

**ATTACHMENT A
TO RESOLUTION NO. R9-2002-0108
DRAFT BASIN PLAN AMENDMENT**

This Basin Plan amendment amends the implementation chapter of the Basin Plan (Chapter 4) to establish TMDLs for nutrients in the Rainbow Creek Watershed and includes a program to implement the TMDLs.

Total Maximum Daily Loads (TMDLs) For Nutrients In The Rainbow Creek Watershed

On May 9, 2002 the Regional Board adopted Resolution No. R9-2002-008, Amendment To The Water Quality Control Plan For The San Diego Region (9) To Incorporate Total Maximum Daily Loads (TMDLs) For Nutrients In The Rainbow Creek Watershed, San Diego County. The terms and conditions of Resolution R9-2002-008 are incorporated into the Basin Plan. This amendment establishes the total maximum daily load (TMDL) of nutrients which Rainbow Creek can receive and still meet water quality objectives. This TMDL is allocated to all contributing sources of nutrients in the watershed by establishing wasteload allocations for all point sources and load allocations for all non point sources and background sources of nutrients in the watershed. Finally a portion of the TMDL is also set aside as a margin of safety. The TMDL implementation plan and monitoring strategy are presented below.

Nutrients in Rainbow Creek Watershed

The establishment and implementation of, total maximum daily loads (TMDLs) for Rainbow Creek is necessary because water quality in Rainbow Creek cannot satisfy applicable water quality objectives for nutrients, even with implementation of waste discharge requirements containing technology based effluent limits or water quality based effluent limits for discharges of pollutants to Rainbow Creek and its tributaries. These TMDLs for nutrients are necessary to ensure attainment of applicable water quality objectives and restoration of beneficial uses designated for Rainbow Creek.

Rainbow Creek is currently identified on the Clean Water Act Section 303(d) list of impaired waters due to excessive nutrient concentrations. Section 303(d) requires the Regional Board to develop and implement TMDLs under the conditions that exist in Rainbow Creek.

Nitrate, total nitrogen, and total phosphorus concentrations in Rainbow Creek exceed water quality objectives for municipal water supply (MUN) and threaten to unreasonably impair the water quality necessary for WARM, COLD and WILD beneficial uses of Rainbow Creek. Excessive nutrient levels in Rainbow Creek promote the growth of algae in localized areas, creating a nuisance condition, that unreasonably interferes with aesthetics and recreation (REC1, REC2) and threatens to impair WARM, COLD and WILD beneficial uses. Runoff from agriculture, nursery and residential land uses contribute to increased pollutant nutrients in Rainbow Creek as a result of storm water runoff, irrigation return flows and groundwater contributions to the creek.

These total maximum daily loads (TMDLs) establish Rainbow Creek's assimilative capacity and allocate portions of the assimilative capacity to various nutrient sources so that water quality objectives for nitrogen and phosphorus can be met. The predominant sources of nutrients in Rainbow Creek include surface runoff from various land uses and surfacing groundwater. Additional information gathered during groundwater and septic tank disposal system investigations, as well as future monitoring data collected in Rainbow Creek, will be used in the future to further refine the load allocations. These refinements will be considered in future reviews and revisions of the nutrient TMDL.

Total Maximum Daily Loads for Rainbow Creek

The TMDLs for biostimulatory nutrients in Rainbow Creek are 1,507 kg/yr¹ for total nitrogen and 190 kg/yr for total phosphorus in order to prevent biostimulatory nutrients from exceeding applicable water quality objectives for the designated use of Rainbow Creek.

The initial annual loading of total nitrogen and phosphorus to Rainbow Creek shall be reduced 28% from current loads² within 4 years, no later than [the end of 4th year after USEPA approval] and by 10% every 4 years thereafter until the level of biostimulatory nutrients has been reduced below applicable water quality objectives: 1 mg/L for total nitrogen and 0.1 mg/L for total phosphorus.

The initial load reduction of 28% of nitrogen and phosphorus loading is required to meet the objective for drinking water of 10 mg/L of nitrate (as N), and to reduce the biostimulatory effects of excessive nitrates and phosphorus in Rainbow Creek. The annual nutrient loading limits to be attained by [the end of 4th year after USEPA approval] are listed in Table 4-X.

Table 4 - X. Annual Nutrient Loading Limits and Compliance Date

TMDL	[end of 4th year after USEPA approval¹]
Total Nitrogen – Annual Load	4,130 kg/yr
Total Phosphorus – Annual Load	415 kg/yr

¹ Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is reasonable and feasible.

Load Allocations By Source

The load allocations for the initial annual loading are provided in Table 4-Y, below. A margin of safety (MOS) of 10% is subtracted from this nutrient TMDL to account for unknowns, errors in assumptions, and potential future development in the watershed. This 10% is reserved for unknowns and is not allocated to any source. Allocations (other than for undeveloped land and

¹ The calculated annual load to achieve the biostimulatory objective of 1 mg/L is 402 kg/yr, which is less than the load contributed from undeveloped land of 1,507 kg/yr. Therefore, the TMDL for total nitrogen is set at annual load for undeveloped land.

² Current annual nutrient loads on May 8, 2002 are defined as 5,740 kg/yr total nitrogen, and 576 kg/yr total phosphorus.

margin of safety) will be further reduced by 10% every 4 years until the biostimulatory targets for nitrogen and phosphorus are met.

Table 4 - Y. Initial Annual Total Nitrogen and Total Phosphorus Load Allocations for Rainbow Creek

Source	Annual Total Nitrogen Load Allocations (kg/yr)	Annual Total Phosphorus Load Allocations (kg/yr)
Commercial nurseries	300	75
Agricultural fields	370	22
Orchards	402	36
Park	7	0.2
Preserve	191	6
Residential areas	310	56
Urban areas	40	8
Septic tank disposal systems	550	0
Air deposition	40	3
Background ¹	1507	167
MOS (not allocated)	413	42
Total	4,130	415

¹ Background is calculated based on the undeveloped land area.

TMDL Implementation Plan -- Phase 1 Measures

1. **IMPLEMENTATION MEASURES BY COUNTY OF SAN DIEGO:** The nutrient load reductions in Table 4-Y will be implemented pursuant to Water Code Section 13225 as follows:
 - A. **INVESTIGATIONS:** The Regional Board will direct the County of San Diego to undertake an investigation to assess nutrient loading to Rainbow Creek from groundwater and septic tank systems. The County of San Diego has indicated a willingness to undertake this investigation. The investigation should address data gaps identified in the Implementation Plan and Monitoring Strategy described in the *Staff Report for Nutrient TMDLs for Rainbow Creek*, dated March 22, 2002, and any additional data gaps identified during the development of the work plan. The Regional Board will direct the County of San Diego to submit an interim report on the status of the investigations by [end of 2nd year after USEPA approval]. Additionally, the County of San Diego will be directed to submit a report of the findings from the investigation and an evaluation of the status of the watershed no later than [end of the 4th year after USEPA approval].
 - B. **ORDINANCES:** The Regional Board will request the County of San Diego to enforce any existing water quality control ordinances and adopt new ordinances as necessary to attain the nutrient load reductions in Table 4-Y above. The Regional Board will direct

the County of San Diego to submit a report on actions it has taken to enforce existing ordinances and adopt new ordinances by [end of 2nd year after USEPA approval] and every four years thereafter.

- C. **LAND USE PLANNING:** Pursuant to the County of San Diego's local planning and land use authority, the Regional Board will request the County to review and revise its land use policies, decision making practices and project approval processes to ensure that new development in the Rainbow Creek watershed does not contribute to exceedances of the nutrient load reductions described in Table 4-Y above. The Regional Board will direct the County of San Diego to submit a report on the changes it has implemented in its land use policies and decision making practices and project approval processes by [end of 2nd year after USEPA approval] and every four years thereafter.
- D. **CEQA RESPONSIBILITIES:** The Regional Board will request the County of San Diego to review and revise its environmental review process pursuant to CEQA to ensure that new development in the Rainbow Creek watershed does not contribute to exceedances of the nutrient load reductions described in Table 4- Y above. For example, diligent performance of environmental review under CEQA and requirements for mitigation of the adverse environmental consequences to water quality of new development and detrimental agricultural practices can significantly reduce nutrient loading to Rainbow Creek. The County should aggressively review proposed projects that have the potential to contribute nitrogen and phosphorus to the Rainbow Creek watershed and take appropriate actions. The CEQA process should be used to ensure compliance with the TMDL and force project proponents to mitigate for nutrient impacts. The Regional Board will direct the County of San Diego to submit a report on the changes it has implemented in its environmental review processes by [end of 2nd year after USEPA approval] and every four years thereafter.
- E. **NUTRIENT REDUCTION MANAGEMENT PLAN:** The Regional Board will request the County of San Diego to develop and implement a watershed wide Nutrient Reduction and Management Plan (NRMP) for new and existing land use activities in the watershed. This NRMP will function as the principal planning and guidance document for the watershed, and should address all management measures, community outreach efforts, and monitoring requirements outlined in the Implementation Plan and Monitoring Strategy described in the *Staff Report for Nutrient TMDLs for Rainbow Creek*, dated March 22, 2002. The proposed NRMP shall be submitted to the Regional Board within 1 year after USEPA approval of the TMDL and shall be reviewed and revised annually. Revisions to the NRMP shall be submitted to the Regional Board.
- F. **MONITORING STRATEGY:** The Regional Board will direct the County of San Diego to develop and implement a monitoring and reporting program to evaluate 1) ambient water quality in Rainbow Creek, 2) the effectiveness of the NRMP and 3) the effectiveness of the nutrient load reductions described in Table 4- Y above. The monitoring strategy shall contain the information described in the *Staff Report for Nutrient TMDLs for Rainbow Creek*, dated March 22, 2002. The County may include additional monitoring of parameters, frequency, and/or sampling locations than what is outlined under the Monitoring Strategy. The County may select alternative or additional

monitoring points if it is deemed useful and provide rationale. A certified laboratory should be used with an approved QA/QC plan for field monitoring. The County should include a monitoring component that will monitor the flow and nutrient concentrations in the creek to both meet nutrient targets and demonstrate that load reductions are being met. Sampling for the drinking water objective will be conducted year round, while objectives for biostimulatory substances only need to be collected during the critical period of February through September of each year. The Regional Board will require the County to submit an annual monitoring report each year thereafter in accordance with the schedule in Table 4-Z.

2. **MS4 PERMIT:** The Waste Discharge Requirements for discharges of urban runoff associated with Municipal Separate Storm Sewer Systems (MS4) in the County of San Diego contained in Order No. 2001-01, NPDES No. CAS0108758, require the County to reduce sources of pollutants, including nutrients, associated with urban development. These requirements are applicable to any areas in the Rainbow Creek watershed where the County operates and maintains an MS4. To the extent the MS4 permit applies in the Rainbow Creek Watershed, the County shall implement the requirements of Order No. 2001-01.
3. **EXISTING WASTE DISCHARGE REQUIREMENTS:** The Regional Board will review and, if necessary, revise waste discharge requirements for existing dischargers in the Rainbow Creek watershed to incorporate effluent limitations in conformance with the nutrient load reductions in Table 4- Y above. This review will be done in accordance with the Regional Board review and update schedule for waste discharge requirements. There are four existing regulated dischargers in the Rainbow Creek watershed: Oak Crest Mobile Estates, Rainbow Conservation Camp, Temecula Truck Inspection Facility, and Rainbow Truck Weigh and Inspection Facility. The Rainbow Truck Weigh and Inspection Facility, discharges under the terms of a waiver of waste discharge requirements (Order No. 2000-235 on November 8, 2000).
4. **EXISTING WASTE DISCHARGE PROHIBITIONS:** Prohibitions against discharges of waste that cause pollution or nuisance, described in the Basin Plan, including discharges of nutrients that would cause or contribute to violation of water quality objectives are applicable to landowners in the Rainbow Creek watershed. Dischargers of nutrients in the Rainbow Creek watershed shall also comply with all other applicable waste discharge prohibitions contained in this Basin Plan.
5. **NEW WASTE DISCHARGE REQUIREMENTS AND PROHIBITIONS:** To the extent that voluntary actions by landowners within the watershed fail to attain conformance with nutrient load reductions, described in Table 4-Y above, the Regional Board may consider adoption of new waste discharge requirements for landowners and new Basin Plan waste discharge prohibitions applicable to nutrient discharges in the Rainbow Creek watershed.
6. **ENFORCEMENT AUTHORITY OF REGIONAL BOARD:** The Regional Board will use its enforcement authority as necessary to ensure compliance with waste discharge requirements and Basin Plan waste discharge prohibitions.
7. **CEQA DOCUMENT REVIEW BY REGIONAL BOARD:** The Regional Board should review and comment on environmental documents (e.g., notice of preparations, negative

declarations, and environmental impact reports) for new development projects in the Rainbow Creek watershed. Review of these documents will help assure that nutrient issues are addressed and mitigated, if necessary, in accordance with the TMDLs.

TMDL Implementation Plan -- Phase II Measures

Following the implementation of the initial reductions during the first 4 years after approval of the TMDLs for Rainbow Creek, Phase II activities will continue to reduce nutrient loading in incremental steps (10% every 4 years) with the ultimate goal of achieving implementation of the water quality objectives for biostimulatory substances. To do this, continuation of the implementation measures described in Phase I is necessary. Additionally, programs developed, as part of the NRMP should be continued. NRMP programs should be assessed annually and their effectiveness evaluated to assure flexibility in the program and allow for improvements to the program as new information becomes available through monitoring or other means.

TMDL Review By Regional Board

The basis for the TMDLs and phased implementation schedule will be re-evaluated every 5 years to determine the need for modifying the source analysis, load allocations, and potentially the numeric targets for biostimulatory substances. Revisions to the source analysis and load allocations will largely be based on findings from the investigations of groundwater and septic tank disposal systems, and empirical data collected from Rainbow Creek under the Monitoring Strategy. Numeric objectives also may be revised if appropriate based on the surveillance and monitoring data obtained from status and annual reports. The first re-evaluation will begin in the 5th year following approval by US EPA.

Table 4 - Z. Schedule of Implementation

Action	Description	Responsible Party	Completion Date
Phase I Measures			
1. Implementation measures by County of San Diego			
A. Investigations	1. Submit interim report to Regional Board 2. Submit report of findings to Regional Board	County of San Diego	1. End of 2 nd year after USEPA approval 2. End of 4 th year after USEPA approval
B. Ordinances	1. Submit Status Reports to Regional Board 2. Submit Annual Reports to Regional Board	County of San Diego	1. End of 2 nd year after USEPA approval 2. Every 4 year after USEPA approval
C. Land Use Planning	Review and revise land use policies, decision making practices and project approval processes.	County of San Diego	1. End of 2 nd year after USEPA approval 2. Every 4 years after USEPA approval
D. CEQA Responsibilities	Review and revise environmental review process for new development.	Regional Board	1. End of 2 nd year after USEPA approval 2. Every 4 years after USEPA approval
E. Nitrate Reduction and Management Plan	Land-owners/land users comply with existing prohibitions. Regional Board apply regulatory authority as needed	Landowners and Regional Board	Submit within 1 year after USEPA approval of the TMDL.
Monitoring Strategy	Develop and implement a monitoring and reporting program	County of San Diego	Every year after USEPA approval.
2. MS4 Permit	To the extent the MS4 permit applies in the Rainbow Creek Watershed, the County shall implement the requirements of Order No. 2001-01.	County of San Diego	On-going
3. Existing Waste Discharge Requirements	Review and revise waster discharge requirements	Regional Board	In accord with Regional Board review and update schedule.
4. Existing Waste Discharge Prohibitions	Comply with Basin Plan discharge prohibitions.	Landowners	On-going
5. New Waste Discharge Requirements and Prohibitions	If landowners within the watershed fail to attain conformance with nutrient load reductions	Regional Board	On-going
6. Enforcement Authority of Regional Board	Regional Board will use its enforcement authority as necessary.	Regional Board	On-going
F. CEQA Document Review by Regional Board	Review environmental documents of projects in the watershed for compliance with the TMDLs	Regional Board	On-going

Action	Description	Responsible Party	Completion Date
Phase II Measures			
G. Continue NRMP	Continue the implementation of NRMP programs	County of San Diego	On-going
H. Re-evaluate NRMP	Evaluate NRMP program effectiveness and submit summary/proposals of changes made to program if needed	County of San Diego	End of 4 th year after USEPA approval and biannually thereafter
TMDL Review by Regional Board			Begin Date
I. TMDL Review by Regional Board	Evaluate effectiveness of all TMDLs and revise TMDLs if needed	Regional Board	5 th year after USEPA approval and every five years thereafter