9.0 Implementation Action Plan

This Chapter describes the actions necessary to implement the TMDL to attain and maintain nutrient water quality objectives[1] in Rainbow Creek. The plan describes implementation responsibilities assigned to cooperating agencies and dischargers and describes the schedule and key milestones for the actions to be taken. A monitoring strategy to assess the success of this implementation action plan is presented in Section 10 Implementation Monitoring Plan.

9.1 Regulatory Authority

Basin Plans must have a program of implementation to achieve water quality objectives[2]. The implementation program must include a description of actions that are necessary to achieve the objectives, a time schedule for these actions, and a description of surveillance to determine compliance with the water quality objectives[3]. State law requires that a TMDL include an implementation action plan because the TMDL normally is, in essence, an interpretation or refinement of an existing water quality objective. The TMDL must be incorporated into the Basin Plan[4], and, because the TMDL supplements, interprets, or refines an existing water quality objective, state law requires a program of implementation.

9.2 Implementation Action Plan Objectives

The specific objectives of this Implementation Action Plan are as follows:

1. Mandate nutrient wasteload reductions in NPDES permits in the Rainbow Creek watershed for the point source component of this TMDL;

2. Mandate nutrient load reductions for seven critical Rainbow Creek watershed land use areas[5] for the non point source component of this TMDL;

3. Promote establishment of a Management Agency Agreement (MAA) between the Regional Board and the County of San Diego setting forth each party's commitment to undertake various implementation oversight responsibilities for the nonpoint source component of this TMDL;

[1] The term nutrient water quality objectives as used in this document refers to both the inorganic nitrate and biostimulatory nutrient water quality objectives described in Chapter 3 of the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) dated September 8, 1994.

[2] See CWC § 13050(j). A "Water quality control plan" or "Basin Plan" consists of a designation or establishment for the waters within a specified area of all of the following: (1) Beneficial uses to be protected, (2) Water quality objectives and (3) A program of implementation needed for achieving water quality objectives.

[3] See CWC § 13242

[4] See Clean Water Act § 303(e).

[5] These land use activities are commercial nurseries; agricultural fields; orchards; parks; residential areas; urban areas, and septic tank disposal systems.

4. Promote establishment of a Memorandum of Understanding (MOU) to document cooperative agreements between the Regional Board and other agencies or organizations (e.g. Natural Resources Conservation Service, Mission Resource Conservation District [MCRD], and the University of California Cooperative Extension) that are able to provide technical or financial assistance to dischargers in the Rainbow Creek watershed; and

5. Establish mechanisms to track management measures (MMs), and management practices (MPs) / best management practices (BMPs) implementation, monitor MM/MP/BMP effectiveness in controlling nutrient pollution, assess success in achieving TMDL objectives and milestones, and report on TMDL program effectiveness in attaining the nitrate and nutrient water quality objectives.

9.3 Phased Nutrient Load Reduction Approach

The nutrient TMDLs shall be implemented in a phased approach with a monitoring component to determine the effectiveness of each phase and guide the selection of MPs / BMPs. Load allocations shall be reduced by approximately 20% every four years until the TMDLs have been achieved. Table 9-1 provides the schedule for total nitrogen and total phosphorus reductions. The initial reductions will achieve the nitrate target of 10 mg NO_3-N/L and begin the first phase of reductions for the total phosphorus target. The subsequent phases target loading reductions in incremental steps towards the ultimate goal of attaining and maintaining compliance with nutrient water quality objectives.

Table 9-1. Total Nitrogen and Total Phosphorus Phased Load Reduction Schedule

Compliance Date	Total Nitrogen		Total Phosphorus	
	Target Annual Loads (LA + WLA) kg N/yr	Cumulative % Reduction	Target Annual Loads (LA + WLA) kg P/yr	Cumulative % Reduction
2005[1]	3,089[2]		276[2]	
2009	2,471	20	222	20
2013	1,853	40	166	40
2017	1,236	60	111	60
2021	796	74	41	85

[1] Estimated effective date begins upon approval by USEPA. Compliance dates follow every fourth year until TMDL is achieved.

[2] Current annual nutrient load from identified point and nonpoint sources (See Tables 4-2 and 4-4). This value does not include the contribution for background.

The target load and wasteload allocations for total nitrogen and total phosphorus are presented in Table 9-2 and 9-3.

Table 9-2. Total Nitrogen Wasteload and Load Allocations

Source	Total Nitrogen Allocations			
	2009 kg N/yr[1]	**2013 kg N/yr[1]**	**2017 kg N/yr[1]**	**2021 kg N/yr[1]**
Caltrans highway runoff	122	49	49	49
Unidentified and future point source discharge	33	33	33	33
Point Source (WLA) Subtotal	**155**	**82**	**82**	**82**
Commercial nurseries	396	315	202	116
Agricultural fields	511	405	261	151
Orchards	617	480	315	182
Park	5	3	3	3
Residential areas	507	401	260	149
Urban areas	40	27	27	27
Septic tank disposal systems	200	100	46	46
Air deposition	40	40	40	40
Non-Point Source (LA) Subtotal	**2,316**	**1,771**	**1,154**	**714**
Total WLA & LA[2]	**2,471**	**1,853**	**1,236**	**796**
Background	**779**	**779**	**779**	**779**
Margin of Safety	**83**	**83**	**83**	**83**
Total Allocations for Total Nitrogen TMDL	**3,333**	**2,715**	**2,098**	**1,658**

[1] To calculate pounds per year, multiply by 2.2.

[2] From Table 9-1

Table 9-3. Total Phosphorus Wasteload and Load Allocations

Source	Total Phosphorus Allocations			
	2009 kg P/yr[1]	**2013 kg P/yr[1]**	**2017 kg P/yr[1]**	**2021 kg P/yr[1]**
Caltrans highway runoff	8	5	5	5
Unidentified and future point source discharge	3	3	3	3
Point Source (WLA) Subtotal	**11**	**8**	**8**	**8**
Commercial nurseries	20	15	10	3
Agricultural fields	30	20	15	4
Orchards	50	40	25	6
Park	0.15	0.10	0.10	0.10
Residential areas	100	75	45	12
Urban areas	9	6	6	6
Air deposition	2	2	2	2
Non-Point Source (LA) Subtotal	**211**	**158**	**103**	**33**
Total WLA & LA[2]	**222**	**166**	**111**	**41**
Background	**116**	**116**	**116**	**116**
Margin of Safety	**8**	**8**	**8**	**8**
Total Allocations for Total Phosphorus TMDL	**346**	**290**	**235**	**165**

[1] To calculate pounds per year, multiply by 2.2

[2] From Table 11-1

9.4 Milestone Dates For Attainment Of Nutrient Water Quality Objective

Tables 9-1, 9-2, and 9-3 describe the general time schedule for nutrient sources to achieve compliance with wasteload and load reductions and allocations. Point source discharges in the Rainbow Creek watershed are projected to achieve compliance with wasteload reductions by the December 31, 2013. Nonpoint sources are projected to implement nutrient reduction strategies by the December 31, 2009 with all resultant nutrient load reductions being achieved by December 31, 2021. Regardless of what actions are taken to achieve load and wasteload reductions, there may not be an immediate response in the water quality or biological condition of Rainbow Creek. For example, there may be significant time lags between when actions are taken to reduce nutrient loads and resulting changes in nutrient concentrations in Rainbow Creek. This is especially likely if nutrients from past activities are tightly bound to sediments or if nutrient-contaminated groundwater has a long residence time before its release to Rainbow Creek waters. A three-year response time is projected for Rainbow Creek to attain compliance with nutrient water quality objectives after reaching the desired nutrient wasteload and load reductions in 2021. Accordingly the projected date when Rainbow Creek will attain and maintain compliance with nutrient water quality objectives is December 31, 2024.

9.5 Regional Board Actions

This section describes the actions the Regional Board shall take to mandate compliance with the nutrient wasteload and load reductions specified in this TMDL.

1. **Caltrans – Incorporate Wasteload Allocations in NPDES Storm Water Permit**
   The Regional Board shall, within 90 days of USEPA approval of the Basin Plan Amendment request that the State Water Resources Control Board to amend Caltrans statewide NPDES storm water permit[6] to include the following requirements:

   a. MS4 discharges to Rainbow Creek shall not exceed the following wasteloads for nitrogen and phosphorus:

Nitrogen Wasteload	Phosphorus Wasteload	Compliance Due Date
122 kg N/yr[1]	8 kg P/yr[1]	December 31, 2009
49 kg N/yr[1]	5 kg P/yr[1]	December 31, 20013

[1] To calculate pounds per year, multiply by 2.2

   b. A directive to submit annual progress reports to the Regional Board on the progress on attaining the nutrient wasteload reductions in Rainbow Creek. The report shall be due on April1 of each year shall be incorporated within Section 2, Program Management of Caltrans MS4 Order No. 99-06-DWQ, NPDES No. CAS000003. Reporting shall continue on an annual basis until the nutrient water quality objective is attained in Rainbow Creek.

2. **County of San Diego –Request for Nutrient Reduction and Management Plan**
   The Regional Board shall, within 90 days of USEPA approval of the Basin Plan Amendment, request the County of San Diego to prepare and submit a Nutrient Reduction and Management Plan (NRMP) for the Rainbow Creek watershed addressing the elements described below in Section 9.7 Nutrient Reduction Management Plan Elements. The County may submit alternative or additional elements that are proposed to prevent or reduce nutrient discharges to Rainbow Creek in accordance with the objectives of this TMDL.

3.

4. **County of San Diego – Establish Management Agency Agreement (MAA)**
   The Regional Board shall consider entering into a Management Agency Agreement (MAA) with the County of San Diego. The MAA shall set forth the commitment of both parties to undertake various oversight responsibilities for the nonpoint source nutrient load reduction component of this TMDL, and the County's commitments to oversee and participate in the implementation of the NRMP.

[6] The term "statewide NPDES storm water permit "refers to Order No. 99-06-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System Permit, Statewide Storm Water Permit, and Waste Discharge Requirements for the State of California, Department of Transportation (Caltrans).

4. **County of San Diego – Issue Water Code Section 13225 Order for Monitoring to Assess Compliance With Nutrient Load Reductions**
The Regional Board shall within 90 days of USEPA approval of the Basin Plan Amendment, issue a CWC §13225 Order directing the County of San Diego to prepare and submit a workplan addressing the elements described below in Section 9.6, County of San Diego Actions, Item 9.6.5, Conduct Monitoring to Assess Compliance With Nutrient Load Reductions.

5. **County of San Diego – Issue Water Code Section 13225 Order for Groundwater Investigation and Characterization Report**
The Regional Board shall, if determined necessary, issue a CWC §13225 Order directing the County of San Diego to prepare and submit a workplan addressing the elements described below in Section 9.6 County of San Diego Actions. In doing so, the RWQCB must meet its CWC §13225(c) obligation to conduct an evidence-supported cost-benefit analysis that demonstrates the need for this monitoring.

6. **CA Dept. of Forestry and Fire Protection – Issue Water Code Section 13267 Order**
The Regional Board shall, within 90 days of USEPA approval of the Basin Plan Amendment, issue a CWC §13267[7] order directing the California Department of Forestry and Fire Protection, Rainbow Conservation Camp (CDFFP) to submit any additional technical information needed to 1) evaluate whether CDFFP's discharge is surfacing and/or contributing to the impairment of Rainbow Creek; and 2) estimate the actual nutrient load originating from the septic tank and percolation ponds to Rainbow Creek via groundwater flow. Based on the review of this information the Regional Board may further direct the CDFFP to implement an alternate means of wastewater disposal or additional treatment necessary to attain and maintain nutrient water quality objectives in Rainbow Creek.

7. **Establish Memorandum of Understanding (MOU) with Agencies or Organizations**
The Regional Board shall consider entering into a memorandum of understanding (MOU) to document cooperative agreements with other agencies or organizations that are able to provide information, technical assistance, or financial assistance to dischargers to support the Regional Board's goals of attaining the nutrient load reductions required under this TMDL and compliance with the nutrient water quality objective. These agencies and organizations include, but are not limited to, the United States Department of Agriculture, Natural Resources Conservation Service (NRCD), Mission Resource Conservation District (MRCD), and the University Of California Cooperative Extension (UCCE).

8. **Adopt Waste Discharge Requirements (WDRs), Waivers, and Discharge Prohibitions**
In conjunction with an MAA or MOU with another third-party representative, organization, or government agency describing an adequate NPS pollution control implementation program, the Regional Board shall adopt individual or general waivers or waste discharge requirements (WDRs) for NPS discharges in the Rainbow Creek watershed. The waivers or

[7] CWC §13267 provides that the Regional Board can require any person who has discharged, discharges, proposes to discharge or is suspected of discharging waste to investigate, monitor, and report information. The only restriction is that the burden of preparing the reports bear a reasonable relationship to the need for and the benefits to be obtained from the reports.

WDRs shall require NPS dischargers to either participate in the third party NPS program or, alternatively, submit individual pollution prevention plans that detail how they will comply with the waivers and WDRs. Alternatively, the Regional Board may adopt a discharge prohibition, which includes exceptions for those discharges that are adequately addressed in an acceptable third-party MAA or MOU NPS pollution control implementation program.

9. **Take Enforcement Actions**

The Regional Board shall consider enforcement action[8], as necessary, against any discharger failing to comply with applicable waiver conditions, waste discharge requirements (WDRs), discharge prohibitions, or take enforcement action, as necessary, to control the discharge of nutrients to Rainbow Creek, attain compliance with the nutrient wasteload and load reductions specified in this TMDL, or attain compliance with the nutrient water quality objectives. The Regional Board may also terminate the applicability of waivers and issue waste discharge requirements or take other appropriate action against any discharger(s) failing to comply with the waiver conditions.

10. **Review and Revise Existing Waste Discharge Requirements**

The Regional Board shall, within two years of USEPA approval of the Basin Plan Amendment, review and, if necessary, update existing waste discharge requirements for discharges to land as well as groundwater in the Rainbow Creek watershed to incorporate effluent limitations for nutrients consistent with applicable nutrient groundwater quality objectives and surface water quality objectives[9].

11. **Recommend High Priority for Grant Funds**

The Regional Board shall recommend that the State Board assign a high priority to awarding grant funding[10] for projects to implement the Rainbow Creek nutrient TMDLs. Special emphasis will be given to projects that can achieve quantifiable nutrient load reductions

[8] An enforcement action is any formal or informal action taken to address an incidence of actual or threatened noncompliance with existing regulations or provisions designed to protect water quality. Potential enforcement actions include a notice of violation (NOV), notices to comply (NTC), imposition of time schedules (TSO), issuance of cease and desist orders (CDOs) and cleanup and abatement orders (CAOs), administrative civil liability (ACL), and referral to the attorney general (AG) or district attorney (DA). The Regional Board generally implements enforcement through an escalating series of actions to: (1) assist cooperative dischargers in achieving compliance; (2) compel compliance for repeat violations and recalcitrant violators; and (3) provide a disincentive for noncompliance.

[9] There are currently three dischargers in the Rainbow Creek watershed currently regulated under waste discharge requirements for the discharge of waste to land or groundwaters: Oak Crest Mobile Estates (Order No. 1993-69), Rainbow Conservation Camp (Order No. 1995-20), and Temecula Truck Inspection Facility (Order No. 1992-56). The Rainbow Truck Weigh and Inspection Facility, discharges under the terms of a waiver of waste discharge requirements (Order No. 2000-235)

[10] The State Water Resources Control Board administers the awarding of grants funded from Proposition 13, Proposition 50, Clean Water Act 319(h) and other federal appropriations to projects that can result in measurable improvements in water quality, watershed condition, and/or capacity for effective watershed management. Many of these grant fund programs have specific set-asides for expenditures in the areas of watershed management and TMDL implementation for NPS pollution.

consistent with the specific nutrient TMDL load allocations.

12. **Incorporate Water Code Section 13291 Regulations in Basin Plan**
The Regional Board shall incorporate regulations currently under development by the State Water Resources Control Board pertaining to onsite wastewater treatment systems[11] into the Water Quality Control Plan for the San Diego Basin (Basin Plan) as soon as practicable upon their adoption by the State Board.[12]

9.6 County Of San Diego Actions

1. **Control MS4 Discharges to Rainbow Creek**
For nutrient discharges in the Rainbow Creek watershed subject to the County of San Diego's MS4 NPDES Storm Water Permit[13], the County shall require increasingly stringent best management practices, pursuant to the iterative process described in Receiving Water Limitation C.2.a.[14] of the permit, to reduce nutrients discharges in the Rainbow Creek watershed to the maximum extent practicable and restore compliance with the nutrient water quality objective. In doing so, the County shall consider, and utilize as appropriate, the following types of program elements and activities:

    a. Modifications to legal authority
    b. Modifications to General Plan
    c. Modification of development project approval process
    d. Modification of CEQA review process
    e. Development of source inventories
    f. Management Practice (MP) requirement and implementation
    g. Inspection of high priority sources
    h. Enforcement of required load reductions
    i. Reporting of non-compliant sites
    j. Community education and outreach
    k. Pursuit of financial assistance
    l. Monitoring
    m. Effectiveness assessment

[11] "Onsite wastewater treatment system(s)" (OWTS) is any individual or community onsite wastewater treatment, pretreatment and dispersal system including, but not limited to, a conventional, alternative, or experimental sewage dispersal system such a septic tanks having a subsurface discharge.

[12] CWC §13291 directs the Regional Board to incorporate the regulations in the Basin Plan upon their adoption by the State Water Resources Control Board.

[13] The term "MS4 NPDES Storm Water Permit" refers to Order No.2001-001, NPDES No. CAS0108758, *Waste Discharge Requirements For Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities Of San Diego County, and the San Diego Unified Port District.*

[14] Receiving Water Limitation C.2.a provides that... "Upon a determination by either the Copermittee or the SDRWQCB that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the SDRWQCB that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards…"

2. **Submit and Implement Nutrient Reduction and Management Plan (NRMP)**
The County of San Diego will be requested by the Regional Board to prepare and submit a NRMP for the Rainbow Creek watershed, consistent with the SWRCB NPS Implementation and Enforcement Policy and containing the elements described in Section 9.7, Nutrient Reduction and Management Plan.

3. **Submit and Implement Groundwater Investigation and Characterization Workplan**
The County of San Diego shall, upon direction by the Regional Board pursuant to a CWC §13225 Order, prepare and submit a workplan designed to guide the collection of information to produce the technical report described in Item 4, Groundwater Investigation and Characterization report below.

   a. The workplan shall include a schedule for completion of planned activities and submission of a final Groundwater Investigation and Characterization Report.
   b. The workplan shall include a description of proposed actions including field methodologies, chemical analyses methods, sampling locations, and proposed monitoring well installations.
   c. The County of San Diego shall consider modifications to the workplan as requested by the Regional Board, or shall modify the workplan as directed so long as the Regional Board has satisfied its requirement to justify the changes in accordance with CWC §13225(c).

   3.c.1. The County of San Diego shall implement the workplan within a schedule agreed to in writing by the Regional Board. Before beginning these activities the County shall notify the Regional Board of the intent to initiate the proposed actions included in the workplan submitted.

Submit Groundwater Investigation and Characterization Report
The County of San Diego shall, on a schedule agreed to in writing by the Regional Board, submit a Groundwater Investigation and Characterization Report containing a technical analysis those elements it has determined in consultation with the Regional Board to be of most importance to characterizing groundwater nutrient loading to Rainbow Creek. In assessing the need for groundwater monitoring, the objectives stated in Section 10.2 shall be considered. The report shall also present recommendations to refine assumptions, resolve uncertainties, and improve the scientific foundation of the TMDL. **5. Conduct Monitoring to Assess Compliance With Nutrient Load Reductions** -- The County of San Diego shall, upon direction by the Regional Board pursuant to a CWC §13225 Order, prepare and submit a workplan describing the monitoring activities it will conduct, or require to be conducted, to assess compliance in achieving the load reductions targeted under this TMDL. Monitoring shall be conducted in accordance with applicable requirements of Section 10.0 (Implementation Monitoring Plan).

[15] Groundwater beneath the Rainbow Creek watershed is interpreted to occur in both the alluvial deposits where present and in the fractured rock. The groundwater investigation report shall assess the relative contribution from each aquifer.

6. **Establish Management Agency Agreement (MAA)**

The County of San Diego is requested to enter into a MAA with the Regional Board setting forth the commitment of both parties to undertake various implementation oversight responsibilities for the nonpoint source nutrient load reduction component of this TMDL and the County's commitments to implement the NRMP. With respect to the County's obligations to implement or participate in the implementation of this TMDL, conditions or actions agreed to by both parties in the MAA shall take precedence over those of the TMDL. To that end, the TMDL shall be considered guidance in defining those obligations. In the event that the County and Regional Board do not enter into a MAA or other equivalent agreement, the County's compliance obligations will be defined solely by the TMDL or subsequent RWQCB action.

9.7 County Of San Diego Nutrient Reduction And Management Plan

The County of San Diego will be requested by the Regional Board to prepare and submit a Nutrient Reduction Management Plan (NRMP) for the Rainbow Creek watershed, consistent with the SWRCB NPS Implementation and Enforcement Policy.

1. NPS Nutrient Reduction and Management Plan (NRMP)

The NRMP should function as the principle planning and guidance document for the watershed. It should describe the activities that will be undertaken to reduce nutrients in the runoff or groundwater discharges from new and existing key nutrient sources such as:

a. Commercial nurseries
b. Agricultural fields
c. Orchards
d. Parks
e. Residential areas
f. Urban areas; and
g. Septic tank disposal system land uses.

To the extent practicable and foreseeable, the NRMP should identify: specific activities and management measures (MMs) / management practices (MPs) to be conducted[16]; the parties responsible for or participating in these activities or implementing MMs/MPs; and, specific commitments and timelines for implementation. It should also describe how monitoring and effectiveness assessment data will be used to evaluate implementation progress, validate program approaches, and determine whether nutrient reductions are being achieved. The plan should be flexible enough to accommodate modifications as new information becomes available. The County may also submit alternative or additional elements that are proposed to prevent or reduce nutrient discharges to Rainbow Creek in accordance with the objectives of this TMDL.

[16] The NRMP should address management measures and best management practices that will be recommended or required for priority nutrient sources. Where practicable, source control and/or pollution prevention MMs/MPs should be encouraged.

2. **Community Education and Outreach**
The County of San Diego is requested to oversee and participate in the development of focused educational programs to raise community awareness of the nutrient impairment problem, promote pollution prevention, and increase the use of applicable MMs / MPs where needed to control and reduce nutrient discharges to Rainbow Creek. Public education, outreach, and training programs should involve applicable user groups and the community.

3. **Seek Financial Assistance**
The County of San Diego is encouraged to seek grant funding[20] for projects to implement the Rainbow Creek nutrient TMDLs, particularly those that can achieve quantifiable nutrient load reductions consistent with the specific nutrient TMDL load allocations.

4. **Nutrient Reduction and Management Plan (NRMP) Effectiveness**
The County of San Diego, in cooperation with other dischargers and stakeholders, is requested to develop a long-term strategy for assessing the effectiveness of the NRMP. The long-term assessment strategy should identify specific direct and indirect measures that will be used to track the long-term progress towards achieving the nutrient load reductions required under this TMDL. Methods used for assessing effectiveness should be appropriate to the activities implemented pursuant to the NRMP. Examples of elements which should be considered are:

   a. An assessment of the degree to which recommended or minimum MPs were implemented.
   b. An assessment of the degree to which load reductions were achieved for specific land use or source categories.
   c. An evaluation of the effectiveness of activities conducted under the NRMP in achieving nutrient load reductions.
   d. Identification of water quality improvements or degradation in Rainbow Creek with regard to attainment of the nutrient water quality objectives.

This strategy may be incorporated into the first NRMP Annual Report.

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[17] Pollution Prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

[18] In determining appropriate MPs the County of San Diego is encouraged to consult the State Water Resources Control Board's California Nonpoint Source Encyclopedia (2004) (http://www.swrcb.ca.gov/nps/encyclopedia.html). This publication contains extensive information on nutrient reduction management measures (MMs) and management practices (MPs) applicable to the NPS land use activities in the Rainbow Creek watershed. The County is also encouraged to consult the Regional Board's Watershed Management Approach for the San Diego Region, Nonpoint Source (http://www.swrcb.ca.gov/rwqcb9/programs/wmc.html) for additional information on management measures.

[19]

[20] Information on available grant funds is contained in the in the State Water Resources Control Board's *California Nonpoint Source Encyclopedia* (2004) (http://www.swrcb.ca.gov/nps/encyclopedia.html).

5. **Nutrient Reduction and Management Plan (NRMP) Annual Reports**
The County of San Diego is requested to submit an annual NRMP report to the Regional Board by January 31 of each year following USEPA approval of this TMDL. The reporting period for this annual report shall be the previous fiscal year. For example, the report submitted January 31, 2006 shall cover the reporting period July 1, 2004 to June 30, 2005. As appropriate, the Report or sections of it may be incorporated in the annual Jurisdictional URMP Annual Report and the Santa Margarita Watershed Management Area Watershed URMP Annual Report under the County's MS4 NPDES Permit. In general the NRMP Annual Report should describe the activities conducted by the County to oversee implementation of the NRMP, provide an accounting of activities conducted pursuant to the NRMP (such as inspections, enforcement, and education), and assess the effectiveness of those efforts[21]. However, specific Annual Report content and organization should be proposed by the County based on the finalized NRMP.

9.8 Discharger Actions

State of California, Department of Transportation (Caltrans) Actions
Caltrans shall take all actions necessary to meet the nutrient wasteload reductions assigned to Caltrans. These nutrient wasteload reductions will eventually be incorporated into Caltrans statewide NPDES storm water permit. It is assumed that compliance with the nutrient wasteload reductions will be accomplished through the development and implementation of best management practices (BMPs). Caltrans shall also prepare and submit progress reports in accordance with the Caltrans statewide NPDES storm water permit or as otherwise directed by the Regional Board in a CWC §13383[22] order.

State of California Department of Forestry and Fire Protection (CDFFP) Actions
CDFFP shall, upon direction by the Regional Board in a CWC §13267 order, undertake an investigation to 1) evaluate whether CDFFP's discharge is surfacing and/or contributing to the impairment of Rainbow Creek; and 2) estimate the actual nutrient load to Rainbow Creek from groundwater flow originating from the septic tank and percolation ponds.

Nonpoint Source Dischargers (NPS Dischargers) Actions
NPS discharges of nutrients in the Rainbow Creek watershed result from (1) commercial nurseries; (2) agricultural fields; (3) orchards; (4) parks; (5) residential areas; (6) urban areas; and; (7) septic tank disposal system land use activities. Individual landowners and other persons (NPS Dischargers) engaged in these land use activities shall implement as appropriate pollution prevention[23] methods and increase the use of applicable management measures and

[21] Long-term effectiveness assessment elements needn't be addressed in each annual report. Depending on the particular measures and strategies utilized, appropriate frequencies of analysis may vary. For instance long-term effectiveness assessment is currently only conducted every 5 years under the Municipal Stormwater Permit, whereas numerous other measures are reported annually.

[22] CWC §13383 provides that the Regional Board may establish monitoring, requirements for any person who discharges, pollutants or dredged or fill material or proposes to discharge pollutants to navigable waters of the United States.

[23] Pollution Prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

practices[24] where needed to control and reduce nutrient discharges to Rainbow Creek and attain nutrient load reductions. Individual landowners and other persons are encouraged to seek grant funding[25] for projects to implement the Rainbow Creek nutrient TMDLs, particularly those that can achieve quantifiable nutrient load reductions consistent with the specific nutrient TMDL load allocations. NPS dischargers will be subject to Regional Board enforcement action for failing to: comply with applicable waiver conditions, waste discharge requirements (WDRs), or discharge prohibitions; attain compliance with the nutrient load reductions specified in this TMDL; or attain compliance with the nutrient water quality objectives. The Regional Board may also terminate the applicability of waivers and issue waste discharge requirements to any NPS dischargers failing to comply with waiver conditions.

9.9 Implementation Action Plan Summary

The following is provided to summarize the County of San Diego and discharger's implementation of the TMDLs.

[24] In determining appropriate management methods and practices to control nutrient discharges interested persons should are encouraged to consult the State Water Resources Control Board's *California Nonpoint Source Encyclopedia* (2004) (http://www.swrcb.ca.gov/nps/encyclopedia.html. This publication contains extensive information on nutrient reduction management measures (MMs) and management practices (MPs) applicable to the NPS land use activities in the Rainbow Creek watershed. Interested persons are also encouraged to consult the Regional Board's Watershed Management Approach for the San Diego Region, Nonpoint Source (http://www.swrcb.ca.gov/rwqcb9/programs/wmc.html) for additional information on management measures.

[25] Information on available grant funds is contained in the in the State Water Resources Control Board's *California Nonpoint Source Encyclopedia* (2004) (http://www.swrcb.ca.gov/nps/encyclopedia.html).

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Table 9-4 Summary of Implementation

Action	Description	Regional Board Authority
County of San Diego Actions		
1. Control MS4 Discharges to Rainbow Creek	• Implement the requirements of Order No. 2001-01 where the permit applies	San Diego RWQCB Order No. 2001-01
2. Submit and Implement Nutrient Reduction and Management Plan	• Develop and implement an NRMP •	Voluntary
3. Submit and Implement Groundwater Investigation and Characterization Workplan	• Submit investigative workplan on a schedule to be agreed to in writing by the Regional Board • Investigate nutrient loads to groundwater and the groundwater contribution to Rainbow Creek • Implement investigative workplan on a schedule to be agreed to in writing by the Regional Board	CWC § 13225
4. Submit Groundwater Investigation and Characterization Report	• Submit Report on a schedule to be agreed to in writing by the Regional Board.	CWC § 13225
5. Conduct Monitoring to Assess Compliance with Nutrient Load Reductions	• Submit investigative workplan on a schedule to be agreed to in writing by the Regional Board • Implement investigative workplan on a schedule to be agreed to in writing by the Regional Board	CWC § 13225
6. Establish MAA	• Enter into MAA with the Regional Board	Voluntary
State of California, Department of Transportation (Caltrans) Actions		
1. Meet Wasteload Allocations	• Implement the requirements of Order No. 99-06-DWQ • Submit a report on the determination of water quality exceedances and BMP implementation within 6 months of USEPA approval • Meet wasteload allocations by 2012	CWC § 13383
2. Perform Water Quality Monitoring	• Perform water quality monitoring • Submit reports annually to Regional Board	CWC § 13267
State of California, Department of Forestry and Fire Protection (CDFFP) Actions		
1. Investigate Impact of Percolation Ponds and Remediate if necessary	• Comply with the requirements of Order No. 95-20 • Investigate, monitor, and take necessary measures to ensure operations do not contribute to impairment • Submit technical report to Regional Board	CWC § 13267
Nonpoint Source Dischargers (NPS Dischargers) Actions		
1. Meet Load Allocations with MAA oversight	• Participate in load reductions with MAA direction and oversight • Iterative evaluation and implementation of MPs • Meet load allocations in compliance with schedule in Table 9-1	CWC § 13260 & § 13269 & § 13243

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