

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF SEPTEMBER 15, 2000
Prepared on July 18, 2000

ITEM:

SUBJECT: San Lorenzo River Nitrate Total Maximum Daily Load

SUMMARY:

This staff report discusses the proposed amendment of the *Water Quality Control Plan, Central Coast Basin* (Basin Plan). The purpose of this amendment is to adopt a nitrate Total Maximum Daily Load (TMDL) for the San Lorenzo River watershed.

San Lorenzo River is threatened with nitrate impairment. States are encouraged to list threatened conditions on the Clean Water Act Section 303(d) list. The Regional Water Quality Control Board (Regional Board) has listed the San Lorenzo River nitrate threat since 1994. Clean Water Act Section 303(d) requires the Regional Board to adopt a TMDL for listed waters. Proposed Resolution 00-003, Attachment A, will adopt the TMDL nitrate targets. The TMDL report is available in Attachment B of this document.

DISCUSSION:

This TMDL addresses nitrate threats within the San Lorenzo River watershed. The United States Environmental Protection Agency encourages States to perform TMDLs for waters threatened by pollutants.

The Regional Board listed waters in this watershed on California's Clean Water Act Section 303(d) list. The 303(d) list identifies water quality limited water bodies. A water quality limited segment is any known segment that does not meet applicable water quality standards and/or is not expected to meet applicable water quality standards, even after the application of technology-based effluent limitations or other Regional Board requirements.

The County of Santa Cruz and the Regional Board adopted the *San Lorenzo River Nitrate Management Plan* (Nitrate Management Plan) to address the nitrate threat to water quality (Regional Board Resolution 95-04). The Nitrate Management Plan provides nitrate improvements for all primary sources.

Regional Board Resolution 95-04 partially satisfies TMDL requirements. While Regional Board Resolution 95-04 adopted an implementation plan to correct nitrate impairment, Regional Board action did not fully comply with Clean Water Act Section 303(d). Section 303(d) requires a TMDL incorporating (1) a problem assessment; (2) numeric targets that are consistent with the narrative and numeric water quality objectives and protect beneficial uses; (3) an assessment of nitrate sources impacting the river system; (4) an estimate of the nitrate loading capacity necessary to attain the numeric targets; (5) allocation of load responsibility among different nitrate sources; (6) a margin of safety, consideration of seasonal variations, and critical conditions; and (7) public participation.

The Nitrate Management Plan adopted by the Regional Board identifies the problem, sources, and implementation measures. The Plan contains information regarding nitrate loading capacity and provides the information that supports the load allocation contained in the TMDL report. Extensive public participation contributed to the Nitrate Management Plan. The implementation plan provides the tools to attain the proposed target.

The Regional Board did not adopt a numeric target as part of Resolution 95-04. (The Nitrate Management Plan provides nitrate reduction goals that are not clear specific targets with clear specific time frames.) The numeric target developed in this TMDL finds a measure where implementation of the Nitrate Management Plan reaches objectives contained in the *Water Quality Control Plan, Central Coast Region* (Basin Plan).

This TMDL is largely based upon the Nitrate Management Plan. This Nitrate Management Plan utilizes many historical reports to develop a program to reduce nitrate. The reader should refer to TMDL appendix to review all the reports that went into developing the Nitrate Management Plan. Because the Nitrate Management Plan is a synopsis of several investigations, the Nitrate Management plan is often used as a reverence for this TMDL.

Summary of Regional Board Adopted Nitrate Management Plan (Resolution 95-04)

The Regional Board amended the Basin Plan in 1995 by adding language that removed the on-site system prohibition providing (among other things) the County implements the Nitrate Management Plan. The language below shows a portion of what the Regional Board adopted. (The struck out language shows language deleted and bolded language shows language added.)

~~“Discharges within five communities are prohibited”~~ **shall be allowed, where the affected area (Class I Area) is defined by the Santa Cruz County Assessor’s Parcel Numbers as described in Appendix A-23 providing the County of Santa Cruz, as lead agency, implements the “Wastewater Management Plan for the San Lorenzo River Watershed, County of Santa Cruz, Health Services Agency, Environmental Health Service”, February 1995, and “San Lorenzo Nitrate Management Plan, Phase II Final Report”, February 1995, County of Santa Cruz, Health Services Agency, Environmental Health Service (Wastewater Management Plan) and assures the Regional Board that areas of the San Lorenzo River Watershed are serviced by the Regional Board that areas of the San Lorenzo River Watershed are serviced by wastewater disposal systems to protect and enhance water quality, to protect and restore wastewater disposal systems to protect and enhance water quality, to protect and restore beneficial uses of water, and to abate and prevent nuisance, pollution, and contamination.”**

The main elements of the Nitrate Management Plan implementation plan (which will implement the proposed TMDL) are summarized below.

Wastewater Disposal

1. Maintain the existing requirement of a one acre minimum parcel size for new development served by septic systems in the San Lorenzo Watershed (ongoing).

2. Implement improved wastewater disposal management through the *Wastewater Management Plan for the San Lorenzo Wastewater*, County of Santa Cruz Health Services Agency Environmental Health Service, February 1995 (ongoing).
3. Complete ongoing efforts to improve treatment procedures at Boulder Creek Country Club Treatment Plant to reduce nitrate discharge by using wastewater reclamation on the golf course (implemented in summer of 1995).
4. Maintain the new requirement for shallow leachfields for new and repaired septic systems (less than 4 feet in sandy areas and 4-6.5 feet in other areas) (ongoing).
5. Implement enhanced technology for at least 50% nitrogen removal for septic systems in sandy soils:
 - a. Require septic systems serving new or expanded uses in sandy soils to install enhanced treatment measures which will reduce nitrogen discharge by at least 50% (implemented starting 1995).
 - b. Encourage the use of nitrogen removal methods for any onsite disposal system which will use a nonstandard system (20 upgrades estimated per year).
 - c. Continue to evaluate new onsite wastewater disposal technology for nitrogen reduction to identify more cost-effective measures. Require higher levels of nitrogen removal if measures become available that are more cost-effective than sand filters.
 - d. Apply for State revolving funds and other funds to develop a funding source to assist property owners in repairing their systems to provide enhanced treatment (estimated 40-100 upgrades per year).
 - e. When more cost-effective technology and/or funding assistance becomes available, require all onsite system repairs in sandy areas to utilize enhanced treatment for nitrogen removal (estimated 40 upgrades per year).
6. Require all large onsite disposal systems that serve more than five residential units or dispose more than an average of 2000 gallons per day to utilize enhanced treatment to reduce nitrate discharge by at least 50%. Installation of such measures for existing systems shall be required at the time of system repair or upgrade (estimated 1-2 upgrades involving approximately 5000 gallons per day per year).
7. Require all new or revised waste discharge permits and all new development projects in the San Lorenzo Watershed to include nitrogen control measures consistent with this Nitrate Management Plan.

Livestock Management

8. Continue to work with stable owners to reduce nitrate discharge; cover manure piles; maintain manure piles and paddock areas at least 50-100 ft from streams or drainageways; direct drainage away from paddock areas; and provide other measures as necessary to reduce discharge of nitrate, sediment, and contaminants. If public education is not effective, adopt an ordinance to impose protective measures (ongoing).

Land Use Regulations

9. Maintain current density restrictions requiring 10 acres per parcel for new land divisions and other protective measures for ground water recharge areas.
10. Maintain current regulations on erosion control, land clearing, and riparian corridor protection.
11. Do not approve new land use projects within the San Lorenzo Watershed which will increase the discharge of nitrate to ground water or surface water by more than 10 pounds of nitrogen per acre per year from the project area.

Ongoing Monitoring

12. Monitor the Scotts Valley nitrate plume, and identify potential ongoing sources of nitrate. Work with the City of Scotts Valley and property owners for reduction of nitrate discharge from Scotts Valley, if feasible. (Ongoing monitoring, implementation of potential control measures in 2000, if necessary and feasible).

III. CALIFORNIA WATER CODE REQUIREMENTS FOR ADOPTING BASIN PLAN AMENDMENT

The California Water Code requires the Regional Board to consider various factors when adopting Basin Plan amendments. This section discusses the factors the Regional Board must consider.

A. The Porter-Cologne Water Quality Control Act identifies issues to be considered in establishing water objectives (or numeric targets). These include, but are not necessarily limited to the following:

- Past, present, and probable future beneficial uses of water,
- Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto,
- Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area,
- Economic considerations,
- The need for developing housing within the region, and
- The need to develop and use recycled water.

1. Past, Present, and Probable Future Beneficial Uses of Water

The recommended action is expected to improve water quality and increase protection of beneficial water uses in the San Lorenzo Watershed. The Staff Report discussed all beneficial uses that may be impacted by nitrate and discusses why the proposed target protects all beneficial uses within the TMDL.

2. Environmental Characteristics of the Hydrographic Unit

The TMDL was determined based upon San Lorenzo watershed monitoring and watershed reconnaissance. The County of Santa Cruz performs an extensive monitoring program (as discussed in the proposed TMDL within the “Monitoring Program” section. In addition to environmental

characteristics described within this report, more environmental characteristics are contained within the “References Used” and the “References Considered.”

3. Economic Considerations

There are no costs associated with this amendment because the Santa Cruz County Board of Supervisors and the Regional Water Quality Control Board, Central Coast Region previously adopted implementation measures to attain the TMDL (Regional Board Resolution 95-04). (This TMDL was developed to provide the maximum water quality improvement at a reasonable cost.)

4. Need for Developing Housing Within the Region

The need for developing housing within the region should not be adversely affected by the proposed water quality objective. This proposal does not influence the rate at which housing is developed.

5. Need to Develop and Use Recycled Water

This water quality attainment strategy includes treatment of wastewater within the watershed thereby making the water available for recycling.

B. The California Porter-Cologne Water Quality Control Act specifies an implementation plan to achieve water quality objectives should include the following components (at a minimum):

1. A description of the nature of actions that are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public, or private;
2. A time schedule for actions to be taken; and
3. A surveillance program description to determine compliance with objectives:

A description of the nature of necessary actions, time schedule to implement necessary actions, and surveillance program to assure implementation of the Management Plan are discussed below.

1. Description of the nature of Actions

To meet the proposed target, the County of Santa Cruz shall manage nitrate disposal in all areas of the watershed using the guidelines and standards contained in the Nitrate Management Plan as described above. The Regional Board already adopted the Nitrate Management Plan in 1995.

2. Time Schedule

The proposed TMDL establishes a target attainment schedule. The target for the San Lorenzo River watershed is 1.5 mg nitrate/l, as nitrate. This level would reduce the nitrate threat and represent a 30 percent reduction in total nitrate loading by the year 2020. A Total Maximum Daily loading schedule requires a 15% reduction by 2005, a 20% reduction by 2010, and 30% reduction by 2020 at three stations.

3. Surveillance Program

The Regional Board will audit the Nitrate Plan implementation twice a year using site visits and database evaluations.

In years 2005, 2010, and 2020, the County will submit a Report on Nitrate Management Plan

Implementation. The report will include nitrate loading at target stations for the months of July, August, and September. The reports shall be due December 31 beginning year 2000. The Regional Board will compare actual loading to target loading and evaluate compliance with this TMDL. In the event the County does not meet the nitrate loads, the County will perform a nitrate budget within six months. Major nitrate sources will be expressed in terms of loading. The Regional Board will determine additional monitoring, implementation, or enforcement measures necessary upon receiving the County's loading evaluation report. Furthermore, the County will submit a Program Status Report every three years. The report will provide County actions and progress toward implementing the Nitrate Management Plan. (For more information, see the Monitoring Section of the TMDL report.)

IV. ANTI-DEGRADATION POLICY COMPLIANCE

This action will improve water quality and approach the high nitrate water quality that existed during the early 1970s.

ENVIRONMENTAL SUMMARY:

An environmental assessment package has been prepared and is contained in Attachment C of this report. The basin planning process has been determined to be functionally equivalent to the California Environmental Quality Act process in accordance with Section 21000 et seq. of the Public Resources Code. Appropriate notices and waiting periods have been provided. This process will satisfy environmental documentation requirements of both the California Environmental Quality Act, under Public Resources Code Section 21080.5 (Functional Equivalent), and the Federal Clean Water Act of 1977 (PL 92-500 and PL 95-217).

COMMENTS:

1. California Department of Fish and Game, March 13, 2000

The Department supports the proposed Basin Plan amendment and finds that Plan implementation should not adversely affect listed species pursuant to the California Endangered Species Act.

2. County of Santa Cruz Health Services Agency, Environmental Health Service, March 26, 2000

- a. The County supports staff recommendations.
- b. In addition to the concern over taste and odor, a concern that increased nitrate and resulting biological activity could result in an increase in dissolved organic compounds and dangerous levels of disinfection byproducts in treated water is also an impetus to reduce nitrate levels.
- c. The County suggested several minor changes.

Staff Response:

- a. No comment.
- b. It is possible that increased nitrate can increase Total Organic Carbon (TOC) concentrations. The increase in TOC can lead to increased disinfection by-products. One possibility is increased trihalomethanes.

The City of Santa Cruz is currently meeting trihalomethane requirements. (The current standard is 80 ug/l.) Because trihalomethanes are not a problem at this time, the TMDL does not discuss this issue.

Staff agrees this may be a potential issue in the future and that this is an impetus to reduce nitrate levels. The trihalomethane standard is expected to become more stringent at a future date. (The new standard is expected to be 40 ug/l.) (Reference: Richard Lee, City of Santa Cruz.)

If Trihalomethane violations (or other violations) become a future problem and a linkage is made to nitrate concentrations, the TMDL can be revised at a future date, if necessary.

- c. Staff changed the TMDL report to address the County's suggestions.
3. City of Santa Cruz, Water Quality Laboratory, March 30, 2000
 - a. The Plan should specify that in the event the proposed target is met, further reductions will be required if they are determined feasible.
 - b. The Plan should clarify whether nitrate is expressed as concentration or load.
 - c. The Plan should include a more thorough discussion of the relationship between nutrient loading and the creation of disinfection by products due to chlorination of raw water during treatment.
 - d. The City believes the role of nitrate vegetative uptake during summer months is not as large as 90% nitrate removal.
 - e. The proposed amendment should include requirements for increased accountability when dealing with the County's Riparian Corridor Protection Ordinance.
 - f. Illegal discharges of septic pump trucks are known to occur occasionally. However, there is no mechanism in place that could document that wastes collected is the same quantity discharged at the wastewater treatment plant. Are there any means by which the proposed amendment could control illegal dumping by septic tanker trucks?

Staff Response:

- a. Staff agrees. This recommendation was made in the implementation plan section.
- b. Staff agrees. The report was modified to make this clearer.
- c. It is possible that nitrate can create disinfection by products such as Trihalomethanes. However, nitrate is not currently contributing toward creation of disinfection by products. If Trihalomethane violations (or other violations) become a future problem and nitrate is the cause, the TMDL can be revised at a future date if necessary.
- d. The impact of vegetative uptake was included in a previous TMDL draft in the Margin of Safety section. However, the current TMDL provides a Margin of Safety that does not rely on vegetative uptake.
- e. Staff agrees. Language was added to the Implementation Plan section of the TMDL to recommend the County review its policy of granting Riparian Exceptions and determine if such

exceptions are reasonable. The County should make every reasonable effort to protect riparian corridors.

- f. Septic pump trucks are required to submit records to the wastewater treatment plant indicating collection quantities equal to discharge quantities. However, the City's suggestion to require keyed meters on trucks that are reset by wastewater treatment plant operators may be a good idea. Staff will amend the implementation plan to suggest the County make this a requirement.

Staff also understands the County District Attorney is anxious to be alerted of any illegal septic pump truck discharges. The District Attorney will prosecute such discharges.

4. United States Department of Commerce, Monterey Bay National Marine Sanctuary, March 31, 2000
 - a. The proposed TMDL relies entirely on preexisting data and plans for both assessment and implementation phases. It does not thoroughly assess the potential impacts from nitrates.
 - b. In revising the target, the TMDL should rely on scientifically rigorous investigation rather than the "absence of public complaints." Research conducted by Oregon State University has indicated that amphibians may develop deformities at nitrate levels that are well below the levels that cause concern for drinking water. Impacts to fish and wildlife should be conducted.
 - c. The Sanctuary is concerned about an increasing frequency of harmful algal blooms in the Central Coast Region. Nitrate and urea may, when combined with the right oceanographic conditions, temperatures, and seed organisms, be a contributing factor to harmful algal blooms. Direct evaluation of these and other potential biological impacts in the river and bay is necessary before setting the nitrate target level.
 - d. The Regional Board should evaluate progress made by the County in implementing the Nitrate Management Plan to determine if the target goals can be met or if additional implementation measures are necessary.
 - e. A 45 year timeline for full implementation of the TMDL is extraordinarily long. No justification for this lengthy timeline is given in the report.

Staff Response:

- a. This amendment clarifies the Nitrate Management Plan, adopted by the Regional Board in 1995, complies with Federal TMDL regulations. The main reason action is proposed is to clarify the nitrate target. The target compliance date is not clear.

The June 29, 2000 draft was improved to discuss potential nitrate impacts.

- b. The June 29, 2000 draft was improved to discuss potential impacts.

The Journal of Environmental Toxicology and Chemistry also published an Oregon State University report titled *Sensitivity of Nitrate and Nitrite in Pond –Breeding Amphibians from the Pacific Northwest, USA*. This report indicates that nitrite showed a high mortality for

warm water fishes at 5 mg N/l (or 16.5 mg NO₂/l) and a significant larval mortality at nitrite concentrations at 1 mg N/l (or 3.3 mg nitrate/l, as NO₃). Nitrate concentrations at 90 mg N/l (or 396 mg nitrate/l, as NO₃) are highly toxic to *Rano pretiosa* and *Ambystoma gracile*. Nitrate at the drinking water standard 10 mg N/L (or 45 mg nitrate/l, as NO₃) is moderately toxic for *R. pretiosa*. The nitrate concentrations in the San Lorenzo River watershed are well below these toxic concentrations. (The average nitrate at Felton from 1997-98 is approximately 1.6 mg nitrate/l, as NO₃, and 1.8 mg nitrate/l, as NO₃, at the river mouth.)

Staff also reviewed nitrite data for the San Lorenzo River watershed. Santa Cruz County has been monitoring nitrite since the mid-1970s. There are approximately 70 nitrite samples and no nitrite values that exceed 1 mg N/l. (Santa Cruz County nitrite data may be viewed at the Regional Board web page, <http://www.swrcb.ca.gov/~rwqcb3/>. Click on “Central Coast Ambient Monitoring Program (CCAMP).” Click on “Support Data for Basin Plan Amendments.”)

A regionwide monitoring program will consider biological monitoring. Biological impacts can be evaluated as a result of on-going regionwide (and watershed) monitoring. In the event future monitoring indicates the current target will not protect biological species, the TMDL can be revised to address this issue.

- c. The County performed numerous studies (see references) dealing with nitrogen impacts to algal species within the San Lorenzo River watershed. The recommended target is a result of all these past investigations.

With regard to Monterey Bay, staff believes a Bay study is appropriate to assess the algal bloom problem and determine causes. If Monterey Bay is impacted by point and/or nonpoint pollution, a TMDL may be necessary to protect Monterey Bay. If a Monterey Bay TMDL determines additional protective measures are necessary to the San Lorenzo River, the San Lorenzo River TMDL can be revised.

- d. The “Monitoring Program” section was revised to clarify Regional Board oversight in assuring TMDL compliance.
 - e. Staff agrees a 45-year timeline is too long. Staff is revising the TMDL to require compliance within the next 20 years. The target compliance date is based on the timing expected to replace septic systems as they fail. More efficient systems are required to replace failed systems.
5. Center for Marine Conservation, April 13, 2000
 - a. Damages to nitrate pollution can be significant. The proposed TMDL ignores these impacts in attempt to complete the TMDL within a set deadline. While it is important for the State to make rapid progress in completing and implementing TMDLs, this should not be done at the expense of developing and implementing a sound plan to restore degraded waters.
 - b. The Staff Report relies entirely on year-old, pre-existing data. No new monitoring was reported to have been conducted to assist in the development of the TMDL, either with respect to chemical or biological parameters or impacts. This fails to meet Porter-Cologne’s requirement for an assessment of the environmental characteristics of the water body being addressed.

Staff Response:

- a. The June 29, 2000 TMDL discusses nitrate impacts to beneficial uses.
- b. Staff agrees the TMDL is based largely on the Nitrate Management Plan. The Regional Board removed an on-site system moratorium in 1995 based on the County implementing Nitrate Management Plan (as one condition). This action clarifies the 1995 action to clarify the target and clarify the target compliance date.

The County has an extensive monitoring program for the San Lorenzo River watershed. (In fact, it is one the most extensively sampled watersheds in the Central Coast Region. For nitrate alone, there are over 6,000 sampling results.) Staff relies on this sampling to verify compliance with the Board's requirement to implement the Nitrate Management Plan.

7. San Lorenzo Valley Water District, March 20, 2000
 - a. The District generally supports the proposed TMDL as a reasonable and technically achievable standard.
 - b. The "Margin of Safety" section of the TMDL indicates that Santa Cruz County requires land clearing activities to maintain a riparian corridor of at least 50 feet. The County Planning Department may be having difficulty enforcing this ordinance due to understaffing. Regional Board staff should talk to the County about existing problems of enforcement and backlogs of complaints.
 - c. The District supports active oversight of implementation and periodic reviews of the TMDL objective. The District urges the Regional Board to consider adaptive management should technological advances make reduces nitrate standards feasible in the future.

Staff Response:

- a. No comment.
- b. The June 29, 2000 TMDL does not utilize the County's Riparian Corridor Policy within the TMDL Margin of Safety section (as an earlier draft did). However, staff did discuss this matter with County staff. The County should make every reasonable effort to protect riparian corridors. The Regional Board will monitor implementation of the Riparian Corridor Policy when reviewing County Nitrate Management Plan implementation progress reports.
- c. Staff agrees. Regional Board oversight and periodic review information is described within the "Monitoring Program" section of the TMDL. Furthermore, the TMDL encourages increased reductions better than 30 percent should reduction measures become cost effective.

ATTACHMENTS:

- A. Resolution No. 00-001
- B. San Lorenzo Watershed Total Maximum Daily Load Report

- C. California Environmental Quality Act “Functional Equivalent” Report for Basin Plan Amendment (Resolution No. 00-003)
- D. Public Notice
- E. Summary of Necessity for Regulatory Provisions
- F. Economic and Fiscal Analysis for San Lorenzo River Nitrate Total Maximum Daily Load

RECOMMENDATION:

Adopt Resolution No. 00-003 contained in Attachment A.

ATTACHMENT A

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 00-003

ADOPTING AMENDMENTS TO THE WATER QUALITY CONTROL PLAN AND
REQUESTING APPROVAL FROM THE STATE WATER RESOURCES CONTROL BOARD
TO:

ADOPT A TOTAL MAXIMUM LOAD FOR NITRATE IN THE SAN LORENZO RIVER
WATERSHED

WHEREAS:

1. The California Regional Water Quality Control Board, Central Coast Region (Regional Board), adopted the *Water Quality Control Plan, Central Coastal Basin* (Basin Plan), on March 14, 1975.
2. The Regional Board periodically revises and amends the Basin Plan.
3. In response to extreme environmental conditions found in the San Lorenzo River Watershed, the excessive number of failing septic systems, and water quality degradation, the Regional Board adopted Resolution 95-04 to implement a program to improve water quality.
4. Regional Board Resolution 95-04 partially satisfies Federal Clean Water Act Total Maximum Daily Load requirements.
5. A Total Maximum Daily Load is necessary to identify an appropriate target to protect water quality.
6. Staff prepared a study titled *San Lorenzo River Watershed Total Maximum Daily Load Model for Nitrate, Santa Cruz, California* dated June 29, 2000 to satisfy clean Water Act Requirements.
7. The aforesaid study identifies the nitrate problem, develops an appropriate nitrate target, determines nitrate sources, allocates loads to the nitrate sources, discusses the implementation plan adopted by the Regional Board with Resolution 95-04, and discusses the monitoring program/public participation activities.
8. The County of Santa Cruz is required to report upon Resolution 95-04 implementation to the Regional Board by annual reports. Resolution 95-04 annual reporting is a cumbersome frequency.
9. The Regional Board has determined the Basin Plan requires further revision and amendment.
10. Drafts of the proposed amendment have been prepared and distributed to interested persons and agencies for review and comment.

11. Regional Board staff followed appropriate procedures to satisfy the environmental documentation requirement of both the California Environmental Quality Act (PL 92-500 and PL 95-217). The Regional Board finds adoption of these amendments will not have a significant adverse effect on the environment.
12. Notice of public hearing was given by advertising in newspapers of general circulation within the Region.
13. On September 15, 2000, in Seaside, California, the Regional Board held a public hearing and heard and considered all public testimony.

THEREFORE BE IT RESOLVED:

1. Based on the draft Basin Plan amendment, the environmental checklist, accompanying written documentation, and public comments received, the Regional Board finds that there is no substantial evidence in the record that adoption of the proposed Basin Plan amendment will have a significant adverse effect on the environment.
2. The environmental document prepared by Regional Board staff pursuant to Public Resource Code Section 21080.5 is hereby certified. Following approval of the revised Basin Plan by the State Board, the State Board shall file a Notice of Decision with the State Clearinghouse.
3. County reporting of Resolution 95-04 shall occur triennially.
4. The Basin Plan amendment shown on “Attachment –Proposed Basin Plan Amendments” is approved. The amendment will not take effect until approved by the State Board, the Office of Administrative Law, and the United States Environmental Protection Agency.
5. Upon approval, the State Board is requested to transmit the amendment to the California Office of Administrative Law and the U.S. Environmental Protection Agency for approval.

I, ROGER W. BRIGGS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of the resolution adopted by the California Regional Water Quality Control Board, Central Coastal Region, on September 15, 2000.

Executive Officer

RESOLUTION NO. 00-003
 ATTACHMENT --PROPOSED BASIN PLAN AMENDMENTS

The following Basin Plan amendment is proposed. New language is shown in **bold** and deleted language is ~~struck out~~.

1. Revise the September 8, 1994 Basin Plan, Chapter Four, as follows:

Add the following to the end of Chapter Four.

III. TOTAL MAXIMUM DAILY LOADS

The goal of a Total Maximum Daily Load (TMDL) is to attain state water quality standards. A TMDL is a quantitative assessment of water quality problems and contributing pollutant sources. It specifies the maximum amount of pollutant that can be discharged (or the amount of a pollutant that needs to be reduced) to meet water quality standards). The TMDL allocates pollutant loads among sources in the watershed and provides an implementation plan needed to protect or restore water quality.

This section identifies TMDLs completed to date and identifies the maximum pollutant contributions allowed to attain water quality standards.

<u>Target Attainment Stations</u>	<u>Nitrate Target</u>	<u>Targets</u>	<u>Percent Reduction</u>	<u>Target Attainment Year</u>
San Lorenzo River at Felton,		4233 pounds nitrate/month	15 %	2005
		4076 pounds nitrate/month	20%	2010
	1.5 mg/l nitrate, as nitrate	3728 pounds nitrate/month	30%	2020
Carbonera Creek at the confluence of Branciforte Creek		339 pounds nitrate/month	15%	2005
		326 pounds nitrate/month	20%	2010
	1.5 mg/l nitrate, as nitrate	299 pounds nitrate/month	30%	2020
Shingle Mill Creek at the confluence of the San Lorenzo River		77 pounds nitrate/month	15%	2005
		74 pounds nitrate/month	20%	2010
	1.5 mg/l nitrate, as nitrate	68 pounds nitrate/month	30%	2020

3. Revise Regional Board Resolution 95-04 (adopted on April 14, 1995) as follows:

“In fulfilling the responsibilities identified above, the County of Santa Cruz shall submit ~~annual~~ **triennial** reports beginning on January 15, ~~1996-2003~~. The report shall state the status and progress of the Wastewater Management Plan within the San Lorenzo River Watershed. The County of Santa Cruz ~~annual~~ **triennial** report shall document the results of:

- a. Existing disposal system performance evaluations,
- b. Disposal system improvements,
- c. Inspection and maintenance of on-site systems,

- d. Community disposal system improvements,
- e. New development and expansion of exiting systems protocol and standards,
- f. Water quality monitoring and evaluation,
- g. Program administration management, and
- h. Program information management.

The report shall also document progress on each element of the Nitrate Management Plan, Including,

- a. Parcel size limit,
- b. Wastewater Management Plan Implementation,
- c. Boulder Creek Country Club Wastewater Treatment Plant Upgrade,
- d. Shallow leachfield installation,
- e. Enhanced wastewater treatment for sandy soils,
- f. Enhanced wastewater treatment for large on-site disposal systems,
- g. Inclusion of nitrogen reduction in Waste Discharge Permits,
- h. Livestock and stable management,
- i. Protection of ground water recharge areas,
- j. Protection of riparian corridors and erosion control,
- k. Nitrate control for new uses,
- l. Scotts Valley nitrate discharge reduction, and
- m. Monitoring for nitrate in surface and ground water.

Every five years, the County will submit a Report on Nitrate Management Plan Implementation. The report will include loading rates for the previous five years. The reports shall be due December 31 beginning year 2000. The Regional Board will compare actual loading to target loading and evaluate compliance with this TMDL. In the event the County does not meet the target nitrate loads specified by the interim and final targets (for years 2005, 2020, and 2045), the County will perform a nitrate budget within six months. Major nitrate sources will be expressed in terms of loading. The Regional Board will determine additional monitoring, implementation, or enforcement measures are necessary upon receiving the County's loading evaluation report

3. Revise the September 8, 1998 Basin Plan, Chapter Three, page III-14 as follows:

~~A specific monthly mean objective for Nitrate (as NO_3^-) of 0.25 mg/l shall apply to both the upper and lower San Lorenzo River to protect beneficial uses from adverse biostimulatory effects. Specific biostimulant objectives for other surface waters will be added to this section in tabular form once they are determined from further studies.~~

ATTACHMENT B

SEE DOCUMENT TITLED

“SAN LORENZO RIVER WATERSHED
TOTAL MAXIMUM DAILY LOAD
FOR NITRATE
SANTA CRUZ, CALIFORNIA”

ATTACHMENT C

CALIFORNIA ENVIRONMENTAL QUALITY ACT
“FUNCTIONAL EQUIVALENT” REPORT FOR BASIN PLAN AMENDMENT
(RESOLUTION NO. 00-001)

The California Regional Water Quality Control Board, Central Coast Region intends to update the Water Quality Control Plan (Basin Plan), Central Coast Region. The purpose of this amendment is to incorporate a nitrate Total Maximum Daily Load (TMDL) for San Lorenzo River watershed.

The Basin Planning process has been certified as “functionally equivalent” to the preparation of the Environmental Impact report (EIR) for the purposes of complying with the California Environmental Quality Act (CEQA) (Section 15251, Title 4, California Code of Regulation ((CCR)). Based on the certification, this Basin Plan Amendment Report is used in lieu of an EIR or a Negative Declaration.

Any Regional Board regulatory program certified as functionally equivalent, however, must satisfy the documentation requirements of Section 377 (a), Title 23, CCR. This report satisfies part (a) of that section. It contains the following :

1. A Description of Proposed Activity and Proposed Alternatives,
2. An Environmental Checklist and a Description of the Proposed Activity,
3. An Environmental Evaluation, and
4. A determination with respect to significant Environmental Impacts.

I. DESCRIPTION OF PROPOSED ACTIVITY

This section describes the changes proposed and alternatives to this proposal. The purpose of this amendment is to incorporate a nitrate Total Maximum Daily Load (TMDL) for San Lorenzo River watershed.

Alternatives to this proposal include:

1. Require a higher level of nitrate reduction than identified in the TMDL

Existing technology providing better treatment than recommended is relatively costly and performance is inconsistent.

However, if nitrate reduction measures become cost-effective, the County is encouraged to provide additional nitrate reduction beyond Basin Plan requirements.

2. Require lesser nitrate target than identified in the TMDL

This alternative is not recommended because it does not protect water quality.

3. Partial adoption of the proposed amendment

This alternative is not recommended because Federal Clean Water Act requirements will not be fulfilled.

4. Modify amendment

This alternative is recommended if it does not modify the current Basin Plan, *Santa Cruz Wastewater Management Plan for the San Lorenzo River Watershed*, and/or the *San Lorenzo Nitrate Management Plan, Phase II Final Report*. Santa Cruz County and the Regional Board have adopted these reports in Resolution 95-04. In addition, this alternative is recommended only if it results in compliance with Federal TMDL requirements and the commitment completion date. Furthermore, this alternative is recommended only if beneficial uses are protected and water quality objectives are attained.

5. Additional amendments

The Regional Board may consider additional alternatives, but will limit its action to a logical outgrowth of the proposed action plan. Other alternatives will be subject to public notice and comment at the time those changes are proposed.

CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENTS

II. EVALUATION OF ENVIRONMENTAL IMPACTS: Potentially Significant Impact/Less than Significant with Mitigation Incorporation/Less than Significant Impact/No Impact

1. AESTHETICS -- Would the project:

- a) Have a substantial adverse effect on a scenic vista? No impact
- b) Substantially damage scenic resources, including, But not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? No impact
- c) Substantially degrade the existing visual character or quality of the site and its surroundings? No impact
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? No impact

2. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? No impact
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? No impact
- c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? No impact

5. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- a) Conflict with or obstruct implementation of the applicable air quality plan? No impact
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? No impact
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is not attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? No impact
- d) Expose sensitive receptors to substantial pollutant concentrations? No impact
- e) Create objectionable odors affecting a substantial number of people? No impact

6. **BIOLOGICAL RESOURCES -- Would the project:**

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? No impact
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? No impact
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? No impact
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? No impact
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? No impact
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation

Plan, or other approved local, regional, or state habitat conservation plan? No impact

5. CULTURAL RESOURCES -- Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? No impact

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? No impact

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? No impact

d) Disturb any human remains, including those interred outside of formal cemeteries? No impact

6. GEOLOGY AND SOILS -- Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: No impact

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. No impact

ii) Strong seismic ground shaking? No impact

iii) Seismic-related ground failure, including liquefaction? No impact

iv) Landslides? No impact

b) Result in substantial soil erosion or the loss of topsoil? No impact

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? No impact

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? No impact

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems

where sewers are not available for the disposal of waste water?

No impact

7. HAZARDS AND HAZARDOUS MATERIALS –

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No impact

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No impact

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No impact

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No impact

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No impact

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No impact

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No impact

h) Expose people or structures to a significant risk of loss injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No impact

8. HYDROLOGY AND WATER QUALITY -- Would the project:

a) Violate any water quality standards or waste discharge requirements?

No impact

- b) Substantially deplete ground water supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? No impact

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? No impact

- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? No impact

- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? No impact

- f) Otherwise substantially degrade water quality? No impact

- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? No impact

- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? No impact

- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? No impact

- j) Inundation by seiche, tsunamis, or mudflow? No impact

- 9. LAND USE AND PLANNING - Would the project:

- a) Physically divide an established community? No impact

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? No impact

c) Conflict with any applicable habitat conservation plan or natural community conservation plan? No impact

10. MINERAL RESOURCES -- Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? No impact

b) Result in the loss of availability of a locally -important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? No impact

11. NOISE --

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? No impact

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? No impact

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? No impact

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? No impact

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? No impact

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? No impact

12. POPULATION AND HOUSING -- Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? No impact

b) Displace substantial numbers of existing housing,

necessitating the construction of replacement housing elsewhere? No impact

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? No impact

13. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection? No impact

Police protection? No impact

Schools? No impact

Parks? No impact

Other public facilities? No impact

14. RECREATION –

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? No impact

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? No impact

15. TRANSPORTATION/TRAFFIC -- Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? No impact

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? No impact

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? No impact
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? No impact
- e) Result in inadequate emergency access? No impact
- f) Result in inadequate parking capacity? No impact
- g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? No impact

16. UTILITIES AND SERVICE SYSTEMS --

Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? No impact
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? No impact
- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? No impact
- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? No impact
- e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? No impact
- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? No impact
- g) Comply with federal, state, and local statutes and regulations related to solid waste? No impact

17. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? No impact

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? No impact

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? No impact

III. ENVIRONMENTAL EVALUATION (of checklist questions answered Potentially Significant Impact, Less than Significant with Mitigation Incorporation, or Less than Significant Impact)

There are no impacts associated with this amendment because the Regional Board (Resolution 95-04) has previously adopted implementation activities.

IV. DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find the proposed project COULD NOT have a significant effect on the environment.

I find that the proposed project may have a significant adverse impact on the environment. However, there are feasible alternatives and/or feasible mitigation measures available which would substantially lessen any significant adverse impact. These alternatives and mitigation measures are discussed in the attached written report.

I find that the proposed project MAY have a significant effect on the environment. There are no feasible alternatives and/or feasible mitigation measures available which would substantially lessen any significant adverse impacts. See the attached written report for a discussion of this determination.

Signature

Date

Printed name

For

ATTACHMENT D

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401-5427

NOTICE OF PUBLIC HEARING

TO CONSIDER FUTURE REVISIONS
AND AMENDMENT OF
THE WATER QUALITY CONTROL PLAN
FOR THE CENTRAL COAST BASIN

The California Regional Water Quality Control Board, Central Coast Region, will hold a public hearing to solicit advice regarding possible water quality issues that should be considered in the review and revision of the Water Quality Control Plan (Basin Plan). The Basin Plan establishes measures to protect beneficial uses of water and achieve water quality objectives.

The Regional Board is proposing to adopt a nitrate Total Maximum Daily Load (TMDL) for the San Lorenzo River watershed. The purpose of the TMDL is to protect nitrate water quality for the San Lorenzo River watershed. Copies of the proposed amendment to the Basin Plan (in the form of a staff report with technical and legal documents attached) are available on the Internet at www.swrcb.ca.gov/~rwqcb3/. At the website, choose "downloads" and you will see "Staff Report for San Lorenzo River Nitrate Total Maximum Daily Load" and "San Lorenzo River Watershed Total Maximum Daily Load for Nitrate, Santa Cruz, California." The proposed amendments to the Basin Plan are also available at the office of the Regional Board.

The public hearing is scheduled as follows:

Date: September 15, 2000
Time: 8:30 am
Place: Seaside City Council Chambers
440 Harcourt Avenue
Seaside, CA 93955

We appreciate any comments you have, preferably in writing, by August 25, 2000. **Your timely submittal will allow staff to analyze your comments and the Regional Board to consider your comments before taking final action at the meeting to be held on September 15, 2000.**

Copies of the existing Basin Plan are located at libraries in major cities throughout the region, at the office of the Regional Board, and on the Internet at www.swrcb.ca.gov/~rwqcb3/.

For additional information on this Basin Plan review, please call Angela Carpenter at (805) 542-4624.

July 18, 2000
Date

ATTACHMENT E

SUMMARY OF THE NECESSITY FOR THE REGULATORY PROVISIONS

REGIONAL WATER QUALITY CONTROL BOARD
RESOLUTION 00-001

ADOPTING AMENDMENTS TO THE WATER QUALITY CONTROL PLAN
AND REQUESTING APPROVAL FROM
THE STATE WATER RESOURCES CONTROL BOARD

AUTHORITY AND REFERENCE

Water Code Section 1300 declares that activities and factors that may (emphasis added) affect the quality of the waters of the state shall be regulated to attain the highest water quality reasonable.

Water Code Section 13240 mandates each Regional Water Quality Control Board (Regional Board) to formulate water quality control plans for all areas within the region and to review the plans periodically. Section 13240 also authorizes Regional Water Boards to revise the plans. A water quality control plan or a revision of a plan becomes effective upon approval by the State Water Resources Control Board (State Board) (Water Code Section 13245).

Water Code Section 13050(j) provides that a water quality control plan consists of a designation or establishment for the waters within a specifies area of all of the following:

- (1) Beneficial uses to be protected.
- (2) Water quality objectives.
- (3) A program of implementation needed for achieving water quality objectives.

Each Regional Board must establish water quality objectives in each water quality control plan which will ensure the reasonable protection of beneficial uses and the prevention of nuisance (Water Code Section 13241). Additionally, the Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste will be prohibited (Water Code Section 13243).

NECESSITY FOR REGULATORY PROVISIONS

Resolution No. 00-003 supplements past regulatory actions. The following describes the reasons that these supplements are necessary.

Introduction

The Federal Clean Water Act Section 303(d) requires all States to adopt Total Maximum Daily Loads (TMDLs). TMDLs are required for waters not attaining (or not expected to attain) water quality standards after the application of Regional Board effluent limitations or other Regional Board requirements (40 C.F.R. Section 130.7). The U.S. Environmental Protection encourages States to adopt TMDLs for waters threatened by pollutants. TMDLs establish a level necessary to implement the applicable water quality standards. Seasonal variations and a margin of safety

takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality (Clean Water Act Section 303 (d)).

The County of Santa Cruz and the Regional Board adopted the *San Lorenzo River Nitrate Management Plan* (Nitrate Management Plan) to address the nitrate threat to water quality (Regional Board Resolution 95-04). The Nitrate Management Plan provides nitrate improvements for all primary sources.

Regional Board Resolution 95-04 partially satisfies TMDL requirements. While Regional Board Resolution 95-04 adopted an implementation plan to correct nitrate impairment, Regional Board action did not fully comply with Clean Water Act Section 303(d). Section 303(d) requires a TMDL incorporating (1) a problem assessment; (2) numeric targets that are consistent with the narrative and numeric water quality objectives and protect beneficial uses; (3) an assessment of nitrate sources impacting the river system; (4) an estimate of the nitrate loading capacity necessary to attain the numeric targets; (5) allocation of load responsibility among different nitrate sources; (6) a margin of safety, consideration of seasonal variations, and critical conditions; and (7) public participation.

The Nitrate Management Plan adopted by the Regional Board identifies the problem, sources, and implementation measures. The Plan contains information regarding nitrate loading capacity and provides the information that supports the load allocation contained in the TMDL report. Extensive public participation contributed to the Nitrate Management Plan. The implementation plan provides the tools to attain the proposed target.

However, the Nitrate Management Plan provides nitrate reduction goals that are not clear specific targets with clear specific time frames. This action clarifies the target. The numeric target will replace the existing nitrate objective.

Discussion

The regulation is necessary to clarify nitrate targets and nitrate compliance dates. While the Regional Board adopted the Nitrate Management Plan when it adopted Resolution 95-04, the Nitrate Management Plan does not fully comply with Federal Total Maximum Daily Load (TMDL) requirements. A TMDL is necessary to clarify the appropriate target and the target compliance date. A nitrate target is necessary to protect beneficial uses. The municipal water supply beneficial uses are threatened by nitrate. Nitrate must be reduced to concentrations that existed prior to the occurrence of odor problems in the San Lorenzo River.

The proposed target is reasonable, protects beneficial uses, attains water quality standards, and complies with Water Code Section 13241.

The staff report and TMDL for this item discusses these matters in greater detail.

APPENDIX F

ECONOMIC AND FISCAL ANALYSIS FOR SAN LORENZO RIVER NITRATE TOTAL
MAXIMUM DAILY LOAD

There are no costs associated with this amendment. The Santa Cruz County Board of Supervisors and the Regional Water Quality Control Board, Central Coast Region has previously adopted the measures implemented to attain the total maximum daily load (Regional Board Resolution 95-04). This amendment clarifies action already taken by the Regional Board Resolution 95-04. The Regional Board is not adopting new regulations.