the Eel River are the Van Duzen River, the Bear River, and Yager, Larabee, Bull and Salmon Creeks. Lake Pillsbury is located near the headwaters of the mainstem. The upper watershed is mountainous and vegetated by redwood, Douglas fir interspersed with some hardwoods and meadows. Toward the coast the River spreads out on a coastal plain where the Salt River joins it. Several dairies are located here, as well as the towns of Ferndale, Fortuna, and Loleta. Other population centers are Scotia, Garberville, Laytonville, and the largest of all Willits.

Surface water in many areas is intimately connected with the ground water along the nearby alluvial valleys, thereby having a profound effect on local groundwater supplies. A Northwestern railroad line follows along the River from south of Dos Rios to the Humboldt Bay and has fallen into disrepair having experienced numerous landslides and train wrecks. There are recent efforts to revive the railroad, but costs seem prohibitive. This rail line has been the cause of a great deal of water quality pollution.

The Eel River WMA is also a prime recreational area boasting numerous state and private campgrounds along its length with both water contact and non-contact uses such as boating and swimming. The Eel River is the third largest producer of salmon and steelhead in the State of California and supports a large recreational fishing industry. The erodable soils, steep terrain, and timber production evoke a high level of concern for

the anadromous fishery resource. Coho salmon were listed as endangered under the federal Endangered Species Act in 1997.

The Eel River is designated as a Critical Coastal Area. See Appendix C for detailed information on this Critical Coastal Area.

ASSESSMENT AND PROBLEM IDENTIFICATION

The WMA is heavily forested and as such, heavily utilized for timber production. Numerous activities occur within the watershed that may result in potential adverse effects to the beneficial uses of the Eel River Watershed. Municipal, agricultural, and recreational uses may be impaired through discharges to surface water bodies from chemical, biological, and sedimentary materials entering the surface water system. A few of the many activities that, if conducted improperly, are likely to impair surface water beneficial uses include: illegal waste disposal, vehicle and railroad maintenance yard operations, herbicide application, gravel extraction, timber harvesting, road building, dairy operations, automotive wrecking yard activities, wood treatment facilities, publicly owned treatment works, and failing septic systems.

Since the watershed is located in steep forested terrain with highly erosive soils and high rainfall, erosion and sediment production and transport are high. For most of the watershed the issues of temperature and sedimentation and their impacts on the salmonid fishery are of high concern, involving the timber and rangeland industries. Other issues include ground water contamination, dairies in the delta area near the ocean, and localized contamination of surface and ground waters.

At Lake Pillsbury, the Regional Water Board has concerns about mercury bioaccumulation in fish and placed the lake on the CWA 303(d) list of impaired waterbodies for mercury. The National Marine Fisheries Service has issued no take permits for endangered species in the lake. There are underground tanks in the area that are leaking and have contaminated private domestic wells. There are also fueling stations on the dock in the marina and above ground piping in the lake area that are of concern. PG & E and US Forest Service are conducting a restoration project in Soda Creek. A scoping project is being done for logging for fuel reduction on the lakeshore at Summerhome. The Eel River is partly diverted to the Russian River through a PG & E power generation plant at Potter Valley. There is a lumber mill operated by Louisiana Pacific at Van Arsdale where a cleanup is partially complete, but dioxin and furans are still detected in the mainstem of the river. Sedimentation is also a problem here.

On the North Fork Eel River where the land is owned by the Bureau of Land Management, the US Forest Service and private parties, there is still a lot of timber harvesting being done. This is an area of natural instability with highly erodable soils so that erosion and sedimentation of the waterways is a concern. The other major land use is cattle grazing which may also cause soil erosion. The wastewater treatment plant in the Covello/Dos Rios area with a daily capacity of about 100,000 gallons is poorly maintained and potentially discharges to the Eel River. Investigation and enforcement need to be increased on the treatment plant. The Round Valley Reservation uses a septic system that may also have problems. There is an old railroad maintenance yard in this area with hazardous waste issues that need to be addressed.

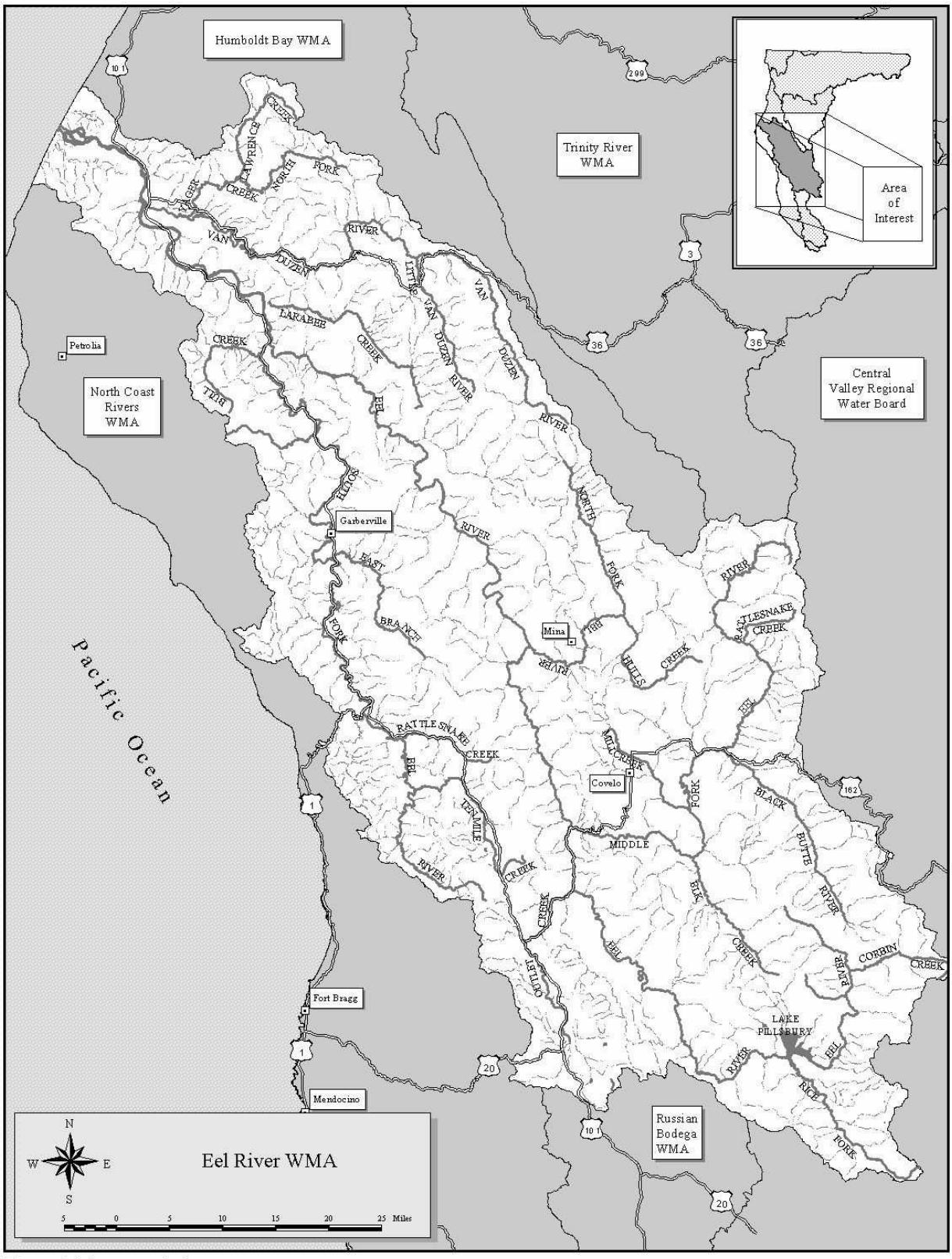

Figure 2.5.1. Eel River WMA

The landfill on Refuse Road is now closed and has been changed to a transfer station, but still needs to be investigated.

At the City of Willits, the treatment plant sometimes discharges to Outlet Creek in excess of the one (1) percent discharge rate. The City will be subject to Phase II of the NPDES storm water permits under which all storm water must be controlled. The Remco plant in Willits continues controlled discharges of VOCs to prevent spills to Baechtel Creek. The ground water plume contaminated with VOCs and hexavalent chrome continues to be cleaned up. The Page chrome pits that were used by Remco in the past and have contaminated ground water and soil are being monitored. In addition, the City has several above ground and under ground tanks that are potential problems.

At Laytonville, there are septic systems that are failing and the town wants to connect these systems to the sewer system that is in place. West of town there is a new vineyard that may be failing and needs investigation. At the Laytonville dump the local indian tribe has obtained a grant from USEPA to conduct ground water monitoring and they have detected arsenic that is also being detected in local private drinking water wells. The Northwestern Railroad has a rail line that runs parallel to the Eel River through highly erodable, unstable land where landslides are common. This railroad has been closed and there is an effort under way to open the line between Willits and Eureka. The Department of Toxic Substance Control, the Department of Fish and Game and the Regional Water Quality Control Board are all concerned with slide issues, fish issues, and debris cleanup issues involved with reopening the railroad line. Near Island Mountain there has been extensive sliding, and there are cleanup problems and a poor sewage system that needs investigation. The railroad has an old storage area here where hazardous wastes are contained in drums and tanks. The iron mine on Island Mountain is still discharging heavy metals to the river. Action is needed on these issues.

In the town of Garberville there is a gas station with leaking underground tanks and a bulk oil tank that is also leaking. In the surrounding areas private growers have problems with fuel tanks on electrical generators leaking and contaminating soil and possibly surface and ground water. Unical has a Waste Discharge Requirement for sparging ozone. At Humboldt Redwoods State Park near Weott there has been considerable restoration work done, especially in Bull Creek. The California Department of Transportation is also involved in restoration, erosion control and runoff projects in this area. The area along Highway 36 has soil stability problems and there is concern about the small communities along the highway that may have waste disposal problems.

In the lower Eel River area, the town of Scotia has a municipal runoff problem and Pacific Lumber Company has a permitted ash dump where Regional Water Board staff is currently taking enforcement action. There are also upland and in-stream quarries near Scotia that need investigation. At Rio Dell there are discharge problems from the municipal treatment plant in the summer and a sludge disposal problem. Eel River Saw Mill, which is being sold, has a NPDES storm water permit. The towns of Scotia, Ferndale, and Rio Dell will get Phase II NPDES storm water permits. At the town of Redcrest there is an underground tank that is leaking MTBE to the river and a failing onsite disposal system that needs investigation. In the Ferndale and Fortuna areas there are about 85 dairies, many with manure management problems and some dairies where cows have direct access to stream banks. Critical Coastal Area problems have been identified for the estuary as sedimentation/threat of sedimentation and threat of fish

population decline, for the river as sedimentation, and for the Van Duzen River as siltation. The pollutants are sediment and temperature from industrial and municipal point sources, silviculture, rangeland, and other nonpoint sources.

Pacific Lumber Company (PALCO) is harvesting heavily, above quantities in the Sustained Yield Plan, in the lower Eel River and Van Duzen River watersheds including Bear, Stitz and Jordan Creeks. PALCO is currently conducting a watershed analysis in this area and there is extensive Regional Water Board oversight. There is also cattle grazing on PALCO land and many roads that are poorly maintained and are contributing sediment to local creeks that are aggrading and causing flooding and domestic water supply problems. The Regional Water Board is conducting a watershed analysis in the lower Eel River area and conducting effectiveness monitoring downstream of where PALCO has installed BMPs.

Primary water quality issues in the Eel River WMA

- Sedimentation of streams
- Salmonid habitat degradation
- High water temperatures
- Ground water contamination

WATER QUALITY GOALS AND ACTIVITIES

The four goals for the Eel River WMA are related through the beneficial uses they address:

- **GOAL 1: Protect and enhance the salmonid resources (COLD)**
- **GOAL 2: Protect other surface water uses (MUN< AGR, REC-1, REC-2)**
- **GOAL 3: Protect ground water uses (MUN, IND, AGR, REC-1, REC-2)**
- **GOAL 4: Protect warm water fishery resources**

GOAL 1: Protect and enhance the salmonid resources (COLD)

The cold water fishery, specifically trout, steelhead, and salmon, is of concern regarding sedimentation and other potential impacts to habitat and water quality. The following nonpoint source issues were identified by the Regional Water Board staff and relate directly to concerns about the cold water fishery:

- Stream Sedimentation: A large portion of the watershed supports commercial timberlands. Logging roads are a concern due to increased runoff and delivery of sediment to local waterbodies. Changes in the morphology of channels have occurred from increased sedimentation rates. Sedimentation of small streams has caused localized flooding and accelerated erosion in some cases from redirected stream channels. Gravel extraction in the upper Eel watershed is a concern. Past and current timber harvest practices have decreased the canopy cover over tributaries and the mainstem of the river. High water temperatures are detrimental to cold water fisheries' reproduction.
- Dairy industry and grazing impacts the watershed from direct discharges of waste and/or whey, animals in the creeks and waterways, trampling of stream banks, and other erosion mechanisms.

- Ground water contamination concerns, as well as erosion and sedimentation issues should be included in outreach and education activities. Problem sites should receive enforcement per the State's Nonpoint Source Enforcement Policy.
- Herbicide application on private and public lands is a water quality concern.
- Interbasin transfers of water and regulated flows from dams affect sediment, flow, and temperature dynamics.

Point Source Issues

Current Activities

- Continue regulation of point sources.

Nonpoint Source Issues

Current Activities

- Implement and enforce best management practices for nonpoint source regulation.
- Work with the timber industry and USFS to address timber harvest impacts and issues such as erosion, herbicides, riparian management and road building and road abandonment.
- Investigate herbicide impacts to surface and ground water.
- Implement and enforce best management practices for nonpoint source regulation for herbicide applications. Work with CalTrans on discharges from roadwork.
- Promote grants for nonpoint source studies and implementation.
- Manage grant-funded projects.

Additional Needs

- Develop strategies for erosion prevention and reduction of sedimentation to support implementation of the TMDL process.
- Promote erosion prevention and sediment control educational materials and programs for small and rural landowners.
- Inspect construction sites for erosion prevention and sediment control measures, encourage local agencies to adopt and enforce local ordinances for erosion prevention and sediment control measures. Increase storm water program resources.
- Funds for coordinating functions with other agencies on a watershed basis, primarily through grant-funded projects, volunteer monitoring coordination, and public education and outreach.
- Promote Tax Incentives for erosion controls. Decreasing road density and decommissioning roads are two potential targets of a tax incentive program.
- Promote enhancement of riparian areas through grant funding, public education and outreach, and coordination and assistance to other agencies and groups.
- Improve habitat conditions for anadromous fishes by assisting and coordinating with CDFG and local agencies and groups in fishery assessment and emerging issues and by grant funding for stream rehabilitation. Obtain any data available on stream temperatures in this area.
- Increase coordination with Resource Conservation Districts and agricultural community to deal with rangeland and confined animal problems; erosion, bank erosion, animal waste in streams.
- Seal waste pits and ponds. Develop Regional Water Board approach to implementation of Rangeland Management Planning process.
- Increase active participation in the CalTrans Vegetation Management Advisory Committee and with CDF and timber industry on herbicide issues.

- Coordinate water rights/dams issues with SWRCB and other agencies.
- Participate in the process and decision criteria regarding gravel extractions.
- Encourage the local planning agencies to endorse the concept of a riparian corridor reserve and develop a model erosion control ordinance for all grading and building projects less than 5 acres in size.
- Coordinate with local agencies, CalTrans, and the Railroad Authority to develop and implement best management practices for erosion control.
- Develop and implement a focused sampling program for temperature, sediment loading, geomorphology changes and water quality in upper mainstem Eel River.
- Support CDFG efforts to identify the extent of squawfish predation on salmon and steelhead populations and evaluate management strategies to eliminate squawfish within the river and Lake Pillsbury.
- Coordinate with CDFG to evaluate removal of railroad debris
- Participate on the Regional Committee to develop a Local Coastal Plan and implement projects in the Critical Coastal Area of the Eel River.

GOAL 2: Protect other surface water uses (MUN, AGR, REC-1, REC-2)
Approximately 86% of the watershed area is privately owned and coordination between regulatory agencies and private groups within the watershed is poor. The compliance rate for existing WDR/NPDES programs is high. Existing regulatory programs related to point source discharges should be continued and increased emphasis placed on identifying and inspecting traditionally low priority and unregulated point source sites. Mercury in largemouth bass from Lake Pillsbury has been measured at concentrations exceeding FDA action levels for human consumption and the state Office of Health Hazard Assessment has issued a fish consumption advisory. Discharge from Lake Pillsbury may be contributing mercury to the Eel River watershed as well. Interbasin transfer of water between the Eel River and the Russian River may affect sediment budgets, flow rates, temperature dynamics and chemical concentrations within the Eel River. Lake Pillsbury may be acting as a source for squawfish found in the upper Eel River affecting recreational uses of the River.

Point Source Issues
Current Activities
- Continue point source regulatory programs.

Additional Needs
- Increase funding for identification and inspection of municipal, industrial and construction storm water facilities and traditionally unpermitted facilities such as junkyards, steam cleaners and maintenance yards.
- Increase inspections and develop general permits for lower priority land application facilities, recycling and composting facilities.
- Encourage improvements to publicly owned treatment plants adjacent to the river to reduce incidents of upsets and eliminate disposal of wastewater to gravel bars within the river channel.
- Coordinate and assist, as needed, during upcoming FERC permit reconsideration for Scott Dam. Negotiate flow releases and diversion schedules that enhance salmon and steelhead populations.

Nonpoint Source Issues
Current Activities

- Develop a sediment and temperature TMDL in conjunction with EPA.
- Increase coordination with RCD and agricultural community to address rangeland issues and confined animal problems related to nutrient runoff and erosion.
- Reduce erosion associated with timber harvest and road systems.
- Continue grant programs for watershed assessment, planning, and restoration.
- Continue the current Toxic Substance Monitoring Program and the SWAMP activities to develop and implement a focused sampling plan to assess water quality, sediment and bioaccumulation potential of mercury in upper mainstem Eel River.

Additional Needs
- Fund and implement a watershed-based sampling program that is prioritized and focused on specific issues/problems within the watershed.
- Identify existing information and develop a central repository for information including database and possibly GIS capabilities.
- Investigate the feasibility and impacts to beneficial uses if Eel River estuary and lower mainstem are dredged to remove documented sediment clogging in watershed.
- Streamline 401 water quality certification program for small dischargers and encourage better use of existing BMP's for erosion.
- Endorse the concept of establishing a "river corridor". Encourage local and state agencies to evaluate appropriate land uses and industrial activities within a "river corridor". Coordinate with local planning agencies to review existing zoning and reevaluate incompatible land uses along the "river corridor".
- Increase coordination with timber companies to monitor herbicide application and pre- and post application chemical handling and disposal.
- Establish and fund a watershed coordinator position to develop outreach programs that include joint participation among landowner, government agencies and other stakeholders.

GOAL 3: Protect ground water uses (MUN, IND. AGR, REC-1, REC-2)
Activities that occur in the Eel River WMA may result in the contamination and degradation of ground water. Beneficial uses identified for ground water in this watershed include, municipal, industrial, and agricultural water supply, and recreation. These uses may be impaired through discharges to ground water from chemical and biological materials. A few of the many activities which, if conducted improperly, are likely to impair ground water beneficial uses include: illegal disposal sites (including illegal landfills), vehicle and railroad maintenance yard operations, herbicide application, dairy operations, automotive wrecking yards or metal recycling activities, wood treatment facilities, underground tank operations, landfill operations, and other industrial facilities operations, publicly owned treatment works, and private septic systems.

Information needs to be gathered and placed into a database system to assist the following: (1) identify the location of the problem areas of the watershed, (2) identify the location of the sensitive areas of the watershed, and (3) identify restoration areas and activities associated with the watershed.

Point Source Issues
Current Activities
- Continue the point source regulation program.

Nonpoint Source Issues

Current Activities

- Continue on-going activities associated with known ground water contamination.
- Prevent access to waste pits and ponds.
- Continue to coordinate with the County to review septic system situations to avoid ground water contamination. This includes enforcement of the Basin Plan requirement to ensure that the County reports septage disposal.
- Continue active participation in the Vegetation Management Advisory Committee (CalTrans) and increase monitoring of the implementation of best management practices for herbicide applicators.
- Conduct follow-up activities.

Additional Needs

- Pursue additional Regional Water Board funding (PYs) for development of a database system to store, analyze, and assess existing information.
- Outreach and coordination as in other goals above.
- Pursue additional Regional Water Board funding (PYs) for staff and laboratory services to assess and address the illegal disposals and assess ground water quality.
- Prepare, develop, and implement a program to educate the public, local, city, and state agencies, along with private industry, on discharges of toxic chemicals.
- Encourage the agricultural community to advance to Chapter 15 requirements in order to avoid ground water contamination.
- Promote agronomic irrigation and agronomic disposal of wastes.

GOAL 4: Protect warm water fishery resources

The warm water fishery exists only in Lake Pillsbury, in the upper Eel River basin. Lake Pillsbury is a favored recreation area for residents of the North Coast. Contamination of the fisheries from naturally occurring mercury is a concern for sport fishing. Erosion of sediment above the dam exacerbates the level of mercury contaminated sediments entering the lake. Erosion of sediment from the upper portion of the basin may also be filling Lake Pillsbury. Existing information needs to be identified and collected to assess impacts to the lake and address problem areas. A database system is needed to identify the location of the problems areas, sensitive areas, and areas for restoration activities. For the warm water fishery, information gathering and assessment should be confined to Lake Pillsbury. Discharges to the lake are a concern and may contribute to the impacts to the warm water fishery. These include discharges due to boating activities, such as MTBE in gasoline, septic systems, industrial/construction site runoff, etc.

Point Source Issues

There are no specific point source issues in this part of the WMA.

Nonpoint Source Issues

Current Activities

Due to funding constraints, the Regional Water Board has little involvement in issues other than timber harvesting activities and mercury accumulation in fish species.

Additional Needs

- The actions for above goals regarding data gathering and assessment, coordination, and outreach all apply to this issue.

- Coordinate more closely with the local watershed groups, as well as the USFS, County Health and other local agencies.

IMPLEMENTATION STRATEGY

Significant strategy development and implementation for water quality protection and improvement are occurring in the Eel River WMA at the present time by many agencies, interest groups, and individuals. This document and the implementation of actions to address issues and achieve water quality goals are flexible.

See Appendix 2.5-A for a list of agencies and groups with interest or responsibility in the Eel River WMA.

The general emphasis in the WMA is to increase assessment activities (including monitoring coordination) and education/outreach, especially regarding erosion control and sedimentation. While maintaining a watchful eye on traditional point source dischargers, forestry related activities are a high priority.

Assessment and Monitoring

Additional assessment needs have been identified for erosion/sedimentation and ground water issues. Assessment of existing data was a key element in the TMDLs for the South Fork Eel and Van Duzen rivers. There is a need to organize surface and ground water data to more effectively describe conditions in the WMA and direct future monitoring activities. For instance, additional emphasis should be directed to evaluating the connection between surface and ground waters in urbanized/industrialized areas and the potential for cross-contamination. A system to gather and analyze existing information on a spatial perspective has been suggested.

A monitoring workshop has been suggested to improve coordination, standardize protocols, develop an information bank, and foster a volunteer monitoring program. The Regional Water Board will provide some staff assistance and request additional funding to assist the Humboldt RCD in continuing a temperature monitoring and screening program in the watershed. Likewise, the need to monitor both the implementation and effectiveness of watershed enhancement efforts should be addressed, as well as bacterial quality at popular recreation sites in the South Fork Eel and Van Duzen Rivers.

The Surface Water Ambient Monitoring Program (SWAMP) is a regionwide monitoring program that will monitor permanent stations for long-term trends as well as rotate into WMAs on a five-year basis. See http://www.waterboards.ca.gov/northcoast/programs/swamp.html. Up to five stations are scheduled as a permanent stations, sampling began in early 2001: South Fork at the confluence with the mainstem, Bull Creek, near Branscomb, Eel River at Dos Rios, and Middle Fork at Dos Rios. The rotation for intensive monitoring is scheduled for FY 2001-02 along with the Humboldt WMA is complete. In FY 04-05 there will be eight permanent stations and four rotating stations. Monitoring and assessment needs are detailed in Appendix 2.5-B.

Education and Outreach

Pollution prevention activities were highlighted as a high priority activity. Increased education and outreach should be addressed for erosion control, other storm water issues, confined animal facilities, management and disposal of toxins, monitoring and assessment, and the core regulatory program.

Coordination
Tied closely with education and outreach is the need for enhanced coordination. The Regional Water Board participates in activities that are aimed at improving communication and coordination to benefit improved water quality. Improving the interaction with other agencies and the public is a goal that will require additional funding or redirection of resources.

Core Regulatory
The Regional Water Board will maintain the current level of point source regulation (inspection, monitoring, and enforcement) on traditional dischargers, while increasing the level of involvement in storm water and confined animal waste management issues. There is concern about publicly owned treatment works discharging to infiltration ponds in the floodplain and the potential for recreational use impairment. In addition to core regulatory are the underground storage tanks program and toxic site cleanups. Additional emphasis should be directed to evaluating the connection between surface and ground waters in urbanized/industrialized areas and the potential for cross-contamination. Involvement in the gravel mining issues should continue, especially for stream channel geomorphology and potential effects on the anadromous salmonid resources.

Ground water
Ground water issues center on petroleum and metals contamination and the potential for cross contamination between surface and ground water. Groundwater and surface water contamination is suspected at former and existing mill sites that historically used wood treatment chemicals. Discharges of pentachlorophenol, polychlorodibenzodioxins, and polychlorodibenzofurans likely occurred with poor containment typically used in historical wood treatment applications. These discharges persist in the environment and accumulate in surface water sediments and the food chain. Additional investigation, sampling and monitoring, and enforcement actions are warranted, but insufficient resources exist to address this historical toxic chemical problem.

Nonpoint Source
Continued involvement in the forestry issues is necessary to ensure protection of aquatic resources. The recent listing of coho salmon as threatened under the federal Endangered Species Act and the lawsuit against USEPA for TMDL development has put the spotlight on all land use activities that potentially may increase sedimentation or otherwise affect habitat. The Regional Water Board will increase work with local agencies and groups regarding land use effects on water quality, following the State Nonpoint Source Enforcement Policy (see Appendix B) to reduce nonpoint source pollution. An active outreach program will enhance the effectiveness of the program.

Regional Water Board staff is proposing a new Total Maximum Daily Load (TMDL) Implementation Policy for Sediment Impaired Receiving Waters in the North Coast Region, which is applicable to all sediment impaired watersheds in the Region. Also under development is a Regional Sediment Amendment to the Basin Plan with prohibitions and an Action Plan, which will provide more enforcement tools to the TMDL Implementation Policy for controlling sediment. See Section 3, Regional Activities for more information on these efforts.

Response to CWA section 303(d) requirements for waste load reductions included sediment TMDLs for the South Fork Eel River (adopted in December 1998) and Van Duzen River (adopted in December 1999). Additional information is contained in http://www.waterboards/northcoast/programs/tmdl/Status.html. Issues of listing additional streams in the WMA will be addressed through the water quality assessment process. In addition, the Regional Water Board staff will participate on the Regional Committee to develop a Critical Coastal Area Action Plan and implement projects in the Critical Coastal Area of the Eel River.

Timber Harvest

The Regional Water Board has an extensive timber harvest program where staff review and inspect timber harvest plans on private lands for implementation of the Forest Practice Rules and compliance with recently adopted General Waste Discharge Requirements (WDRs) or a Categorical Waiver. Additionally, staff reviews U.S. Forest Service timber sales for implementation of best management practices and compliance with a recently adopted Categorical Waiver to ensure protection of water quality and beneficial uses.

Regional Water Board staff continues to work in concert with the California Department of Forestry and Fire Protection during the review and approval of proposed timber harvesting activities on private lands. The SWRCB and CDF/BOF entered into a Management Agency Agreement, which delegates some water quality protection responsibilities to the CDF/BOF associated with timber harvest regulation. The Regional Water Board has not given up any authority to regulate timber if violations of the Basin Plan occur or threaten to occur. More recently however, the Regional Water Board adopted General WDRs and a Categorical Waiver of WDRs for discharges related to timber harvesting on private timberlands. Regional Water Board staff continues to review timber harvest plans (THPs) and non-industrial timber management plans (NTMPs) and provide recommendations to CDF during the Review Team process. In addition, Regional Water Board staff must review THPs and NTMPs for compliance with the recently adopted General WDRs or waivers of WDRs.

The Regional Water Board currently has resources to oversee timber sale activities associated with USFS lands pursuant to the USFS MAA. Regional Water Board staff continues to review USFS timber harvesting activities for compliance with the recently adopted Categorical Waiver of WDRs and implementation of best management practices. Review of non-timber nonpoint source activities on USFS land is not well funded. Regional Water Board staff is unable to implement this portion of the USFS MAA except for responding to complaint issues on a case-by-case basis. This is a significant issue for future oversight by the Regional Water Board for these activities.

Where cumulative impacts are present or where ground disturbance from a large concentration of timber harvest activity creates the potential for contributing to adverse impacts to the beneficial uses of water, the Regional Water Board can employ all available authorities, including existing regulatory standards and permitting and enforcement tools. Examples of existing permitting and enforcement tools can include, but are not limited to watershed-wide waste discharge requirements, individual or project-specific waste discharge requirements, and enforcement actions, including, but not limited to, cleanup and abatement orders, time schedule orders, cease and desist orders, and administrative civil liabilities, and other regulatory actions as necessary. Recent adoption of Resolution No. R1-2004-0087 by the Regional Water Board directing

staff to address sediment waste discharges at the watershed-specific level, including cumulative impacts, through all available authorities will be an on-going proactive effort by staff to ensure that water quality standards in impaired waterbodies are achieved.

An estimated 25% of the timber harvested in the Region occurs in this WMA. The primary water quality issues are discharges of sediment due to surface erosion and mass wasting (landslides). Stream temperature is of specific concern in this area as are forest herbicide application. Mendocino National Forest is located in this area and is the primary federal timber agency.

Local Contracts/Agreements
The Regional Water Board will continue active involvement in the Clean Water Act section 319(h) grant program, the Water Bond grant programs, as well as promoting other programs like the California Department of Fish and Game restoration programs. Staff is currently managing a 319(h) grant that funds implementation of dairy improvements. Another 319(h) grant with the Humboldt County Resource Conservation District is to implement landowner improvement projects that will improve water quality and salmonid habitat.

Water Quality Planning
The Basin Plan review process feeds into the activities to the extent issues were identified in the Triennial Review and applicable to the Eel River WMA. The top priority issues are:

- Consider revisions to the water quality objectives for dissolved oxygen and temperature, and
- Review the Nonpoint Source Control Measures.

In additional, the water quality attainment strategies for the section 303(d) waterbodies will be incorporated into the Basin Plan.

Evaluation and Feedback
The Regional Water Board plans to evaluate the overall effectiveness of the process on a yearly basis, adjusting the activities as appropriate. Emerging issues of large magnitude or high priority may cause early re-evaluation and shifting priorities. The final evaluation will feed future assessment and problem identification.

BUDGET

The Regional Water Board will attempt to fund the highest priority actions as identified in this WMA to the extent funding constraints allow, and will pursue additional funding for those actions not currently addressed. Monitoring and assessment needs are detailed in Appendix 2.5-B.

Appendix 2.5-A
Stakeholders

Partial listing of agencies and groups in the Eel River WMA with an interest and/or responsibility for water quality:

United States
Environmental Protection Agency

Army Corps of Engineers
Forest Service
Bureau of Land Management
Geological Survey
National Biological Service
Fish and Wildlife Service
National Marine Fisheries Service (NOAA Fisheries)
Natural Resources Conservation Service

Native American
Round Valley Indian Reservation

California State
California Environmental Protection Agency
Resources Agency
Department of Fish and Game
Department of Health Services
Department of Parks and Recreation
Department of Pesticide Regulation
Office of Environmental Health and Hazard Assessment
Department of Toxic Substance Control
Department of Water Resources
California Coastal Conservancy
UC Agricultural Extension
Humboldt State University
College of the Redwoods

Humboldt and Mendocino County
Water Agency
Planning Department
Department of Environmental Health
Agricultural Commissioner's Office

Local Agencies
Resource Conservation Districts
    Mendocino County RCD
    Humboldt County RCD
local water districts - numerous
city planning departments
city public works departments

Public Interest Groups
Farm Bureau
United Dairymen
Cattlemen’s Association
Eel/Russian Commission
Trout Unlimited
Salmon Unlimited
California Forestry Association
Eel River Watershed Improvement Group
Eel River Watershed Protection & Restoration Association

Environmental Protection Information Center
Elk River Watershed Conservancy
Friends of the Eel River
Institute for Sustainable Forestry
Redwood Community Action Agency
Round Valley Resource Center
Willits Watershed Group
Salmon Forever
Humboldt Watershed Council
Pacific Lumber Company
Trees Foundation

Appendix 2.5-B

Monitoring priorities and needs detail for the Eel River Watershed Management Area

Additional assessment by Regional Water Board staff is needed to test hypotheses about support of beneficial uses MUN, REC1, COLD, RARE, or provide assessment information essential for program implementation. They are currently not funded.

The estimates are Regional Water Board needs on a per year basis.

1. Water temperature - $15,000 (0.1 PY + $4,000 supplies)
High water temperatures affect coldwater salmonid species such as the coho and chinook salmon that are listed as threatened under the federal Endangered Species Act). The Humboldt RCD has completed a CWA section 205(j) grant project to provide a broad picture of water temperatures in the basin. Their continuing efforts focus on specific problem areas, but need assistance.

2. Sedimentation - $188,000 (0.8 PY + $100,000)
The entire Eel River watershed is CWA section 303(d) listed for sediment impacts. The USEPA is developing TMDL waste reduction strategies, which will support gathering and assessment of existing information. Additional monitoring for the effectiveness of the actions is needed in the phased TMDL approach. The SWAMP will address this to some degree.

3. Bacterial studies - $32,000 (0.2 PY + $10,000 lab)
Contact recreation may be at risk in the Van Duzen and South Fork Eel. Data on bacterial and parasitic (Cryptosporidium, Giardia) presence is lacking.

4. Basic Assessment - $180,000 (1.0 PY + $70,000 lab)
No specific body of recent water quality data exists for the watershed as a whole. A focus on assessments and monitoring is needed to ensure new problems are not going unnoticed. Likewise, coordination of monitoring and assessment efforts and a compilation of existing data are needed, but will be supported to a degree by TMDL activities. Sampling of POTWs for MtBE, other petroleum products, and metals is needed, both influent and effluent.

5. Groundwater Data Assessment - $33,000 (0.3 PY)
A spatial organization of existing information is needed to first assess the extent of known problems. That will guide future focused monitoring and assessments and overall assessment of groundwater in the watershed.

6. Groundwater/Stormwater Data Collection - $75,000 (0.5 PY + $20,000)
Surface water and groundwater are contiguous in much of the watershed. Stormwater drainages are contributing animal waste products, gasoline, MtBE, metals (mostly Pb, Cr, Ni, Zn, Cu), solvents, and other petroleum products to the surface and ground waters to an unknown extent. There are problems in the Garberville and Fortuna areas, and suspect problems in the Willits, Carlotta, and Hydesville areas.

Surface Water Ambient Monitoring Program

The SWAMP addressed some monitoring issues in the WMA in FY 2000-01, and the issues were investigated more intensively in FY 2001-02. Six long-term stations were for setup in spring of 2001: South Fork at mainstem confluence, Bull Creek, near Branscomb, Eel River at Dos Rios, Middle Fork at Dos Rios; and North Fork at Mina. Other long-term stations in the WMA will be proposed if appropriate. The intensive survey will provide sampling sites in waterbodies in the WMA. Anticipated parameters are general water chemistry, nutrients, metals, organic chemicals, and sediment related parameters. Temperature and bacterial issues in the WMA will be addressed during the intensive survey. For this rotation, stations have been added at Benbow, Elder Creek, Hearst and Alder Point. In FY 04-05 there may be eight permanent stations and four rotating stations in this WMA.

Other Monitoring Programs

As mentioned above, the Humboldt RCD coordinates a temperature monitoring network in the WMA. The Regional Water Board supports and will assist that effort to the extent resources allow.

The mercury bioaccumulation in and below Lake Pillsbury is addressed through the Toxic Substance Monitoring Program and in coordination with the state Office of Health Hazard Assessment. Lake sediment analysis was performed during the spring of 2001 to supply data to Office of Environmental Health and Hazard Assessment. A food consumption advisory was issued in 2000.