

H. CHANGE OF OWNERSHIP AND RECORDATION

1. The permittees shall establish a mechanism not only to track treatment control BMPs, but also to ensure that appropriate easements and ownerships are properly recorded in public records at the County and/or the city and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

I. OPERATION AND MAINTENANCE OF POST-CONSTRUCTION BMPS

1. The permittees shall ensure that all structural treatment control BMPs are designed and implemented with control measures necessary to effectively minimize the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, flies, etc. The permittees should consult the Orange County Vector Control District to ensure that structural treatment control systems are designed to minimize the potential for vector breeding. The operation and maintenance plans for all post-construction structural treatment controls should include specific vector control mitigation measures to avoid and/or minimize vector breeding.
2. The permittees shall specify conditions of approval that require proper maintenance and operation of all structural treatment control BMPs installed in new developments, including requirements for vector control. The parties responsible for the long-term maintenance and operation of the structural treatment control BMPs for the life of the project and a funding mechanism for operation and maintenance, shall be identified prior to approval of the WQMP.
3. The permittees shall develop a database with information regarding each structural treatment control BMP installed after adoption of this order. At a minimum, it should include: type of BMP, watershed where it is located, date of construction, party responsible for maintenance, source of funding for operation and maintenance, maintenance verification, and any problems identified during inspections including any vector or nuisance problems. If vector or nuisance problems are identified, the site should be referred to the Orange County Vector Control District. The permittees should work with the Vector Control District to remedy the problems associated with vectors.
4. The annual report shall include a list of all structural treatment control BMPs approved, constructed and/or operating within each permittee's jurisdiction.
5. Within 12 months of adoption of this order and annually thereafter, all public agency structural treatment control BMPs, and at least 25% of priority development project structural treatment control BMPs, shall be inspected prior to the rainy season. All structural treatment control BMPs shall be inspected within every four year period. The permittees shall ensure that the BMPs are operating and are maintained properly and all control measures are working effectively to remove pollutants in runoff from the site. All inspections shall be documented and kept as permittee record. The permittees may accept inspections conducted and certified by state licensed professional engineers in lieu of permittee inspections.

J. PRE-APPROVED PROJECTS

1. The above provisions for LID and hydrologic conditions of concern are not applicable to projects that have an approved Water Quality Management Plan. The above provisions shall be implemented in a manner consistent with the maximum extent practicable standard for all other projects 90 days from the date of approval of the revised model WQMP (per Section XII.C.1). The Regional Board recognizes that full implementation may not be feasible for certain projects which have received tentative tract or parcel map or other discretionary approvals.

XIII. PUBLIC EDUCATION AND OUTREACH

1. The permittees shall continue to implement the public education efforts already underway and shall implement the most effective elements of the comprehensive public and business education strategy contained in the Report of Waste Discharge/DAMP. By July 1, 2012, the permittees shall complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The findings of the survey and any proposed changes to the current program shall be included in the annual report for 2011-2012.
2. The permittees shall sponsor or staff a storm water table or booth at community, regional, and/or countywide events to distribute public education materials to the public. Each permittee shall participate in at least one event per year.
3. The permittees shall continue to participate in the Public Education Committee to review and update existing guidance for the implementation of the public education program. The Public Education Committee shall meet at least twice per year. The Public Education Committee shall continue to make recommendations for any changes to the public and business education program including: how to make the multimedia efforts more effective; a reevaluation of audiences and key messages for targeted behaviors; and opportunities for participation in regional and statewide public education efforts. The goal of the public and business education program shall be to target 100% of the residents, including businesses, commercial and industrial establishments. Through use of local print, radio and television, the permittees must ensure that the public and business education program makes a minimum of 10 million impressions per year and that those impressions measurably increase the knowledge and measurably change the behavior of the targeted groups.
4. The permittees shall continue their outreach and other public education activities. Each permittee should try to reach the following sectors: manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. Individual workshops (or regional workshops) for each of the aforementioned elements shall be administered by each permittee (or on a countywide basis) by July 1, 2010 and on an annual basis thereafter. Commercial and industrial facility inspectors shall distribute developed educational information (Fact Sheets) to these facilities during inspections.

Further, for restaurant, automotive service centers and gasoline service station corporate chains, new information or that which has been previously developed shall be provided to corporate environmental managers during outreach visits that should take place twice during the permit term. Some of these outreach activities could be conducted through the chamber of commerce or other similar establishments. The outcomes from all outreach requirements contained herein shall be reported in the applicable annual reports.

5. The permittees shall further develop and maintain public education materials to encourage the public to report illegal dumping and unauthorized, non-storm water discharges from residential, industrial, construction and commercial sites into public streets, storm drains and to surface waterbodies and their tributaries; clogged storm drains; faded or missing catch basin stencils and general storm water and BMP information. Hotline and web site information shall be included in the public and business education program and shall be listed in the governmental pages of all regional phone books and on the permittees' website.
6. Within 12 months from the date of adoption of this order, the permittees shall further develop and maintain BMP guidance for the control of those potentially polluting activities identified during the previous permit cycle, which are not otherwise regulated by any agency, including guidelines for the household use of fertilizers, pesticides, herbicides and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting. These guidance documents shall be distributed to the public, trade associations, etc., through participation in community events, trade association meetings and/or by mail.
7. The principal permittee, in collaboration with the co-permittees, shall develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses.

XIV. MUNICIPAL FACILITIES/ACTIVITIES

1. The permittees shall continue to implement the Model Municipal Activities Program developed by the permittees for fixed facilities, field operations and drainage facilities to ensure that public agency facilities and activities do not cause or contribute to a pollution or nuisance in receiving waters. By July 1 of each year, the permittees shall review all their activities and facilities to determine the need for any revisions to the facility inventories, prioritization, and maintenance programs. The annual report shall include the findings of this review and a schedule for any needed revisions. All revisions should consider a pollution prevention strategy to ensure that the public agency facilities and/or activities that are currently not required to obtain coverage under the State's general storm water permits reduce the discharge of pollutants into waters of the US to the maximum extent practicable.
2. The permittees shall continue to implement BMPs as per the Fact Sheets developed by the permittees for fixed facilities, field programs and drainage facilities for public

agency and contract field operations and maintenance staff. A reporting of these activities shall be included in each annual report.

3. The permittees shall conduct inspections of open channel systems at least on an annual basis and record the findings in the inspection forms developed by the permittees. At a minimum the following municipal areas should be inspected:
 - a) Parking facilities;
 - b) Flood management and storm water conveyance systems (open channels);
 - c) Areas or facilities discharging directly to lagoons, the ocean, or environmentally sensitive areas such as 303(d) listed waterbodies and Areas of Special Biological Significance; and
 - d) Municipal landfills, solid waste transfer facilities, land application sites, corporate yards, sewage collection and treatment facilities, parks and recreation facilities including golf courses, and airfields.
4. All applicable public agency staff shall be trained as specified under Section XVI.
5. In collaboration with the University of California Cooperative Extension and consistent with the Model Integrated Pest Management, Pesticide and Fertilizer Management Guidelines, the permittees shall:
 - a) Conduct annual integrated pest management self-audits;
 - b) Implement the Model Integrated Pest Management, Pesticide and Fertilizer Guidelines;
 - c) Provide proper training to municipal and contract staff involved in the above activities;
 - d) Within one year of adoption of this order, revise the LIP to include an integrated pest management program.
6. The permittees shall evaluate the need for any revisions to the Integrated Pest Management, Pesticide and Fertilizer Management Guidelines and determine the need for developing pesticide use indicators.
7. Within one year of adoption of this order, the principal permittee shall evaluate the effectiveness of debris booms and determine if additional debris booms are needed to address floatables in inland streams. This evaluation should also include an evaluation of other control measures such as more effective street sweeping program, litter control measures, and drain inlet screens and /or other inlet controls.
8. Within twelve months of adoption of this order, the principal permittee shall develop an intragency agreement with the County Integrated Waste Management Department to ensure that household solid and hazardous waste collection, transfer and disposal practices do not cause or contribute to a water quality problem.
9. The permittees shall ensure that their flood management processes and projects do not contribute pollutants to receiving waters to the MEP.
10. Each permittee shall examine opportunities to retrofit existing storm water conveyance systems and parks and other recreational areas with water quality protection measures, where feasible. The 2005 RBF Retrofit Study may be used by the principal permittee for a system-wide evaluation in lieu of each permittee conducting its own evaluation. Within 12 months of adoption of this order, the principal permittee shall

submit a proposal for additional retrofit studies that incorporates opportunities for addressing any applicable TMDL implementation plans.

11. The permittees shall continue to implement the established model maintenance procedure for drainage facilities (catch basins, storm drains inlets, open channels, etc.). Each permittee shall clean and maintain at least 80% of its drainage facilities on an annual basis, with 100% of the facilities included in a two-year period, using the model maintenance procedures developed by the permittees. Each permittee shall keep a record of its inspections, maintenance and cleaning activities, and overall quantity of waste removed. This record shall be included in the annual report.
12. The permittees shall determine whether a more aggressive maintenance frequency is necessary for the cleaning of drainage facilities, including catch basins, based on the data generated by the historic and ongoing inspections of these facilities. This program shall be based on a list of drainage facilities and prioritized on such factors as: proximity to receiving waters, receiving water beneficial uses and impairments of beneficial uses, historical pollutant types and loads from past inspections/cleanings and the presence of downstream regional facilities that would remove the types of pollutants found in the drainage facility. Using this list, the permittees shall revise clean out schedules and frequency and provide justification for any proposed clean out frequency that is less than once a year. This information shall be included in the annual report.
13. Within six months of adoption of this order, the permittees shall evaluate the applicability of the Model Municipal Activities Program to municipal maintenance contracts, contracts for field maintenance operations, and leases. The findings from the evaluation shall be included in the next annual report.
14. Each permittee shall implement control measures necessary to minimize infiltration of seepage from sanitary sewers to the storm drain systems through routine preventive maintenance of the storm drain system. The permittees who are also owners and/or operators of sewage collection systems shall also implement a routine maintenance program for the sewage collection systems in accordance with the State Board's Water Quality Order No. 2006-0003. Each permittee shall cooperate and coordinate with the sewage collection/treatment agencies (Orange County Sanitation District and/or Irvine Ranch Water District) to swiftly respond to and contain any sewage spills.

XV. MUNICIPAL CONSTRUCTION PROJECTS/ACTIVITIES

1. This order authorizes the discharge of storm water runoff from construction projects that may result in land disturbance of one (1) acre or more (or less than one acre, if it is part of a larger common plan of development or sale which is one acre or more) that are under ownership and/or direct responsibility of any of the permittees. All permittee construction activities shall be in accordance with DAMP Sections 7 and 8.
2. All construction activities shall be in compliance with the latest version of State's General Permit for Storm Water Discharges Associated with Construction Activities except that an NOI need not be filed with the State Board.
3. Prior to commencement of construction activities, the permittees shall notify the Executive Officer of the Regional Board concerning the proposed construction project. Upon completion of the construction project, the Executive Officer shall be notified of the completion of the project.

4. The permittees shall develop and implement a storm water pollution prevention plan (SWPPP) and a monitoring program that is specific for the construction project greater than one acre, prior to the commencement of any of the construction activities, except for routine maintenance activities. The SWPPP shall be kept at the construction site and released to the public and/or Regional Board staff upon request.
5. The SWPPP (and any other plans and programs required under the General Permit) and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Permit.
6. The permittees shall give advance notice to the Executive Officer of the Regional Board concerning any planned changes in the construction activity, which may result in non-compliance with the latest version of the State's General Construction Permit.

XVI. TRAINING PROGRAM FOR STORM WATER MANAGERS, PLANNERS, INSPECTORS AND MUNICIPAL CONTRACTORS

1. Within 12 months from the date of adoption of this order, the principal permittee, in coordination with the co-permittees, shall develop a training program including a training schedule, curriculum content, and defined expertise and competencies for storm water managers, inspectors, maintenance crew, those involved in the review and approval of WQMPs, public works employees, community planners and for those preparing and/or reviewing CEQA documentation and for municipal contractors.
2. The curriculum content should include: federal, state and local water quality laws and regulations as they apply to construction and grading activities, industrial and commercial activities; the potential effects of construction, industrial and commercial activities and urbanization on water quality; implementation and maintenance of erosion control and pollution prevention measures and sediment control BMPs; the proper use and maintenance of erosion and sediment controls; the enforcement protocols and methods established in the Drainage Area Management Plan, Local Implementation Plan, the Construction Runoff Guidance Manual, Enforcement Consistency Guide and Illicit Discharge/Illegal Connection Training Program. Each permittee may develop its own training program curriculum consistent with the general principles discussed in this and the next paragraph. The training program should be coordinated with the Orange County Vector Control District to insure that vector control issues related to post-construction BMPs are incorporated into the training curriculum.
3. The training modules for each category of trainees (managers, inspectors, planners, contractors, public works crew, etc.) should define the required competencies, outline the curriculum, a testing or other procedure at the end of the training program to determine that the trainees have acquired the requisite knowledge in the storm water program to carry out their duties and proof of completion of training, such as Certificate of Completion, attendance sheets or other proof that training has been completed. .
4. At least every two years, the principal permittee shall provide and document training to applicable public agency staff on Fixed Facility Model Maintenance Procedure, Field Program Model Training and Drainage Facility Model Maintenance Training. The field program training should include Model Integrated Pest Management, Pesticide and Fertilizer Guidelines. Each permittee shall attend at least three of these training sessions during the term of this permit. The training sessions may be conducted in classrooms or using videos, DVDs, or other multimedia with appropriate documentation

and a final test to verify that the material has been properly reviewed and understood. The permittees have the option to develop and conduct their own training program as indicated in Paragraph 2, above.

5. The principal permittee shall conduct and document public employee training for model environmental review, and on how to conduct public/business education for preparation of environmental documents. The permittees have the option to develop and conduct their own training program as indicated in Paragraph 2, above.
6. The principal permittee shall provide BMP and training information to municipal contractors to assist the contractors in training their staff. In instances where applicable municipal operations are performed by contract staff, the permittees shall require evidence that contract staff have received a level of training equivalent to that listed above. The permittees have the option to develop and conduct their own training program as indicated in Paragraph 2, above.
7. The principal permittee shall notify designated Regional Board staff via e-mail at least 30 days prior to conducting any of these training sessions.
8. Each permittee shall have adequately trained all its staff involved with storm water related projects within 60 days from being assigned these duties and on an annual basis thereafter, prior to the rainy season.
9. Each permittee shall maintain a written record of all training provided to its storm water and related program staff.

XVII. NOTIFICATION REQUIREMENTS

1. Within 24 hours of discovery, each permittee shall provide oral or e-mail notification to Regional Board staff of non-compliant sites within its jurisdiction that are determined to pose imminent threat to human health or the environment (e.g., sewage spills that could impact water contact recreation, an oil spill that could impact wildlife, a hazardous substance spill where residents are evacuated, etc.). Following oral or email notification, a written report must be submitted to the Regional Board office within 5 business days, detailing the nature of the non-compliance, any corrective action taken by the site owner, other relevant information (e.g., past history of non-compliance, environmental damage resulting from the non-compliance, site owner responsiveness) and the type of enforcement that will be carried out by the permittee. Further, incidences of non-compliance shall be recorded along with the information noted in the written report and the final outcome/enforcement for the incident in the databases for construction, industrial and commercial inspections⁶¹.
2. At a minimum, all sewage spills above 1,000 gallons and all reportable quantities of hazardous waste spills as per 40CFR 117 and 302 shall be reported within 24 hours. All spill incidents shall be also included in the annual report. The permittees may propose a reporting program, including reportable incidents and quantities, jointly with other agencies, such as the County Health Care Agency, for approval by the Executive Officer.

⁶¹ The reporting schedule may be revised with the approval of the Executive Officer.

XVIII. WATERSHED ACTION PLANS AND TMDL IMPLEMENTATION**A. IMPAIRED WATERBODIES WITH NO TMDLS**

1. The principal permittee, in collaboration with the co-permittees, shall develop Watershed Action Plans for areas where such a Plan has not been developed. Existing Watershed Action Plans and those under development shall be updated as new TMDLs are approved by the Regional Board.
2. Each Watershed Action Plan shall identify impaired waters [CWA § 303(d) listed], pollutants causing impairment, monitoring programs for these pollutants, control measures, including any BMPs that the permittees are currently implementing, and any BMPs that the permittees are proposing to implement. All construction sites that are adjacent to (within 200 feet) or discharging directly to a waterbody listed for sediments or turbidity shall be treated as high priority sites. In selecting control measures, the listed pollutants shall be treated as primary pollutants of concern and these pollutants shall be addressed through source control, site design, pollution prevention and structural treatment control BMPs.

B. WATERBODIES WITH TECHNICAL TMDLS (NO IMPLEMENTATION PLANS)

1. As required under a consent decree, in 2002, the EPA promulgated technical TMDLs for toxic pollutants in San Diego Creek and Newport Bay, including metals, organochlorine compounds, selenium and organophosphate pesticides. EPA and the Los Angeles Regional Water Quality Control Board established technical TMDLs for metals in Coyote Creek. Technical TMDLs do not include implementation plans or compliance schedules.
2. In collaboration with stakeholders, Regional Board staff are developing revised TMDLs that are expected to supplant the toxics TMDLs promulgated by EPA for the Newport watershed. The TMDLs will include implementation plans and compliance schedules. Implementation plans for the Coyote Creek TMDLs are also being developed.
3. In summary, work related to the following established TMDLs is ongoing:
 - a) Metals (San Diego Creek and Newport Bay (including Rhine Channel))
 - b) Metals (Mercury, Chromium) (Rhine Channel)
 - c) Organochlorine compounds (San Diego Creek and Newport Bay; also see Paragraphs 5 and 6, below)
 - d) Selenium (San Diego Creek and Newport Bay)
 - e) Copper, lead and zinc (Coyote Creek, TMDL developed by the EPA and the Los Angeles Regional Water Quality Control Board for wet weather)
 - f) Copper (Coyote Creek, TMDL developed by the EPA and the Los Angeles Regional Water Quality Control Board for dry weather)
4. The permittees in the Newport Watershed shall comply with the wasteload allocations specified in the established TMDLs and shown in Tables 1 A/B/C, 2 A/B/C/D and 3. These wasteload allocations shall remain in effect unless and

until alternative wasteload allocations are established in TMDLs approved by the Regional Board, State Board, Office of Administrative Law and EPA.

**Tables 1 A/B/C/D – Urban Runoff Waste Load Allocations for Metals
(TMDLs promulgated by U.S. EPA)⁶²**

A- San Diego Creek and Tributaries – Concentration based TMDL

	Base flows (<20 cfs) Hardness- 400 mg/L		Small flows (21-181 cfs) Hardness- 322 mg/L		Med. flows (182-815 cfs) Hardness- 236 mg/L		Large Flows (>815 cfs) Hardness- 197 mg/L
	Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute
Cd (ug/L)	19.1	6.2	15.1	5.3	10.8	4.2	8.9
Cu (ug/L)	50	29.3	40	24.3	30.2	18.7	25.5
Pb (ug/L)	281	10.9	224	8.8	162	6.3	134
Zn (ug/L)	379	382	316	318	243	244	208

B- Newport Bay

Cd *	Cu	Pb	Zn
9,589 lbs/yr	3,403 lbs/yr	17,638 lbs/yr	174,057 lbs/yr

* (Applies to Upper Bay only, estimated as 40% of Newport Bay volume)

C- Rhine Channel

Mercury (Hg)	Chromium (Cr)
0.0171 kg/yr	5.66 kg/yr

D- Concentration-based Dissolved Metal TMDLs, WLAs and LAs for Newport Bay

	Dissolved saltwater TMDLs and allocations which apply to direct discharges to the bay, including storm drains/channels and metals loading associated with boats	
	Acute	Chronic
Cd* (ug/L)	42	9.3
Cu (ug/L)	4.8	3.1
Pb (ug/L)	210	8.1
Zn (ug/L)	90	81

* (Applies to Upper Bay only, estimated as 40% of Newport Bay volume).

⁶² From Total Maximum Daily Loads For Toxic Pollutants San Diego Creek and Newport Bay, California, U.S. EPA – Region 9, established June 14, 2002.

**Tables 2 A/B/C/D – Urban Runoff Waste Load Allocations for Organochlorine Compounds
(TMDLs promulgated by U.S. EPA)⁶³**

A- San Diego Creek and Tributaries

Total DDT	Chlordane	Dieldrin	PCBs	Toxaphene
302.8 g/yr	220.3 g/yr	183.4 g/yr	177.7 g/yr	6.2 g/yr

B- Upper Newport Bay

Total DDT	Chlordane	PCBs
207.4 g/yr	120.5 g/yr	609.7 g/yr

C – Lower Newport Bay

Total DDT	Chlordane	Dieldrin	PCBs
76.3 g/yr	12.6 g/yr	4.45 g/yr	303.3 g/yr

D – Rhine Channel

	Total DDT	Chlordane	Dieldrin	PCBs
WLA	0.7 g/yr	0.1 g/yr	0.13 g/yr	4.1 g/yr

**Table 3 – Urban Runoff Waste Load Allocation for Selenium – San Diego
Creek and Tributaries
(TMDL promulgated by U.S. EPA)⁶⁴**

Base flows (<20 cfs)	Small flows (21-181 cfs)	Med. flows (182–814 cfs)	Large Flows (>814 cfs)
0.4 lbs/yr	1.0 lbs/yr	1.0 lbs/yr	5.3 lbs/yr

5. The Regional Board adopted TMDLs, including an implementation plan, for organochlorine compounds in September 2007. These TMDLs must be submitted for approval by the State Board, Office of Administrative Law and EPA. These TMDLs have not yet been submitted to the State Board for its approval. However, stakeholders in the watershed are already taking steps to implement the TMDLs through a Toxicity Reduction and Investigation Program (TRIP) that will address the organochlorine compounds and other toxic pollutants, including metals, in the Newport Bay watershed. These TMDLs will become effective upon approval by the State Board and Office of Administrative

⁶³ From Total Maximum Daily Loads For Toxic Pollutants San Diego Creek and Newport Bay, California, U.S. EPA – Region 9, established June 14, 2002.

⁶⁴ From Total Maximum Daily Loads For Toxic Pollutants San Diego Creek and Newport Bay, California, U.S. EPA – Region 9, established June 14, 2002.

Law but will not supplant the EPA organochlorine compounds TMDLs until they are approved by EPA. Accordingly, upon approval of the Regional Board-adopted organochlorine compounds TMDLs by the State Board and the Office of Administrative Law, the permittees shall comply with both the EPA and Regional Board wasteload allocations specified in Tables 2 A/B/C/D and Table 4, respectively. In accordance with the Regional Board TMDLs, compliance with the allocations specified in Table 4 shall be achieved as soon as possible but no later than December 31, 2015. Upon approval of the Regional Board-approved organochlorine compounds TMDLs by EPA, the applicable wasteload allocations shall be those specified in Table 4.

Table 4 – Urban Runoff Waste Load Allocations for Organochlorine Compounds (TMDLs approved by Santa Ana Regional Water Quality Control Board)⁶⁵

	Total DDT	Chlordane	Total PCBs	Toxaphene
San Diego Creek	128.3 g/yr			1.9 g/yr
Upper Newport Bay	51.8 g/yr	30.1 g/yr	29.8 g/yr	
Lower Newport Bay	19.1 g/yr	11.0 g/yr	78.1 g/yr	

- The organochlorine compounds are carried by fine sediment into the water column. Since the use of organochlorine pesticides has been banned, the levels of these compounds have been steadily decreasing in the watershed. The implementation plan requires monitoring to verify the decreasing trend and strict controls on sediment discharges. The stakeholders in the San Diego Creek/Newport Bay watershed have an established Regional Monitoring Program (RMP), and in early 2008, initiated the Toxicity Reduction and Investigation Program (TRIP) consistent with the Regional Board-approved implementation plan for the organochlorine compounds TMDLs. Recognizing the difficulties inherent in measuring the allocations presented in Table 4, the permittees shall evaluate the monitoring results with the targets shown in Tables 5A/B and determine the need for any additional control measures to achieve the targets. Monitoring shall be conducted at representative locations within San Diego Creek and Newport Bay and include water column, sediment and fish tissue monitoring. The permittees may use current monitoring locations.

⁶⁵ From Resolution No. R8-2007-0024, Table NB-OCs-10.

**Tables 5 A /B - Water Column Targets for Protection of
Aquatic Life, Wildlife & Human Health⁶⁶**

A - San Diego Creek and Tributaries

	Total DDT	Toxaphene
Acute Criterion	1.1 µg/l	0.73 µg/l
Chronic Criterion	0.001 µg/l	0.0002 µg/l
Human Health Criterion	0.00059 µg/l	0.00075 µg/l

B - Upper and Lower Newport Bay

	Total DDT	Chlordane	Total PCBs
Acute Criterion	0.13 µg/l	0.09 µg/l	
Chronic Criterion	0.001 µg/l	0.0004 µg/l	0.03 µg/l
Human Health Criterion	0.00059 µg/l	0.00059 µg/l	0.00017 µg/l

7. Regional Board staff, in collaboration with the stakeholders, is developing TMDLs for metals and selenium that will include implementation plans and monitoring programs and that are intended to replace the EPA TMDLs. The permittees within the Newport Bay watershed shall continue to participate in the development and implementation of these TMDLs. This Order will be reopened to incorporate revised allocations based upon TMDLs, including implementation plans, for metals and selenium approved by the Regional Board, State Board and Office of Administrative Law. As for the organochlorine compounds, the EPA promulgated allocations for these constituents will also remain in effect unless and until EPA approves the Regional Board's TMDLs for these constituents.
8. Selenium is a naturally occurring element in the soil but its presence in surface waters in the Newport Bay watershed is largely the result of changes in the hydrologic regime as the result of extensive drainage modifications. Selenium-laden shallow and rising groundwater enters the storm water conveyance systems and flows into San Diego Creek and its tributaries. Groundwater inputs are the major source of selenium in San Diego Creek and Newport Bay. Currently, there are no economically and technically feasible treatment techniques to remove selenium from the water column.

⁶⁶ From Resolution No. R8-2007-0024, Table NB-OCs-4.

The stakeholders have initiated pilot studies to determine the most efficient methods for treatment and removal of selenium. Through the Nitrogen and Selenium Management Program, the watershed stakeholders are developing comprehensive selenium (and nitrogen) management plans, which are expected to form the basis, at least in part, for the selenium implementation plan (and a revised nutrient TMDL implementation plan). A collaborative watershed approach to implement the nitrogen and selenium TMDLs for San Diego Creek and Newport Bay is expected. A proposed Cooperative Watershed Program that will fulfill applicable requirements of the selenium TMDL implementation plan must be submitted by the stakeholders covered by this order within 24 months of adoption of this order, or one month after approval of the selenium TMDLs by OAL, whichever is later. The Program must be implemented upon Regional Board approval. As long as the stakeholders are participating in and implementing the approved Cooperative Watershed Program, they will not be in violation of this order with respect to the nitrogen and selenium TMDLs for San Diego Creek and Newport Bay. In the event that any of the stakeholders does not participate, or if the collaborative approach is not approved or fails to achieve the TMDLs, the Regional Board will exercise its option to issue individual waste discharge requirements or waivers of waste discharge requirements.

9. The permittees with discharges tributary to Coyote Creek or the San Gabriel River shall develop and implement a constituent-specific source control plan for copper, lead and zinc until a TMDL implementation plan is developed. The source control plan shall include a monitoring program and shall be completed within 12 months from the date of adoption of this order. The source control plan shall be designed to ensure compliance with the following wasteload allocations:

Table 6 – Municipal Storm Water Wasteload Allocations - Coyote Creek

	Copper	Lead	Zinc
Dry Weather	0.941 kg/day		
Wet Weather	9.41 kg/day	36.9 kg/day	55.0 kg/day

10. Within 12 months of adoption of this order, the principal permittee, in collaboration with the co-permittees with discharges to the San Gabriel River/Coyote Creek and/or their tributaries, shall develop a monitoring program to monitor dry weather (for copper) and wet weather (for copper,
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lead and zinc) flows in Coyote Creek. The monitoring results shall be evaluated against the following numeric targets:

**Table 7 – Numeric Targets - Coyote Creek
 (total recoverable metals)**

	Copper	Lead	Zinc
Dry Weather ⁶⁷	3.7 µg/l		
Wet Weather	27 µg/l	106 µg/l	158 µg/l

C. WATERBODIES WITH TMDL IMPLEMENTATION PLANS AND COMPLIANCE SCHEDULES BEYOND THE PERMIT TERM

1. The Regional Board adopted a TMDL implementation plan for fecal coliform bacteria in Newport Bay that included a compliance date for water contact recreation standards no later than December 30, 2013 (within the permit term), and with shellfish standards no later than December 30, 2019. The allocations are shown in the tables below.

**Table 8A – Fecal Coliform TMDL and Allocations for Newport Bay
 To be achieved no later than December 30, 2013**

Urban Runoff Waste Load Allocation for Fecal Coliform	As soon as possible, but no later than December 30, 2013	5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30- day period.
Total Maximum Daily Load for Fecal Coliform		5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period.
Load Allocations for Fecal Coliform in Agricultural Runoff, including stormwater, Discharges		5-Sample/30-days Geometric Mean less than 200 organisms/ 100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period.
Load Allocations for Fecal Coliform from Natural Sources in all Discharges	In effect	5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period.
Allocations for Vessel Waste		0 MPN/100 mL - No discharge.

⁶⁷ Based on saltwater CTR criterion in San Gabriel River estuary.

**Table 8B – Fecal Coliform TMDL and Allocations for Newport Bay
Before December 30, 2019**

Urban Runoff Waste Load Allocation for Fecal Coliform	As soon as possible, but no later than December 30, 2019	Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Total Maximum Daily Load for Fecal Coliform		Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Load Allocations for Fecal Coliform in Agricultural Runoff, including stormwater, Discharges		Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Load Allocations for Fecal Coliform from Natural Sources in all Discharges		Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Allocations for Vessel Waste	In effect	0 MPN/100 mL - No discharge.

The permittees shall comply with the wasteload allocations for urban runoff in Tables 8A and 8B in accordance with the deadlines in Tables 8A and 8B. Compliance determination for fecal coliform shall be based on monitoring conducted at representative sampling locations within San Diego Creek and Newport Bay. (The permittees may use the current sampling locations for compliance determination.)

2. The fecal coliform TMDL implementation plan includes a number of studies that are expected to inform possible revision of the TMDL, including the wasteload allocations for urban runoff and the implementation plan. The permittees shall revise the Watershed Action Plans to include implementation measures and schedules for further studies related to the TMDL for fecal coliform in Newport Bay, as set forth in the January 2000, March 2000 and April 2000 Newport Bay Fecal Coliform TMDL Technical Reports submitted by the permittees. The permittees within this watershed shall complete the ongoing source identification and characterization plan for urban runoff by December 31, 2009 and continue their participation in the studies and monitoring programs as specified in the implementation plan. Recommendations for an updated TMDL report and revisions to the fecal coliform TMDL shall be provided within twelve months of completion of the Source Identification and Characterization Investigation and Report submittal, as specified in the implementation plan.
3. The fecal coliform TMDL includes waste load allocations for storm water in urban runoff and load allocations in agricultural runoff. The University of California Cooperative Extension and Orange County Coastkeeper are working with the agricultural operators in the area to reduce runoff from their operations.

D. WATERBODIES WITH TMDL IMPLEMENTATION PLANS AND COMPLIANCE SCHEDULES WITHIN THE PERMIT TERM

1. The Regional Board/EPA developed TMDLs for diazinon and chlorpyrifos in San Diego Creek and for chlorpyrifos in Newport Bay. The following allocations are included in the TMDLs (Tables 9A and 9B are extracted from the Implementation Plan⁶⁸). The permittees in the Newport Bay Watershed shall comply with the allocations in Tables 9 A and B.

Table 9A**Diazinon and Chlorpyrifos Allocations for San Diego Creek***

Category	Diazinon (ng/l)		Chlorpyrifos (ng/l)	
	Acute	Chronic	Acute	Chronic
Wasteload Allocation	72	45	18	12.6

Chronic means 4-consecutive day average

* Pursuant to the TMDLs, compliance with these allocations was achieved no later than December 1, 2007

Table 9B**Chlorpyrifos Allocations for Upper Newport Bay***

Category	Acute (ng/l)	Chronic (ng/l)
Wasteload allocation	18	8.1

Chronic means 4-consecutive day average

* Pursuant to the TMDLs, compliance with these allocations was achieved no later than December 1, 2007

The Regional Board adopted an implementation plan for these TMDLs. In accordance with the implementation plan, the Regional Monitoring Program was modified to include analysis for organophosphate pesticides and toxicity. The Regional Board also performed simulation studies to predict contaminant concentrations in the Bay. Based on the results of these studies, the Regional Board will reevaluate the TMDLs every three years. The permittees shall continue to participate in any additional monitoring that is needed to confirm that the permittees are in compliance with the allocations.

Compliance determination for diazinon and chlorpyrifos for San Diego Creek shall be based on monitoring conducted at representative monitoring locations within San Diego Creek (the permittees may use current monitoring locations for this purpose).

Compliance determination for chlorpyrifos for Upper Newport Bay shall be based on monitoring conducted at representative monitoring locations within Upper Newport Bay (the permittees may use current monitoring locations for this purpose).

⁶⁸ Attachment to Resolution No. R8-2003-0039.

The County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County
Areawide Urban Storm Water Runoff

2. The waste load allocations established in the nutrient TMDLs adopted by the Regional Board in 1998 for Newport Bay included 5, 10 and 15 year allocations. The overall allocations for 2012 have been met.

Table 10 - Seasonal Load Allocations of Total Nitrogen for the Newport Bay Watershed (Urban Runoff)⁶⁹

Nutrient TMDL	1990-1997 Loading	2002 Summer Allocation (Apr-Sept) ⁷⁰	2007 Summer Allocation (Apr-Sept) ⁷¹	2012 Winter Allocation (Oct-Mar) ⁷²
Newport Bay Watershed	lbs/year TN ^{73,74}	lbs/season TN	lbs/season TN	lbs/season TN
Urban runoff	277,131 ⁷⁵	20,785	16,628	55,442
		5 year target	10 year target	15 year target

Table 11 - Annual Total Nitrogen Load Allocations for San Diego Creek, Reach 2 During Non-Storm Conditions.⁷⁶

	2012 Allocation lbs/day TN ⁷⁷
TMDL	14 lbs/day (TN)
Waste Load Allocation (Urban runoff)	5.5 lbs/day (TN)

3. The permittees shall verify, through monitoring or other mechanisms, that they have met the following load allocations for phosphorous for urban runoff (recent

⁶⁹ From Attachment to Resolution No. 98-9 as amended by Resolution No. 98-100, Table 5-9b. Compliance dates are as soon as possible but no later than December 31 of the years specified (Table 5-9a of Resolution No. 98-9, as amended).

⁷⁰ Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

⁷¹ See previous footnote.

⁷² Total nitrogen winter loading limit applies between October 1 and March 31 when the mean daily flow rate at San Diego Creek at Campus Drive is below 50 cubic feet per second (cfs), and when the mean daily flow rate in San Diego Creek at Campus Drive is above 50 cubic feet per second (cfs), but not as the result of precipitation. Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable. Assumes 67 non-storm days.

⁷³ TIN = (NO₃+NH₃).

⁷⁴ TN = (TIN + Organic N).

⁷⁵ Estimated annual average (summer and winter loading).

⁷⁶ From Attachment to Resolution No. 98-9 as amended by Resolution No. 98-100, Table 5-9d. Total nitrogen loading limit applies when the mean daily flow rate at San Diego Creek at Culver Drive is below 25 cubic feet per second (cfs), and when the mean daily flow rate in San Diego Creek at Culver Drive is above 25 cubic feet per second (cfs), but not as the result of precipitation.

⁷⁷ Compliance to be achieved no later than December 31, 2012. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

monitoring data indicate that these target load allocations have been already met).

**Table 12 - Annual Total Phosphorous Load Allocations
For The Newport Bay Watershed⁷⁸**

	2002 Allocation lbs/year TP ⁷⁹	2007 Allocation lbs/year TP ⁸⁰
TMDL	86,912	62,080
Urban areas	4,102	2,960

The permittees shall comply with the waste load allocations for urban runoff in Tables 10, 11 and 12 in accordance with the schedules in Tables 10, 11 and 12. Compliance determination for nutrients in San Diego Creek and Newport Bay shall be based on monitoring conducted at representative monitoring locations within San Diego Creek and Newport Bay.

4. The permittees shall meet the following target load allocations for sediment in urban runoff by implementing the BMPs contained in Sections 7 and 8 of the DAMP and the "March 1999 Technical Report on the Implementation of the TMDL for Sediment in the Newport Bay Watershed, the October 1999 Preliminary Sediment Load Allocation Analysis for San Diego Creek and Newport Bay, and the February 2000 Sediment Yield and Transport Investigation for San Diego Creek and Newport Bay".
 - a) The load allocations for sediment discharges to Newport Bay from urban areas shall not exceed 2,500 tons per year, implemented as a 10-year running annual average.
 - b) The load allocations for sediment discharges to San Diego Creek and its tributaries from urban areas shall not exceed 2,500 tons per year, implemented as a 10-year running annual average.

Compliance determination for sediment in San Diego Creek and Newport Bay shall be based on monitoring conducted at San Diego Creek at Campus, starting from year 2000 and based on a 10-year running average. The data from this monitoring is to be submitted annually on February 27.

⁷⁸ From Attachment to Resolution No. 98-9 as amended by Resolution No. 98-100, Table 5-9c. Compliance dates are as soon as possible but no later than December 31 of the years specified (Table 5-9a of Resolution No. 98-9, as amended).

⁷⁹ Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

⁸⁰ See previous footnote.

5. This order may be reopened to include additional requirements based on new or revised TMDLs.

E. COMPLIANCE DETERMINATION WITH TMDLs AND BMP IMPLEMENTATION

1. Except for sediment TMDLs in San Diego Creek and Newport Bay, compliance determinations shall be based on monitoring within the receiving waters. For sediment TMDLs, compliance determination shall be based on monitoring in the Creek.
2. Based on the TMDLs, effluent limits have been specified to ensure consistency with the wasteload allocations. If the monitoring results indicate an exceedance of the wasteload allocations, the permittees shall reevaluate the current control measures and propose additional BMPs/control measures. This reevaluation and proposal for revisions to the current BMPs/control measures (revised plan) shall be submitted to the Executive Officer within 12 months of determining that an exceedance has occurred. Upon approval, the permittees shall immediately start implementation of the revised plan.

XIX. PROGRAM MANAGEMENT/DAMP REVIEW

1. By July 1 of each year, the permittees shall evaluate the DAMP to determine whether any revisions are necessary in order to reduce pollutants in MS4 discharges to the maximum extent practicable. In addition, the first annual review after adoption of this order shall include the following:
 - a) Review of the formal training needs of municipal employees
 - b) Review of coordinating meeting/training for the designated NPDES inspectors.
2. The annual report shall include the findings of this review and a schedule for any needed revisions or a copy of the amended DAMP with the proposed changes.
3. Upon the effective date of this Order, the permittees shall start implementing the 2007 DAMP. If modifications to the 2007 DAMP are determined to be necessary, the permittees shall prepare and submit DAMP modifications to the Regional Board Executive Officer, for consideration by the Regional Board at a public hearing. Such modifications may include regional and watershed-specific requirements and/or waste load allocations developed and approved pursuant to the TMDL process.
4. The Management Committee shall meet at least six times a year to discuss issues related to permit implementation and regional and statewide issues. Each permittee's designated representative or a designated alternate should attend at least 75% of these meetings.

XX. FISCAL ANALYSIS

1. Each permittee shall secure the resources necessary to meet all requirements of this order.

2. The permittees shall prepare and submit a unified fiscal accountability analysis to the Executive Officer of the Regional Board. The fiscal analysis shall be submitted with the annual report shall, at a minimum, include the following:
 - a) Each permittee's expenditures for the previous fiscal year,
 - b) Each permittee's budget for the current fiscal year,
 - c) A description of the source of funds, and
 - d) Each permittee's estimated budget for the next fiscal year.

XXI. PROVISIONS

1. All reports submitted by the permittees as per the requirements in this order for the approval of the Executive Officer shall be publicly noticed and made available on the Regional Board's website, or through other means, for public review and comments. The Executive Officer shall consider all comments received prior to approval of the reports. Any unresolved significant issues shall be scheduled for a public hearing at a Regional Board meeting prior to approval by the Executive Officer.
2. Permittees shall demonstrate compliance with all the requirements in this order and specifically with Section III.2 Discharge Limitations and Section IV. Receiving Water Limitations, through timely implementation of their DAMP and any modifications, revisions, or amendments developed pursuant to this order approved by the Executive Officer or determined by the permittee to be necessary to meet the requirements of this order.
3. The permittees shall, at a minimum, implement all elements of the DAMP. Where the dates in the DAMP are different than those of this order, the dates in this order shall prevail. Any proposed revisions to the DAMP shall be submitted with the annual report to the Executive Officer of the Regional Board for review and approval. All approved revisions to the DAMP shall be implemented as per the time schedules approved by the Executive Officer. In addition to those specific controls and actions required by (1) the terms of this order and (2) the DAMP, each permittee shall implement additional controls, if any are necessary, to reduce the discharge of pollutants in storm water to the maximum extent practicable, as required by this order.
4. The permittees shall comply with Monitoring and Reporting Program NO. R8-2008-0030, and any revisions thereto, which is hereby made a part of this order. The Executive Officer is authorized to revise the Monitoring and Reporting Program to allow the permittees to participate in regional, statewide, national or other monitoring programs in lieu of or in addition to Monitoring and Reporting Program No. R8-2008-0030.
5. Within one year of adoption of this order, the permittees, in coordination with the Orange County Fire Chiefs Association, shall develop a list of appropriate BMPs to be implemented to reduce pollutants from training activities, fire hydrant/sprinkler testing or flushing, non-emergency fire fighting and any BMPs feasible for emergency fire fighting flows.

6. Upon approval by the Executive Officer of the Regional Board, all plans, reports and subsequent amendments required by this order shall be implemented and shall become an enforceable part of this order. Prior to approval by the Executive Officer, these plans, reports and amendments shall not be considered as an enforceable part of this order.
7. The permittees shall report to the Executive Officer of the Regional Board:
 - a) Any enforcement actions and discharges of storm or non-storm water, known to the permittees, which may have an impact on human health or the environment,
 - b) Any suspected or reported activities on federal, state, or other entity's land or facilities, where the permittees do not have any jurisdiction, and where the suspected or reported activities may be contributing pollutants to waters of the US.

(Also see reporting requirements in Monitoring and Reporting Program No. R8-2008-0030)
8. The permit application package and special NPDES program requirements contained in 40 CFR 122.21 (a), (b), (d)(2), (f), (p); 122.41 (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l); and 122.42 (c) are incorporated into this order by reference.

XXII. PERMIT MODIFICATION

1. In accordance with 40 CFR 122.41(f), this order may be modified, revoked or reissued prior to its expiration date for the following reasons:
 - a) To address significant changes in conditions identified in the technical reports required by the Regional Board which were unknown at the time of the issuance of this order;
 - b) To incorporate applicable requirements of statewide water quality control plans adopted by the State Water Resources Control Board or any amendments to the Basin Plan approved by the Regional Board, the State Board and, if necessary, by the Office of Administrative Law;
 - c) To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this order; or,
 - d) To incorporate any requirements imposed upon the permittees through the TMDL process.
2. The filing of a request by the permittees for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any conditions of this order.

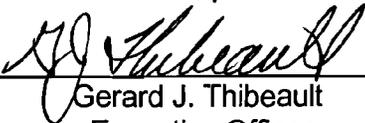
XXIII. PERMIT EXPIRATION AND RENEWAL

1. This order expires on April 1, 2014 and the permittees must file a Report of Waste Discharge (permit application) no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements (40 CFR

122.41(b)). The Report of Waste Discharge shall, at a minimum, include the following:

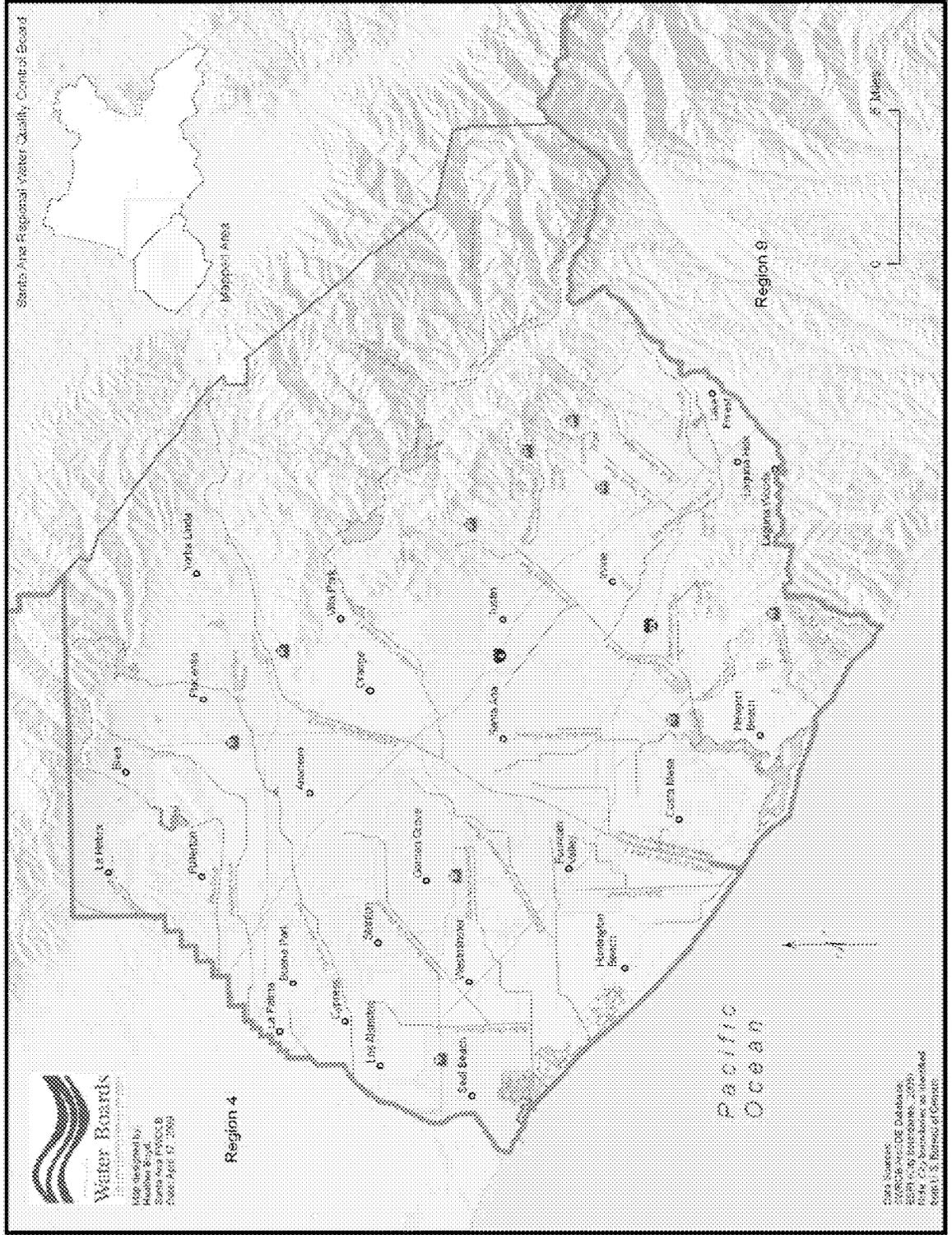
- a) Any revisions to the Drainage Area Management Plan including, but not limited to, all the activities the permittees propose to undertake during the next permit term, goals and objectives of such activities, an evaluation of the need for additional source control and/or structural BMPs, any proposed pilot studies, etc.;
 - b) Changes in land use and/or population including land use map updates;
 - c) Any significant changes to the storm drain systems, outfalls, detention or retention basins or dams and other controls including map updates of the storm drain systems; and,
 - d) Any new or revised program elements and compliance schedule(s) necessary to comply with Section IV of this order.
2. All permit applications (Report of Waste Discharge), annual reports and other information submitted under this order shall be signed by either a principal executive officer or a ranking elected official (40 CFR 122.22(a)(3)) or a duly authorized representative as per 40 CFR 122.22(b).
 3. This order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to Section 402(p) of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption, provided the Regional Administrator of the EPA has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.
 4. Order No. R8-2002-0010 is hereby rescinded.

I, Gerard Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on May 22, 2009.


Gerard J. Thibeault
Executive Officer

Order No. R8-2009-0030 (NPDES No. CAS618030) – cont'd
 The County of Orange, OCFCD, and Incorporated Cities
 Area wide Urban Storm Water Runoff

Attachment
 "A"



Water Boards
 Santa Ana Regional Water Quality Control Board
 Logo designed by
 Kathleen Boyd
 Santa Ana District 8
 Date: April 17, 2009

Case Number:
 CAS618030-0030
 SDWA 10.49 (10/10/2008), 2009
 Risky City Stormwater as identified
 from L1, S. Regional of Orange

Order No. R8-2009-0030
Attachment "C"

LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS
TO THE ORANGE COUNTY STORM WATER SYSTEM

California Department of Transportation (Caltrans), District 12
Southern Pacific Railroad
Atchison, Topeka & Santa Fe Railway Company
Seal Beach Naval Weapons Station
Seal Beach Naval Reserve Center, Los Alamitos
National Forest Service

Universities and Colleges

University of California, Irvine
California State University, Fullerton
Chapman College
Coastline College
Cypress College
Fullerton College
Irvine Valley College
Golden West College
Orange Coast College
Rancho Santiago College

School Districts

Anaheim Elementary School District
Anaheim Union High School District
Brea-Olinda Unified School District
Buena Park Joint Union High School District
Centralia Elementary School District
Cypress Elementary School District
Fountain Valley Union High School District
Fullerton Joint Union High School District
Garden Grove Unified School District
Huntington Beach Elementary School District
Huntington Beach Union High School District
Irvine Unified Union High School District
La Habra Joint Union High School District
Los Alamitos Unified School District
Lowell Joint Union High School District
Magnolia Elementary School District
Newport-Mesa Unified School District
Ocean View Union High School District
Orange Unified School District

Placentia Unified School District
Saddleback Unified School District
Santa Ana Unified School District
Savanna Union High School District
Tustin Unified School District
Westminster Union High School District
Yorba Linda Joint Union High School District

Hospitals

Anaheim General Hospital
Brea Community Hospital
Chapman General Hospital
Children's Hospital of Orange County, Orange
Coastal Communities Hospital, Santa Ana
Fairview Hospital
FHP Hospital, Fountain Valley
Fountain Valley Regional Hospital and Medical Center
Hoag Hospital, Newport Beach
Kaiser Foundation Hospital, Anaheim
Orange County Community Hospital, Buena Park
Pacifica Community Hospital, Huntington Beach
Placentia Linda Community Hospital
Santa Ana Hospital and Medical Center
St. Joseph's Hospital, Orange
U.C. Irvine Medical Center
Vencor Hospital of Orange County, Westminster
Whittier Hospital and Medical Center, Buena Park

Water/Wastewater Agencies

Santa Ana Watershed Project Authority
Irvine Ranch Water District
Los Aliso Water District
El Toro Water District
Mesa Consolidated Water District
San Bernardino County Flood Control District
Riverside County Flood Control & Water Conservation District
L.A. County Department of Public Works
County Sanitation Districts of Orange County
Costa Mesa Sanitary District
Orange County Water District
Metropolitan Water District

**State of California
California Regional Water Quality Control Board
Santa Ana Region**

**Monitoring and Reporting Program No. R8-2009-0030
NPDES No. CAS618030**

**for
the County of Orange, Orange County Flood Control District,
and
Incorporated Cities of Orange County within the Santa Ana Region
Areawide Urban Storm Water Runoff**

I. GENERAL

1. Revisions of the monitoring and reporting program are appropriate to ensure that the permittees are in compliance with requirements and provisions contained in this order. Revisions may be made under the direction of the Executive Officer at any time during the term, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.
2. The Executive Officer is authorized to allow the permittees to participate in statewide, national, or other monitoring programs in lieu of or in addition to this monitoring program.
3. All sample collection, handling, storage, and analysis shall be in accordance with 40 CFR Part 136 or other methods approved by the Executive Officer.
4. The permittees are authorized to complement their monitoring data with other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana Watershed.
5. Any proposals for revisions to the 2003 Monitoring Plan shall be accompanied by a Quality Assurance Project Plan.

II. OBJECTIVES

The Orange County monitoring program was initiated in the mid 1970s with the goal of protecting key environmental resources. Successive iterations of the Orange County MS4 permit required the permittees to develop and implement comprehensive monitoring programs. During the first part of the third term permit, the permittees continued to implement the 1999 Water Quality Monitoring program. In August 2005, the Executive Officer approved the 2003 Monitoring Program that was developed in accordance with the requirements specified in the third term permit. The 2003 Monitoring Program was based on "The Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California" developed by the Southern California Monitoring Coalition. The permittees also participate in the Regional Monitoring Program for San Diego Creek Nutrient TMDL, Southern California Bight Regional Monitoring Program, Southern California Stormwater Monitoring/Research Cooperative Program and other regional monitoring programs. The overall goal of these monitoring programs is to develop and

support an effective watershed and key environmental resources management program. The following are the major objectives:

1. To develop and support an effective municipal urban runoff pollutant source control program.
2. To define water quality status, trends, and pollutants of concern associated with urban runoff and their impact on the beneficial uses of the receiving waters.
3. To characterize pollutants associated with urban runoff and to assess the influence of urban land uses on water quality and the beneficial uses of receiving waters.
4. To identify significant water quality problems related to urban runoff.
5. To identify other sources of pollutants in urban runoff to the maximum extent possible (e.g., atmospheric deposition, contaminated sediments, other non-point sources, etc.)
6. To identify and prohibit illicit discharges.
7. To identify those waters, which without additional action to control pollution from urban storm water discharges, cannot reasonably be expected to attain or maintain applicable water quality standards required to sustain the beneficial uses in the Basin Plan (TMDL monitoring).
8. To determine unit loading rates from different urban land use categories.
9. To determine reference loads and concentrations from unimpacted areas of Orange County including sediment loads from open spaces at the foothills.
10. To determine runoff concentrations and loads as close as possible to the source (e.g., golf courses, restaurants, etc.)
11. To evaluate the effectiveness of existing urban runoff water quality management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs implemented by the permittees. This should also include a determination of concentrations and unit loads that are achievable upon BMP implementation.
12. To evaluate costs and benefits of proposed municipal storm water quality control programs to the stakeholders, including the public.

The Regional Board recognizes that program modifications may be necessary to attain these objectives and authorizes the Executive Officer to evaluate and to determine adequate progress toward meeting each objective and the need for any modifications to the monitoring and reporting program.

III. MONITORING PROGRAM REQUIREMENTS

1. The permittees shall continue to implement the 2003 Monitoring Program. The permittees shall review the 2003 Monitoring Program on an annual basis and

determine the need for any modifications to the program. Each of the following elements of the program shall be evaluated:

- a) Mass Emissions Monitoring. Currently the principal permittee monitors 11 mass emissions stations to estimate the total mass emissions from the MS4; assess trends in mass emissions over time; and to determine if the MS4 is contributing to exceedances of water quality objectives or beneficial uses, by comparing results to the California Toxics Rule (CTR), Basin Plan, Ocean Plan and/or other relevant standards. Samples are collected from the first storm event and two more storm events during the rainy season. A minimum of three dry-weather samples are also collected. Samples from the first rain event each year are analyzed for the entire suite of priority pollutants. All samples are analyzed for metals, pH, TSS, TOC, pesticides/herbicides, and constituents which are known to have contributed to impairment of local receiving waters. An additional 4 mass emissions stations are utilized only for nutrient analysis for TMDL requirements. Dry weather samples are also analyzed for oil and grease. Sediments associated with mass emissions are analyzed for constituents of concern.
- b) Estuary/Wetlands Monitoring: Currently the permittees monitor 20 sites in Upper Newport estuary, Talbert Marsh, and Bolsa Chica wetlands areas to determine the effects of storm water and non-storm water runoff associated with increased urbanization on these systems. These monitoring locations include representative areas surrounding channel outfalls and areas away from channel outfalls to enable the determination of storm water and non-storm water effects on sediment chemistry, toxicity, benthic communities, nutrient status, and spatial extent of sediment fate within the estuarine environment.
- c) Water Column Toxicity Monitoring: The current monitoring program analyses for toxicity to freshwater and marine species on mass emissions samples to determine the impacts of storm water and non-storm water runoff on toxicity of receiving waters.
- d) Sediment: The permittees monitor sediment toxicity at seven stations in Newport Bay and seven stations along Huntington Harbour/Talbert Marsh areas.
- e) Bacteriological/Pathogen Monitoring: The permittees currently monitor 9 representative areas along the Orange County coastline and six inland water bodies/channels, for total coliform, fecal coliform, and enterococcus in order to determine the impacts of storm water and non-storm water runoff on loss of beneficial uses to receiving waters. Currently weekly channel monitoring is conducted in San Diego Creek and Santa Ana-Delhi channels by both Orange County Environmental Health and the Orange County monitoring program. The Executive Officer is authorized to allow the permittees to integrate their monitoring efforts with other bacteriological/pathogen monitoring programs.

- f) Bioassessment: The permittees currently monitor 12 stations in cooperation with the Southern California Coastal Water Research Project (SCCWRP) in efforts to evaluate the biological index approach for Southern California and to design a research project for developing an Index of Biological Integrity (IBI) for the region. The Executive Officer is authorized to allow the permittees to integrate this element of the monitoring program with the regional bioassessment monitoring initiative being coordinated by the Southern California Monitoring Coalition.
 - g) Reconnaissance: The permittees are currently conducting dry and wet weather reconnaissance surveys to identify and prohibit illicit discharges.
2. TMDL/303(d) Listed Waterbody Monitoring: The Permittees shall continue to participate in the Regional Monitoring Programs for the San Diego Creek Nutrient TMDL and the Toxics TMDL.
 3. In addition, strategies must be revised/developed to evaluate the impacts of storm water or non-storm water runoff on all impairments within the Newport Bay watershed and other 303(d) listed waterbodies. Since the 303(d) listing is dynamic, with new waterbodies and new impairments being identified over time, the permittees shall revise their monitoring plan to incorporate new information as it becomes available.

IV. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

1. All progress reports and proposed strategies and plans required by this order shall be signed by the principal permittee, and copies shall be submitted to the Executive Officer of the Regional Board under penalty of perjury.
2. The permittees shall submit an ANNUAL PROGRESS REPORT to the Executive Officer of the Regional Board and to the Regional Administrator of the U.S. EPA, Region 9, no later than November 15th, of each year. This progress report may be submitted in a mutually agreeable electronic format. At a minimum, annual progress report shall include the following:
 - a) A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this order;
 - b) An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the Drainage Area Management Plan. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit/illegal discharges and reducing pollutant loads in storm water discharges;

- c) As assessment of control measures and their effectiveness in addressing pollutants causing or contributing to an exceedance of water quality objectives in receiving waters that are on the 303(d) list of impaired waters.
 - d) The annual report shall include an overall program assessment. The permittees may use the "Municipal Stormwater Program Effectiveness Assessment Guidance" developed by the California Stormwater Quality Association in May 2007 as guidance for assessing program activities at the various outcome levels. The assessment should include each program element required under this order, the expected outcome and the measures used to assess the outcome. The permittees may propose any other methodology for program assessment using measurable targeted outcomes.
 - e) Each permittee shall develop and implement a plan and schedule to address program modifications and improvements identified during the program assessment.
 - f) A summary and analysis of monitoring results from the previous year and any changes to the monitoring program for the following year;
 - g) A unified fiscal accountability analysis, as described in Section XX., Provision, 2, of this order;
 - h) A draft workplan which describes the proposed implementation of the DAMP for next fiscal year. The workplan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each permittee actions for the next fiscal year;
 - i) Major changes in any previously submitted plans/policies; and
 - j) An assessment of the permittees compliance status with the Receiving Water Limitations, Section IV of the Order, including any proposed modifications to the DAMP if the Receiving Water Limitations are not fully achieved.
3. The permittees shall be responsible for the submittal to the principal permittee of all required information/materials needed to comply with this order in a timely manner. All such submittals shall be signed by a duly authorized representative of the permittee under penalty of perjury.
4. The data transmittals to the Regional Board shall be in the form developed by the Stormwater Monitoring Coalition (SMC) and approved by the State Water Resources Control Board in the document entitled "Standardized Data Exchange Formats." This document was developed in order to provide a standard format for all data transfer so that data can universally be shared and evaluated from various programs.

V. REPORTING SCHEDULE

All reports required by this order shall be submitted to the Executive Officer of the Regional Board in accordance with the following schedule:

ITEM	COMPLETION DATE	REPORT DUE DATE
Review planning procedures and CEQA document preparation processes	Within 24 months of adoption	Annual Report
Public Education Committee Meetings	Twice/year	Annual Report
Review DAMP	Annually	Annual Report
Public education workshops	Annually	Annual Report
Update inventory of construction sites and prioritize for inspections	Twice/year	Annual Report
Inspect municipal facilities	Annually	Annual Report
Maintain drainage facilities	80% annually/100% in every two years	Annual Report
Review/revise Implementation Agreement	Within 6 months of adoption	Annual Report
Review/revise Illegal Discharge/Illicit Connection Training Program	Within 6 months of adoption	Annual Report
Evaluate the need for additional debris control measures	Within 12 months of adoption	Annual Report
Complete Public Awareness Survey	July 1, 2012	Annual Report
Review Monitoring Program	Annually	Annual Report
Update industrial site database, including prioritization for inspection	Annually	Annual Report
Update the commercial site database, including prioritization for inspection	Quarterly	Annual Report
Develop a mobile business pilot program	Within 12 months of adoption	Annual Report
Residential common interest area/HOA pilot program	Within 18 months of adoption	Annual Report

Develop a guidance document for preparing conceptual WQMP	Within twelve months of adoption	Annual Report
Review planning documents to ensure water quality protection	Within 24 months of adoption	Annual Report
Report of Waste Discharge	180 days before permit expires	Six months prior to expiration
Annual Report/Fiscal Analysis	November 15th of each year	November 15
Provide training to public agency staff and to contract field operations staff	Once in two years/3 per permit term	November 15
Re-evaluate monitoring program priorities based on previous year's data	Annually	November 15
Evaluate the DAMP	Annually	November 15
Permittee Committee meetings to discuss permit implementation and regional and state-wide issues	Held at least 6 times each year	November 15

Ordered by



Gerard J. Thibeault
Executive Officer