8.0 PROPOSED IMPLEMENTATION PLAN

8.1 Introduction

Federal regulations require states to incorporate TMDLs into water quality management plans (40 CFR 130.6). California's water quality management plan consists of the Regional Water Boards' Basin Plans (see Water Code Section 13240-13247) and statewide water quality control plans. Section 13242 of the California Water Code requires that basin plans include a program of implementation to achieve water quality objectives, including:

(a) A description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private;
(b) A time schedule for the actions to be taken; and
(c) A description of surveillance to be undertaken to determine compliance with objectives.

A TMDL does not establish new water quality objectives. A TMDL is a management plan through which existing narrative or numeric water quality objectives and beneficial uses are to be achieved. An implementation plan must be developed to ensure that the TMDL achieves its purpose.

Staff proposes that the Newport Bay/San Diego Creek OCs TMDLs be adopted as phased TMDLs. The phased implementation framework provides time to conduct further monitoring and assessment, including data collection to fill informational gaps; development of site-specific, risk-based models to develop protective sediment and/or fish tissue targets; and assessment of open space and channel erosion as potential OCs sources. The results of these studies are expected to provide the analytical basis for future modification of the TMDLs, WLAs, LAs, targets and/or other TMDL elements. Additional monitoring and assessment may also lead to delisting certain water body-pollutant combinations, should a finding of impairment no longer be supported.

Regional Board staff intends to coordinate TMDL implementation with the following agencies, programs, and policies:

- The Regional Board's Watershed Management Initiative (WMI) program for the Newport Bay/San Diego Creek watershed
- The Regional Board's permitting and enforcement sections
- The Regional Board's Storm Water compliance section
- The State Board's Nonpoint Source (NPS) Implementation and Enforcement Policy
- The State Board's Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

- The State Board's Sediment Quality Objectives (upon approval)
- The Newport Bay Watershed Management Committee
- U.C. Cooperative Extension and/or the Orange County Farm Bureau
- Other watershed stakeholders
- The U.S. Fish and Wildlife Service, and
- The California Department of Fish and Game

This implementation plan details the activities planned to ensure that the OCs TMDLs are achieved. Implementation tasks include:

- Source control activities to reduce any active sources of OC pesticides and PCBs in the San Diego Creek/Newport Bay watershed;
- Implementation and evaluation of agricultural best management practices (BMPs) in the watershed;
- Implementation and evaluation of construction best management practices (BMPs) in the watershed;
- Special studies to evaluate sediment transport, OCs concentrations and areas where BMP implementation will be most effective in meeting the TMDL goals;
- Monitored natural recovery; this task includes investigation of multiple lines of evidence to evaluate long-term ecological recovery due to natural attenuation of contaminated sediments.

8.2 Relevant Special Studies in the Newport Bay/San Diego Creek Watershed

A number of investigations and monitoring programs have been established to assist with meeting TMDL goals. Some of the studies that are relevant to implementation of these TMDLs are listed below.

(1) SCCWRP - Investigation of bioaccumulative contaminant concentrations in bird eggs, food items and sediment in the San Diego Creek/Newport Bay Watershed

Project Director: Martha Sutula
Subcontractor: CH2MHill (Gary Santolo and Harry Ohlendorf)
Funding Source: State TMDL contract funds
Contract Amount: FY 03-04 $50,000; FY 04-05 $100,000.
Project Deliverable: Final Report due March 31, 2007
Project Purpose: To determine whether bioaccumulative contaminants such as selenium (Se) and organochlorine compounds (OCs) are bioaccumulating in birds and their food items in the San Diego Creek/Newport Bay watershed. Data will be used to structure a biological monitoring program for the Se and OCs TMDLs, to create a conceptual model of contaminant pathways in birds in the watershed, and to identify the most sensitive end receptors for these contaminants to determine

appropriate numeric targets that will be protective of all of the beneficial uses in the watershed.

(2) SCCWRP/UCR/CSULB - Assessment of food web transfer of organochlorine compounds, selenium and trace metals in fishes in Newport Bay, California

Project Director: Dr. Jim Allen
Funding Source: Prop 13 CNPS grant
Grant Amount: $253,532.
Project Deliverable: Final Report due March 31, 2007.
Project Purpose: The project will focus on several identifiable trophic pathways leading to birds of concern or to human consumption. Key fish species will be collected and tissue analyzed for organochlorine pesticides, PCBs and trace metal concentrations. Stomach analysis will be conducted on these species to identify prey organisms or food (e.g., detritus, sediment) specific to Newport Bay, and trophic pathways. These food items and sediments will also be collected and analyzed for organochlorine compounds and trace metals. Fish tissue contamination will be evaluated relative to predator-risk guidelines, human health guidelines and TMDL targets; bioaccumulation factors will be calculated; appropriate fish species to use as surrogates for assessing ambient water quality will be identified; locations will be identified in Newport Bay where elevated concentrations in fish tissue and sediment were observed.

(3) County of Orange – San Diego Creek Sediment Pesticide Study

Project Director: Chris Crompton
Funding Source: Prop 13 PRISM grant
Grant Amount: $188,254.
Project Deliverable: Final Technical Report due March 31, 2007.
Project Purpose: The study will evaluate legacy organochlorine pesticide and PCBs mass loadings with respect to geographic location, flow, sediment particle size, and total organic content within the San Diego Creek/Newport Bay watersheds. The information gathered by the study will assist with the quantification of existing loads and identification of active sources and appropriate BMPs.

(4) SCCWRP – Pesticide Source Analysis in the Upper Newport Bay Watershed Using Chiral Properties and Isotopic Fingerprinting

Project Director: Ken Schiff
Funding Source: Prop 13 PRISM grant
Grant Amount: $185,155.
Project Deliverable: Final Project Report due March 1, 2007
Project Purpose: To employ two relatively new analytical methods, chiral gas chromatography (CGC) and compound-specific isotope analysis (CSIA), to identify and apportion sources of pesticides in the San Diego Creek/Newport Bay

watershed. Compounds evaluated include chlorinated and organophosphorous pesticides, including chlorpyrifos, diazinon, chlordane, oxychlordane, dieldrin, DDT (six isomers), and toxaphene. Analysis of urban runoff (storm water and dry weather flow), sediments, water column, and air samples will be conducted to determine the sources of the target pesticides and to characterize their distribution in the San Diego Creek/Upper Newport Bay Watershed.

(5) Resource Management Associates (RMA) – Newport Bay Sediment Transport and Macroalgal Modeling (contract not yet executed)

Project Director: John DeGeorge
Funding Source: State TMDL Contract Funds
Contract Amount: $150,000
Project Deliverable: March 31, 2008
Project Purpose: Among other tasks identified in the scope of work, objectives include predicting general sediment deposition rates in Newport Bay under current loading conditions, and using updated or revised bathymetry, storm hydrographs, and sediment-flow regression equation; predicting fine-textured sediment deposition rates in Newport Bay under current sediment loading conditions using the updated/revised model.

(6) San Francisco Estuary Institute – Indicator Development and Framework for Assessing Indirect Effects of Sediment Contaminants.

Work performed under subcontract to Southern California Coastal Water Research Project, as part of the work product provided to the State Water Resources Control Board to aid in development of sediment quality objectives.

Project Director: Steve Bay
Funding Source: SWRCB
Subcontract Amount: $220,178 (a portion of which funds the Newport Bay case study)
Project Deliverable: April 25, 2006 (Draft report is under internal review. Final report is expected late 2006.)
Project Purpose:
The objective of the project is to provide methodology that will assist in evaluating indirect adverse biological effects for bioaccumulative pollutants (e.g. due to food web biomagnification), as part of the overall goal of developing statewide sediment quality objectives. Newport Bay is used as a case study to show how the proposed methodology could be implemented. Multiple lines of evidence will be evaluated to determine impacts of organochlorine pesticides and PCBs to humans and wildlife. A conceptual foodweb model will be developed, and sensitive wildlife receptors will be identified. Empirical field data and a steady-state food web model will be used to calculate bioaccumulation factors for the OCs. The bioaccumulation factors will be combined with effects thresholds to identify sediment concentrations that are protective of target wildlife and humans.

(7) County of Orange Resources and Development Management Division, Water Quality Monitoring Program for Santa Ana Region (2003 DAMP).

In 2005, pursuant to specifications in the Monitoring and Reporting Program No. R8-2002-0010, NPDES No. CAS618030, the County revised the stormwater monitoring program that is conducted under the 3rd Term MS4 Permit, to incorporate monitoring elements for the toxics TMDLs (RDMD, 2003 DAMP, Exhibit 11.II). Watershed-specific issues relevant to the toxics TMDLs were identified. Work to address these issues will be managed and funded by a group of permittees within the watershed, and coordination will occur through the NPDES monitoring program. The specific watershed issues identified by the permittees are listed below. Addressing these issues is consistent with the TMDL implementation activities that were identified previously.

- Identification of in-bay sites with substantially elevated pollutant levels;
- An assessment of current understanding of sediment and pollutant movements through the Newport Bay system;
- Long-term monitoring of fish tissue for pollutants above screening values for human and/or wildlife health;
- Assess the need for and design a benthic community monitoring effort;
- The design of future egg tissue and teratogenesis studies.

8.3 Proposed Implementation Tasks

A phased implementation approach is recommended for these TMDLs. Phase 1 primarily entails evaluation and implementation of BMPs to control erosion and discharge of fine sediments into San Diego Creek and Newport Bay, with monitoring to determine BMP effectiveness in reducing OCs loads. Table 8-1 shows the proposed tasks and schedule for Phase 1 implementation of the TMDL. These tasks are discussed in more detail below.

8.3.1 *WDRs and NPDES Permits*

The Regional Board shall review and revise, as necessary, existing NPDES permits and/or WDRs to incorporate the appropriate TMDL WLAs, compliance schedules, and monitoring program requirements. These permits are identified in Table 8-2 below. The appropriate TMDL WLAs, compliance schedules and monitoring program requirements shall be included in new NPDES permits/WDRs. Permit revisions shall be accomplished as soon as possible upon approval of the Basin Plan amendment. Given Regional Board resource constraints and the need to consider other program priorities, permit revisions are likely to be tied to renewal schedules.

Table 8-1. TMDL Task Schedule

Task No.	Task	Schedule	Description
1	Incorporate WLAs into new and existing WDRs and NPDES permits	As soon as possible upon approval of Basin Plan Amendment and permit renewal	WDR and NPDES permits will be revised to include TMDL allocations and compliance monitoring. TMDL allocations and compliance monitoring will be included in new WDRs and NPDES permits, as appropriate.
2	Develop Regional Program for Complying with State's Nonpoint Source Policy	Estimated 2007-2008	Agricultural operations without coverage under individual WDRs will be required to comply with region-wide requirements when they are established. Requirements will focus on BMPs necessary to achieve TMDL allocations.
3	Ensure construction activities incorporate effective sediment and erosion control BMPs and conduct monitoring, as appropriate	Upon State approval of Basin Plan Amendment	Construction site operators will evaluate and implement BMPs to manage discharge of fine sediments; builders will participate in studies to evaluate BMP effectiveness; discharges of sediment-laden storm water and non-storm water will be sampled and analyzed for OCs. BMP implementation will follow an iterative process: if certain BMPs are found to be ineffective at controlling fine sediments, more effective BMPs will be identified and implemented.
4	Conduct Monitoring	Upon State approval of Basin Plan Amendment	Modify existing regional monitoring program to include water quality monitoring for OCs: sediment chemistry, sediment toxicity, benthic community assessment; fish tissue chemistry. TIEs will be performed to identify toxicants in sediment. The most sensitive wildlife/human receptor(s) will be identified for the creek and bay, and models will be used to predict protective sediment and fish tissue target concentrations. Data gaps will be filled, including collecting data to evaluate human health impairment in San Diego Creek; sediment toxicity and benthic community assessment in San Diego Creek; toxaphene impairment in Newport Bay. Sources will be better defined, including potential OCs contributions from open space and channel erosion. GIS tools will be used to evaluate temporal and spatial distribution of OCs, in order to better evaluate sources and select appropriate BMPs for source control.
5	Conduct Special Studies	Ongoing and as Needed	Special studies that are discussed in Section 8.1 will be completed, and results of studies will provide data for TMDL refinement in future phases.
6	Develop Sediment Quality Objectives	Estimated Late 2007	Recommend TMDL revisions based on adopted SQOs

Table 8-2. NPDES Permits and WDRs to be Revised to Incorporate TMDL limits.

Permit Title	Order No.	NPDES No.
Waste Discharge Requirements for the United States Department of the Navy, Former Marine Corps Air Station Tustin, Discharge to Peters Canyon Wash in the San Diego Creek/Newport Bay Watershed	R8-2006-0017	CA8000404
Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana Region - Areawide Urban Storm Water Runoff - Orange County	R8-2002-0010	CAS618030
General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (de minimus) Threat to Water Quality	R8-2003-0061 as amended by R8-2005-0041 and R8-2006-0004	CAG998001
General Waste Discharge Requirements for Short-term Groundwater-Related Dischargers and De Minimus Wastewater Discharges to Surface Waters Within the San Diego Creek/Newport Bay Watershed	R8-2004-0021	CAG998002
General Groundwater Cleanup Permit for Discharges to Surface Waters of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Petroleum Hydrocarbons, Solvents and/or Petroleum Hydrocarbons mixed with Lead and/or Solvents	R8-2002-0007, as amended by R8-2003-0085 and R8-2005-0110	CAG918001
Waste Discharge Requirements for City of Tustin's 17th Street Desalter	R8-2002-0005	CA8000305
Waste Discharge Requirements for City of Irvine, Groundwater Dewatering Facilities, Irvine, Orange County,	R8-2005-0079	CA8000406
Waste Discharge Requirements for Bordiers Nursery, Inc.	R8-2003-0028	
Waste Discharge Requirements Hines Nurseries, Inc.	R8-2004-0060	
Waste Discharge Requirements for El Modeno Gardens, Inc., Orange County	R8-2005-0009	
Waste Discharge Requirements for Nakase Bros. Wholesale Nursery, Orange County	R8-2005-0006	

For commercial nurseries covered under existing WDRs, staff recommends that the following actions be implemented under Phase 1 of these TMDLs:

(1) Evaluate sites to determine/verify potential storm water and nonstorm water discharge locations;
(2) Evaluate current monitoring programs and methods of sampling and analysis for consistency with other monitoring efforts in the watershed;
(3) In cooperation with U .C. Cooperative Extension, evaluate BMPs for adequacy and implement the most effective BMPs to reduce/eliminate the discharge of potentially-contaminated fine sediments; and
(4) Perform monitoring to assure that OCs load reductions are achieved.

For the MS4 permittees, staff recommends implementation of the following actions during Phase 1 of these TMDLs. These actions are already largely included within the proposed 2007 Drainage Area Management Plan and/or Report of Waste Discharge, dated July 21, 2006:

(1) Mass Emissions Monitoring: Estimate mass emissions of OCs covered under these TMDLs, assess temporal and spatial trends, and determine the extent to which the MS4 is contributing to exceedances of water quality objectives or beneficial uses. Staff recognizes that accurately quantifying the very small mass loads that are allowable under these TMDLs will be very challenging, and recommends that analytical strategies for quantifying loads of the OCs be carefully explored.
(2) Conduct source analysis in regions of the MS4 demonstrating elevated concentrations of OCs; ensure appropriate BMPs are implemented that will result in reducing or eliminating discharges of OCs to San Diego Creek and Newport Bay.
(3) Conduct monitoring to fill gaps in knowledge: (a) assess effects of OCs on fishing in San Diego Creek (i.e., evaluate fish tissue concentrations of OCs with respect to potential adverse impacts to human health), and effects on COMM, WILD, EST, and RARE beneficial uses in Newport Bay; (b) assess sediment quality in San Diego Creek by evaluating sediment chemistry, benthic community integrity, and sediment/pore water toxicity; (c) assess the relative OCs source contribution from open space and channel erosion.
(4) Participate in special studies to evaluate the relative magnitude of the OCs mass load in continuing OCs discharges into San Diego Creek and Newport Bay versus the mass load held within the existing reservoir of OCs in bed sediments that are subject to redistribution, in order to determine the most effective implementation strategies to reduce OCs in the MS4 and other receiving waters.

For NPDES permittees discharging ground water to San Diego Creek, the following implementation task is recommended by staff:

(1) Conduct periodic (i.e., annual) monitoring, using the most sensitive analytical techniques practicable, to analyze permitted discharges for OCs. If OCs are present, determine whether the discharge would contribute to an exceedance of the MS4 waste load allocation and implement appropriate measures to reduce or eliminate OCs in those discharges.

8.3.2 *Develop and Implement an Appropriate Regulatory Mechanism for Complying with the State's Nonpoint Source Policy*

In May 2004, the SWRCB issued its "Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program" (Nonpoint Source Policy). That document explains how the Nonpoint Source Program Plan will be implemented and enforced, in accordance with the California Water Code §13369(a)(2)(B). The Porter-Cologne Act provides that "All discharges of waste into the waters of the State are privileges, not rights" (CWC §13263(g)), and that all dischargers, whether point source or nonpoint source dischargers, are subject to regulation (CWC §13260). The Nonpoint Source Policy requires that all dischargers, including nonpoint source dischargers, be regulated under WDRs, waivers of WDRs, Basin Plan prohibitions, or some combination of these three administrative tools. During Phase I of these TMDLs, it is expected that Regional Board staff will develop and the Regional Board will be asked to consider general WDRs or waiver of WDRs to regulate agricultural operations that are not deemed to require individual WDRs. Load allocations will be reflected in WDRs/waivers, along with a schedule for compliance and a monitoring program to assure permit requirements are achieved.

Nonpoint source discharges from open space are also subject to state regulation. During Phase 1 of these TMDLs, staff recommends that sufficient data be collected by the County of Orange to determine whether discharges of OCs from designated open space, as well as discharges resulting from erosion in and adjacent to unimproved streams, are causing or contributing to exceedances of water quality objectives and/or beneficial uses of San Diego Creek and Newport Bay.

8.3.3 Develop and Implement Appropriate BMPs for Construction Activities

Currently, all construction activities in the watershed that disturb an area one acre or greater are regulated under the State's General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (Order No. 99-08-DWQ; the General Permit). The General Permit requires the permittee to develop and implement a site-specific storm water pollution prevention plan (SWPPP); install and maintain appropriate best management practices (BMPs) to prevent erosion,

manage sediments, and eliminate unauthorized non-storm water discharges; and conduct periodic inspections to ensure BMPs are adequate and maintained.

Construction sites are also regulated by local governments. The Phase II Municipal Separate Storm Sewer System (MS4) regulations require municipalities to develop a local program to control storm water discharges from construction sites and to manage post-construction urban runoff (see 40 CFR 122.34). Section A-7 of the Orange County Drainage Area Management Plan (DAMP) is the Local Implementation Plan (LIP) for New Development and Redevelopment. In the LIP, the County, as Principal Permittee, coordinated development of a model program to link BMP design, construction and operation to the early phases of project planning encompassed by the County's General Plan, environmental review process and development permit approval process (DAMP Section A-7, 2004). The General Plan specifies policies for new development; the environmental review process examines environmental impacts resulting from proposed new development or significant redevelopment, and includes consideration of mitigation measures to reduce significant environmental impacts, including impacts to water quality; the development permit approval process carries forward mitigation requirements in the form of conditions of approval, design specifications, tracking, inspection and enforcement. The model program links these three "front-end" planning processes to later phases of development to ensure that water quality protection features are planned, designed and evaluated in accordance with goals for the protection of water quality, and in conformance with requirements of the MS4 permit (DAMP Section A-7, 2004). Prior to issuance of grading or building permits, a project applicant must provide a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board (SWRCB), the Waste Discharge Identification (WDID) number showing that the project is covered under the State's General Permit, and a project-specific Erosion and Sediment Control Plan (ESCEP). The SWPPP is not required to be submitted or approved, but must be kept on-site for review during inspections. Recommended construction BMPs are identified in the Orange County Stormwater Program Construction Runoff Guidance Manual (2004).

In their Final Report to the State Water Resources Control Board (Agreement Number 01-269-250-0), dated June 18, 2004, and revised September 20, 2004, Raskin et al. reported that at least one half of construction sites they visited demonstrated noncompliance with BMP selection and maintenance and had inadequate SWPPPs. On the other hand, because storm water discharges from construction sites are already regulated by various federal, state and local agencies, USEPA recently determined that these existing programs should adequately address potential threats to water quality and declined to set effluent limitations or new source performance standards for construction (69 FR 80, April 26, 2004).

In a memorandum dated November 22, 2002, USEPA stated that an iterative, adaptive-management BMP approach could be identified, in lieu of numeric effluent limits, to meet TMDL waste load allocations (WLAs), as long as monitoring is

performed to demonstrate that the BMPs are adequate to implement the WLA and are protective of water quality. This memorandum also states:

> *"Where the NPDES permitting authority allows for a choice of BMPs, a discussion of the BMP selection and assumptions needs to be included in the permit's administrative record, including the fact sheet when one is required. 40 CFR §§ 124.8, 124.9 and 124.18. For general permits, this may be included in the storm water pollution prevention plan required by the permit. See 40 CFR § 122.28. Permitting authorities may require the permittee to provide supporting information, such as how the permittee designed its management plan to address the WLA(s). See 40 CFR § 122.28. The NPDES permit must require the monitoring necessary to assure compliance with permit limitations, although the permitting authority has the discretion under EPA's regulations to decide the frequency of such monitoring. See 40 CFR § 122.44(i). EPA recommends that such permits require collecting data on the actual performance of the BMPs. These additional data are likely to have other uses as well. For example, the monitoring data might indicate if it is necessary to adjust the BMPs. Any monitoring for storm water required as part of the permit should be consistent with the state's overall assessment and monitoring strategy."*

The State's General Permit currently requires that sampling and analysis be conducted for pollutants that are: a) not visually detectable in storm water discharges; (b) are known or should be known to occur on the construction site; and (c) could cause or contribute to an exceedance of water quality objectives in the receiving water. Pollutants can be considered to be known to occur on the construction site if they were applied to the soil as part of past land use activities. Because the majority of new construction in the San Diego Creek/Newport Bay watershed occurs on sites previously in agricultural land use and on which the organochlorine pesticides may have been applied, sampling and analysis should be conducted on any storm water and nonstorm water discharges containing sediments.

The implementation plan for construction activities has been formulated to be consistent with all applicable state and federal guidelines. For active construction activities, implementation of these TMDLs should rely on the following:

1) The existing NPDES permits regulating construction activities (General Permit and MS4 Permit) will be the foundation for meeting TMDL WLAs for Construction.
2) Permittees and Co-permittees under the MS4 permit shall participate in studies to evaluate BMPs that are most appropriate for reducing or eliminating OCs discharges from construction sites (e.g., fine particulates).

MS4 Permittees and Co-permittees shall include these BMPs in the Orange County Stormwater Program Construction Runoff Guidance Manual.

3) BMPs with demonstrated high effectiveness for control of erosion and sediment must be implemented for all construction activities in the watershed. SWPPPs must provide supporting documentation and assumptions for selection of sediment and erosion control BMPs, and must state why the selected BMPs will meet Construction WLAs for the organochlorine compounds.
4) As soon as is practicable upon receipt by the SARWQCB of the Notice of Intent (NOI) to be covered under the General Permit, with WDID number for projects in the San Diego Creek/Newport Bay watershed, Regional Board staff will submit a letter to the project applicant informing them of the requirement to sample all storm water and non-storm water discharges containing sediments for the organochlorine pesticides and PCBs, unless previously conducted soil analyses revealed the absence of these compounds. Regional Board staff's letter to each project applicant shall contain a signature line on which the applicant must acknowledge receipt of the letter and their understanding of all requirements specified therein.
(5) The project applicant shall develop a sampling plan that will ensure that the mass load of all OCs TMDL constituents in storm water or nonstorm water discharges can be estimated from the site, in the event that discharges occur from multiple discharge points on the construction site. Additionally, sampling should include suspended sediment concentration, total organic carbon concentration, and estimated flow rate and duration. The monitoring plan describing sampling and analysis of non-visible pollutants shall be included with the project SWPPP. Any monitoring results showing concentrations of any of the organochlorine compounds above detection limits shall be submitted to the SARWQCB, along with an explanation of the reason for the discharge and any BMP modifications that are implemented as a result.
(6) The requirements described above must also be communicated to the project proponent by the County and/or Cities along with standard Conditions of Approval for each project. Local governments are encouraged to specify additional compliance mechanisms as they see fit, in order to meet Construction WLAs for this TMDL.
(7) When construction site inspections are performed by Regional Board, county or city staff, a SWPPP evaluation shall be conducted that includes the adequacy of BMP supporting documentation, and any sampling and analysis records for storm water and non-storm water discharges.
(8) All enforcement options that are currently available to ensure compliance with the State's General Permit and local regulations shall be considered when violations of the General Permit occur. These mechanisms include notices of noncompliance, Notice of Violation, Administrative Civil Liability (includes monetary penalty), or Cease and Desist Orders. Penalties associated with Administrative Civil Liability actions are determined, in part, by the degree of culpability on the part of the owner or operator of a construction project. A

high degree of culpability may be assumed since permit requirements will have been exhaustively communicated to the project proponents.

8.3.5 Develop Site-Specific Sediment Quality Objectives

The California Water Code requires the State to develop sediment quality objectives (SQOs) for bays and estuaries. Since 2003, the SWRCB and other technical experts have worked to develop SQOs, along with a preliminary process to apply and implement them. It is anticipated that the State will adopt the Sediment Quality Plan for Enclosed Bays and Estuaries that will establish narrative, receptor-specific SQOs; provide tools by which a protective condition may be established for targeted receptor(s); provide tools by which site-specific conditions may be measured relative to the protected condition; and provide a regulatory framework to promote the protection of sediment quality related to beneficial uses (SWRCB, 2006). In development of SQOs, Newport Bay is being used as a case study to show how the proposed Plan may be implemented. In that case study, in order to evaluate indirect effects to sensitive wildlife species, target avian receptors were identified, and the environmental conditions protective of the most sensitive receptors are being evaluated. Once completed, this case study should provide a strong foundation from which to build a local program for evaluating sediment quality for Newport Bay in a comprehensive manner. In the interim, implementation tasks include collecting data with which to evaluate multiple lines of evidence in a sediment triad approach (e.g., sediment chemistry, sediment toxicity, and benthic community integrity), consistent with elements of the proposed Sediment Quality Plan. (The sediment triad approach will be used for San Diego Creek as well as Newport Bay, although the proposed SQOs only apply to bays and estuaries.) This may lead to refinement of the OCs TMDLs in future phases, or impairment delisting for one or more of the OC pollutants.

8.4 Monitoring Program

Section 13242 of the California Water Code specifies that Basin Plan implementation plans must contain a description of the monitoring and surveillance programs to be undertaken to determine compliance with water quality objectives. As part of the incorporation of the proposed San Diego Creek/Newport Bay OCs TMDLs into the Basin Plan, specific monitoring requirements are proposed in order to evaluate the effectiveness of actions and programs implemented pursuant to the TMDL. Since these TMDLs are proposed as phased TMDLs, follow-up monitoring and evaluation are essential to properly validate and revise the TMDLs.

The County of Orange, as Principal Permittee under the county's MS4 permit, oversees the countywide monitoring program. Implementation of the monitoring program is supported by funds shared proportionally by each of the Permittees. The program elements are described in the DAMP Section 11, and are in accordance

with requirements of the MS4 Permit. Many of staff's recommendations for monitoring are already reflected in the county's current monitoring program. Staff recommends that the county document each of its program elements that addresses the monitoring recommendations outlined Table 8-1, and revise the monitoring program, where and if necessary, to ensure that their regional monitoring program is adequate to monitor the effectiveness of TMDL implementation tasks.

8.5 Implementation Schedule and TMDL Reopener

Regional Board staff proposes that the TMDL targets and allocations for San Diego Creek and Newport Bay specified in Tables 3-1 and 7-2 be met as soon as possible, but no later than 2015. These TMDLs will be reopened five (5) years following their effective date in order to evaluate the effectiveness of Phase 1 implementation. At that time, all new data will be evaluated and used to reassess impairment; BMP effectiveness; and whether modifications to the TMDLs are warranted.