California Regional Water Quality Control Board
San Diego Region

Waste Discharge Requirements for Discharges of Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watershed of the County of Orange, The Incorporated Cities of Orange County, and The Orange County Flood Control District Within the San Diego Region

Tentative Order No. R9-2009-0002
NPDES NO. CAS0108740

Date to be determined

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WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF RUNOFF FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) DRAINING THE WATERSHED OF THE COUNTY OF ORANGE, THE INCORPORATED CITIES OF ORANGE COUNTY, AND THE ORANGE COUNTY FLOOD CONTROL DISTRICT WITHIN THE SAN DIEGO REGION

Adopted by the
California Regional Water Quality Control Board
San Diego Region
on MM DD, 20##

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The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

A. BASIS FOR THE ORDER

1. This Order is based on the federal Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000), applicable State and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (State Board), the Water Quality Control Plan for the San Diego Basin adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.

2. This Order reissues National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108740, which was first adopted by the Regional Board on July 16, 1990 (Order No. 90-38), and then reissued on August 8, 1996 (Order No. 96-03) and February 13, 2002 (Order No. R9-2002-01). On August 21, 2006, in accordance with Order No. R9-2002-01, the County of Orange, as the Principal Copermittee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit.

3. This Order is consistent with the following precedential Orders adopted by the State Water Resources Control Board (State Board) addressing municipal storm water NPDES Permits: Order 99-05, Order WQ-2000-11, Order WQ 2001-15, and Order WQO 2002-0014.

B. REGULATED PARTIES

1. Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates an MS4, through which it discharges urban runoff into waters of the United States within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States (waters of the U.S).

Table 1. Municipal Copermittees

1. City of Aliso Viejo	8. City of Mission Viejo
2. City of Dana Point	9. City of Rancho Santa Margarita
3. City of Laguna Beach	10. City of San Clemente
4. City of Laguna Hills	11. City of San Juan Capistrano
5. City of Laguna Niguel	12. County of Orange
6. City of Laguna Woods	13. Orange County Flood Control District
7. City of Lake Forest	

C. DISCHARGE CHARACTERISTICS

1. Urban rRunoff from an MS4 contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of urban runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.

2. Municipal storm water (wet weather) and non-storm water (dry weather) discharges are likely to contain pollutants that cause or threaten to cause an exceedance of the water quality standards, as outlined in the Regional Board's Water Quality Control Plan for the San Diego Basin (Basin Plan). Wet weather and dry weather discharges are subject to the conditions and requirements established in the San Diego Basin Plan for point source discharges. These water quality standards must be complied with at all times, irrespective of the source and manner of discharge.

3. The most common categories of pollutants in urban runoff include total suspended solids, sediment, pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers), oxygen-demanding substances (decaying vegetation, animal waste), detergents, and trash.

4. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and/or impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

5. Pollutants in urban runoff can threaten and adversely affect human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

6. Urban rRunoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

7. The Copermittees discharge urban runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within one of the eleven hydrologic units (San Juan Hydrologic Unit) comprising the San Diego Region as shown in Tables 2a and 2b. Some of the receiving water bodies have been designated as impaired by the Regional Board and the United States Environmental Protection Agency (USEPA) in 2006 pursuant to CWA section 303(d). Also shown in the Tables are the watershed management areas (WMAs) as defined in the Regional Board report, Watershed Management Approach, January 2002.

8. Trash is a persistent pollutant which can enter receiving waters from the MS4 resulting in accumulation and transport in receiving waters over time. Trash poses a serious threat to the Beneficial Uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.

Table 2a. Common Watersheds and CWA Section 303(d) Impaired Waters

Regional Board Watershed Management Area (WMA)	**Hydrologic Area (HA) or Hydrologic Subarea (HSA) of the San Juan Hydrologic Unit**	**Major Receiving Water Bodies**	**303(d) Pollutant(s)/stressor or Water Quality Effect**[1]
Laguna Coastal Streams	Laguna HA, excluding Aliso HSA and Dana Point HSA	Laguna Canyon Creek, Pacific Ocean	Bacterial indicators Sediment toxicity
Aliso Creek	Aliso HSA	Aliso Creek, Pacific Ocean	Toxicity Phosphorus Bacterial indicators Benzo[b]flouranthene Dieldrin Sediment toxicity

[1] The listed 303(d) pollutant(s) do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Water Resources Control Board's 2006 Section 303(d) List of Water Quality Limited Segments.

Table 2a. Common Watersheds and CWA Section 303(d) Impaired Waters

Regional Board Watershed Management Area (WMA)	Hydrologic Area (HA) or Hydrologic Subarea (HSA) of the San Juan Hydrologic Unit	Major Receiving Water Bodies	303(d) Pollutant(s)/stressor or Water Quality Effect[1]
Dana Point Coastal Streams	Dana Point HSA	Dana Point Harbor, Salt Creek, Pacific Ocean	Bacterial indicators
San Juan Creek	Mission Viejo HA	San Juan Creek, Trabuco Creek, Oso Creek, Canada Gobernadora, Bell Canyon, Verdugo Canyon, Pacific Ocean	Bacterial indicators DDE Chloride Sulfates Total dissolved solids
San Clemente Coastal Streams	San Clemente HA	Prima Deshecha, Segunda Deshecha, Pacific Ocean	Bacterial indicators Phosphorus Turbidity
San Mateo Creek	San Mateo HA	San Mateo Creek, Christianitos Creek, Pacific Ocean	

Table 2b. Common Watersheds and Municipalities

Municipality	Laguna Coastal Streams	Aliso Creek	Dana Point Coastal Streams	San Juan Creek	San Clemente Coastal Streams	San Mateo Creek
Aliso Viejo	☑	☑				
Dana Point			☑	☑		
Laguna Beach	☑	☑				
Laguna Hills *		☑		☑		
Laguna Niguel		☑	☑	☑		
Laguna Woods *		☑				
Lake Forest *		☑				
Mission Viejo		☑		☑		
Rancho Santa Margarita				☑		
San Clemente					☑	☑
San Juan Capistrano				☑		
County of Orange *	☑	☑	☑	☑	☑	☑
Orange County Flood Control District *	☑	☑	☑	☑	☑	
* Municipality also includes areas within watersheds of the Santa Ana Regional Board that are outside the scope of this Order						

9. The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various urban runoff-related pollutants (fecal coliform bacteria, total suspended solids, turbidity, metals, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicates that the majority of urbanized receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that urban runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Orange County.

10. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed urban area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 3-5 percent conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

11. Urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

12. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d)-impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in other areas. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

13. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; (4) ensuring that each drainage feature is adequately maintained in perpetuity; and (5) pretreatment.

14. Non-storm water (dry weather) discharge is not considered a storm water (wet weather) discharge and therefore is not subject to regulation to the Maximum Extent Practicable (MEP) from CWA 402(p)(3)(B)(iii), which is explicitly for "Municipal and Industrial *Stormwater Discharges* (emphasis added)". Non-storm water discharges, per CWA 402(p)(3)(B)(ii) are to be effectively prohibited unless specifically exempted. Exempted discharges identified as a source of pollutants are required to be *addressed* (emphasis added) through prohibition. Dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, urban Southern California watersheds. The Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the United States.

D. ~~URBAN~~ RUNOFF MANAGEMENT PROGRAMS

1. General

a. This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water ~~urban~~ runoff to the maximum extent practicable (MEP). However, since MEP is a dynamic performance standard, which evolves over time as ~~urban~~ runoff management knowledge increases, the Copermittees' ~~urban~~ runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of ~~urban~~ runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region.

b. The Copermittees have generally been implementing the jurisdictional ~~urban~~ runoff management programs required pursuant to Order No. 2002-01 since February 13, 2003. Prior to that, the Copermittees were regulated by Order No. 96-03 since August 8, 1996. However, ~~urban~~ runoff discharges continue to cause or contribute to violations of water quality standards as evidenced by the Copermittees monitoring results.

c. This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in urban runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the expanded Watershed Urban Runoff Management Program section, are designed to specifically address high priority water quality problems. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other Regional Board compliance assessment activities.

d. Updated Jurisdictional Urban Runoff Management Plans (JURMPs) and Watershed Urban Runoff Management Plans (WURMPs), which describe the Copermittees' urban runoff management programs in their entirety, are needed to guide the Copermittees' urban runoff management efforts and aid the Copermittees in tracking urban runoff management program implementation. It is practicable for the Copermittees to update the JURMPs and WURMPs within one year, since significant efforts to develop these programs have already occurred.

e. Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants that have been mobilized by wet-weather or dry-weather flows.

f. Urban rRunoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of pollutants from storm water to the MEP, eliminate pollutants in dry weather flows and protect receiving waters. Urban development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can negatively impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing urban development generates substantial pollutant loads which are discharged in urban runoff to receiving waters.

g. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs.

h. This Order establishes Municipal Action Levels (MALs) for selected pollutants based on nationwide Phase I MS4 monitoring data for pollutants in storm water. The MALs were computed using the statistical based population approach, one of three approaches recommended by the California Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). MALs are identified in Section D of this Order. Copermittees shall implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the MALs. MALs express an integration of the adequacy/inadequacy of programmatic measures and BMPs required in this Order. The exceedance of an MAL will create a presumption that MEP is not being met.

2. **Development Planning**

a. The Standard ~~Urban~~ Storm Water Mitigation Plan (S~~U~~SMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the State Water Resources Control Board (State Board) on October 5, 2000. In the precedential order, the State Board found that the design standards, which essentially require that ~~urban~~ runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the S~~U~~SMP requirements are appropriately applied to the majority of the Priority Development Project categories contained in Section D.1 of this Order. The State Board also gave Regional Water Quality Control Boards the needed discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in S~~U~~SMPs.

b. Controlling ~~urban~~ runoff pollution by using a combination of onsite source control and site design BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the pollutant source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

c. Use of Low-Impact Development (LID) site design BMPs at new development,

redevelopment and retrofit projects can be an effective means for minimizing the impact of urban runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of urban runoff. Current runoff management, knowledge, practice and technology has resulted in the use of LID BMPs as an acceptable means of meeting the MEP standard.

d. Retail Gasoline Outlets (RGOs) are significant sources of pollutants in urban runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas.

e. Heavy industrial sites are significant sources of pollutants in urban runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design, source control, and treatment control BMPs are needed at heavy industrial sites in order to meet the MEP standard. These BMPs are necessary where the heavy industrial site is larger than one acre. The one acre threshold is appropriate, since it is consistent with requirements in the Phase II NPDES storm water regulations that apply to small municipalities.

f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design and maintenance to avoid standing water can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, the Orange County Vector Control District, and the California Department of Public Health during the development and implementation of urban runoff management programs.

g. The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil.

3. **Construction and Existing Development**

a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, each Copermittee is responsible for enforcing its local permits, plans, and ordinances, and the Regional Board is responsible for enforcing the General Construction Activities Storm Water Permit, State Board Order 99-08 DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, State Board Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit). NPDES municipal regulations require that municipalities develop and implement measures to address runoff from industrial and construction activities. Those measures may require the implementation of additional BMPs than are required under the statewide general permits for activities subject to both state and local regulation.

b. Identification of sources of pollutants in ~~urban~~ runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants from its MS4 in storm water are reduced to the MEP. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at high risk areas for pollutant discharges.

c. Historic and current development makes use of natural drainage patterns and features as conveyances for ~~urban~~ runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, man-made, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.

d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.

e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges into MS4s must be reduced using a combination of management measures, including source control, and an effective MS4

maintenance program must be implemented by each Copermittee.

f. Enforcement of local ~~urban~~ runoff related ordinances, permits, and plans is an essential component of every ~~urban~~ runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction.

g. Education is an important aspect of every effective ~~urban~~ runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs understand how their activities impact water quality, how to accomplish their jobs while protecting water quality, and their specific roles and responsibilities for compliance with this Order. Public education, designed to target various urban land users and other audiences, is also essential to inform the public of how individual actions affect receiving water quality and how adverse effects can be minimized.

h. Public participation during the development of ~~urban~~ runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

i. Retrofitting existing development with storm water treatment controls including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems caused by hydromodification in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

4. **Watershed ~~Urban~~ Runoff Management**

a. Since ~~urban~~ runoff within a watershed can flow from and through multiple land uses and political jurisdictions, ~~does not recognize political boundaries,~~ watershed-based ~~urban~~ runoff management can greatly enhance the protection of receiving waters ~~within a watershed~~. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective

watershed-based ~~urban~~ runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based ~~urban~~ runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the Tentative Order. Watershed management of ~~urban~~ runoff does not require Copermittees to expend resources outside of their jurisdictions. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

b. Some ~~urban~~ runoff issues, such as general education and training, can be effectively addressed on a regional basis. Regional approaches to ~~urban~~ runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.

c. It is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially Caltrans, the Department of Defense, and water and sewer districts, is also important.

E. STATUTE AND REGULATORY CONSIDERATIONS

1. The Receiving Water Limitations (RWL) language specified in this Order is consistent with language recommended by the USEPA and established in State Board Water Quality Order 99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Board on June 17, 1999. The RWL in this Order require compliance with water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution.

2. The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for surface waters in Orange County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special

Significance (BIOL). The following additional beneficial uses are identified for coastal waters of Orange County: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

3. This Order is in conformance with State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, and the federal Antidegradation Policy described in 40 CFR 131.12.

4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Copermittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.

5. Section 303(d)(1)(A) of the CWA requires that "Each state must identify those waters within its boundaries for which the effluent limitations…are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the State Board on October 25, 2006. On June 28, 2007 the 2006 303(d) list for California was given final approval by the United States Environmental Protection Agency (USEPA). ~~and by USEPA on November 30, 2006.~~

6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under federal Clean Water Act section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) Second, the local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. Fifth, the

local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIIIB, Section (6) of the California Constitution.

7. Urban Rrunoff treatment and/or mitigation must occur prior to the discharge of urban runoff into receiving waters. Treatment BMPs must not be constructed in waters of the U.S. or State unless the urban runoff flows are sufficiently pretreated to protect the values and functions of the water body. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an urban runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. Without federal authorization (e.g., pursuant to Clean Water Act Section 404), waters of the U.S. may not be converted into, or used as, waste treatment or conveyance facilities. Similarly, waste discharge requirements pursuant to California Water Code Section 13260 are required for the conversion or use of waters of the State as waste treatment or conveyance facilities. Diversion from waters of the U.S./State to treatment facilities and subsequent return to waters of the U.S. is allowable, provided that the effluent complies with applicable NPDES requirements.

8. The issuance of waste discharge requirements and an NPDES permit for the discharge of urban runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

9. Copermittees have operated and have proposed to continue developing and operating facilities that extract water from waters of the U.S., subject such extracted water to treatment, then discharge the treated water back to waters of the U.S. Without sufficient treatment processes, facilities that extract, treat, and discharge (FETDs) to waters of the U.S. may discharge effluent that does not support all designated beneficial uses. This Order does not regulate the discharge of said facilities.Copermittees have implemented operated and have proposed to continue implementing developing and operating facilities that extract water from waters of the U.S., subject such extracted water to treatment, then discharge the treated water back to waters of the U.S. Without sufficient treatment processes, facilities that extract, treat, and discharge (FETDs) to waters of the U.S. may discharge effluent that does not support all designated beneficial uses. Use of the MS4 NPDES Permit to regulate discharges from FETDs is an interim approach until individual or general NPDES requirements for such discharges are developed. At that time, the FETD

~~discharges will be expected to meet all applicable water quality standards. At this time, monitoring of FETDs is necessary to characterize their effectiveness, and ensure that facilities do not add or concentrate pollutants, create conditions of erosion, or unreasonably affect the quality of receiving waters.~~

10. Multiple water bodies in Orange County have been identified as impaired and placed on the 303(d) list. On December 12, 2007, the Regional Board adopted a Basin Plan amendment to incorporate 19 TMDLs developed in *Bacteria Impaired Waters TMDL Project I for Beaches and Creeks* in the San Diego Region. This action meets requirements of section 303(d) of the Clean Water Act (CWA). The Basin Plan amendment process is authorized under section 13240 of the Water Code. In 2004, Bacteria Impaired Waters TMDL Project II included six bacteria impaired shorelines in Dana Point Harbor and San Diego Bay: Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park, B Street, G Street Pier, Tidelands Park, and Chula Vista Marina in San Diego Bay. Since then, only Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay can be confirmed as still impaired by indicator bacteria. On June 11, 2008 the Regional Board adopted a Basin Plan amendment to incorporate *Bacteria Impaired Waters TMDL Project II for San Diego Bay and Dana Point Harbor Shorelines*.

11. The San Diego Regional Board (Regional Board) finds storm water discharges from urban and developing areas in Orange County to be significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Orange County. Furthermore, as delineated in the CWA section 303(d) list, the Regional Board has found that there is a reasonable potential that municipal storm water and dry weather discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Phosphorous, Toxicity and Turbidity. In accordance with CWA section 303(d), the Regional Board is required to establish Total Maximum Daily Loads (TMDLs) for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

12. This Order incorporates MS4 WLAs developed in TMDLs that have been adopted by the Regional Water Board and have been approved by the State Board, Office of Administrative Law and U.S. EPA. The TMDL WLAs in the Order are addressed using water quality-based numeric effluent limits (WQBELs) calculated at end-of-pipe. Water quality-based effluent limits for storm water discharges have been included within this Order. Non storm water dry weather TMDLs have been included in this order as water quality-based effluent limits. Adopted TMDLs will be addressed as Cleanup and Abatement Orders (CAOs) subject to approval and adoption by the Regional Board. Storm water compliance date(s), schedules and monitoring to assess compliance will be included within each adopted TMDL CAO,

even if said date(s) do not fall within the term of this Order.

13. Basin Plan Prohibition 5 in Attachment A of the Permit states "The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited." Taken together with Finding C.1 and Discharge Prohibition 4, the Copermittees discharge from the MS4 is required to meet receiving water limitations.

F. PUBLIC PROCESS

1. The Regional Board has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.

2. The Regional Board has held public hearings on April 11, 2007, and February 13, 2008, and MM DD, 20## and heard and considered all comments pertaining to the terms and conditions of this Order.

IT IS HEREBY ORDERED that the Copermittees, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the Clean Water Act (CWA) and regulations adopted thereunder, must each comply with the following:

A. PROHIBITIONS AND RECEIVING WATER LIMITATIONS

1. Discharges into and from municipal separate storm sewer systems (MS4s) in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state are prohibited.

2. Storm water Ddischarges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.[2]

3. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses, and water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited.

a. Each Copermittee must comply with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the Jurisdictional Urban Runoff Management Program and other requirements of this Order, including any modifications. The Jurisdictional Urban Runoff Management Program must be designed to achieve compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the Jurisdictional Urban Runoff Management Program and other requirements of this Order, the Copermittee must assure compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:

(1) Upon a determination by either the Copermittee or the Regional Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee must promptly notify the Regional Board within 30 days and thereafter submit a report to the Regional Board that describes best management practices (BMPs) that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the Annual Report update to the Jurisdictional Urban Runoff Management Program

[2] This prohibition does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer).

unless the Regional Board directs an earlier submittal. The report must include an implementation schedule. The Regional Board may require modifications to the report;

(2) Submit any modifications to the report required by the Regional Board within 30 days of notification;

(3) Within 30 days following approval of the report described above by the Regional Board, the Copermittee must revise its Jurisdictional Urban Runoff Management Program and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required; and

(4) Implement the revised Jurisdictional Urban Runoff Management Program and monitoring program in accordance with the approved schedule.

b. So long as the Copermittee has complied with the procedures set forth above and is implementing the revised Jurisdictional Urban Runoff Management Program, the Copermittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to do so. The Copermittee will have to repeat the procedure set forth above to comply with the receiving water limitations for continuing or recurring exceedances of the same water quality standard(s) unless directed to do otherwise by the Regional Board Executive Officer.

c. Nothing in section A.3 must prevent the Regional Board from enforcing any provision of this Order while the Copermittee prepares and implements the above report.

4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order.

5. Discharges of Waste to State Water Quality Protected Areas (SWQPAs) or Areas of Special Biological Significance (ASBS) are prohibited except where allowable under a State approved Ocean Plan Exception or Special Condition.

B. NON-STORM WATER DISCHARGES

1. Each Copermittee must effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit; or not prohibited in accordance with sections B.2 and B.3 below.

2. The following categories of non-storm water discharges are not prohibited unless a Copermittee or the Regional Board identifies the discharge category as a significant source of pollutants to waters of the U.S. For such a discharge category, the Copermittee must either prohibit the discharge category or develop and implement appropriate control measures to prevent reduce the discharge of pollutants to the MEP MS4 and report to the Regional Board pursuant to Section HK.1 and HK.3 of this Order.

   a. Diverted stream flows;
   b. Rising ground waters;
   c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
   d. Uncontaminated pumped ground water;
   e. Foundation drains;
   f. Springs;
   g. Water from crawl space pumps;
   h. Footing drains;
   i. Air conditioning condensation;
   j. Flows from riparian habitats and wetlands;
   k. Water line flushing;
   l. Landscape irrigation;
   m.l. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
   n. Irrigation water;
   o.m. Lawn watering;
   p.n. Individual residential car washing; and
   o. Dechlorinated swimming pool discharges; and
   p. Saline swimming pool discharges directly to a saline water body.

3. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited. As part of the Jurisdictional Urban Runoff Management Plan (JURMP), each Copermittee must develop and implement a program to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified by the Copermittee to be significant sources of pollutants to waters of the United States.

4. Each Copermittee must examine all dry weather field screening and effluent analytical monitoring results collected in accordance with section DF.4 of this Order and Receiving Waters Monitoring and Reporting Program No. R9-20089-00021 to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in section B.2. Follow-up investigations must be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

~~5. Facilities that Extract, Treat, and Discharge (FETDs). Each Copermittee that extracts water from waters of the U.S., subjects the water to treatment processes, then discharges the treated effluent to waters of the U.S. must implement the following:~~

~~The effluent discharged to waters of the U.S. must not contain pollutants added by the treatment process or pollutants in greater concentration than the influent;~~

~~The discharge must not cause or contribute to a condition of erosion;~~
~~Submit verification to the Regional Board of compliance with Clean Water Act Section 404 at least 30 days prior to discharging effluent to waters of the U.S.; and~~

~~Conduct monitoring in accordance with Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2008-0001, Attachment E to this Order.~~

~~Any other requirements specified by the Regional Board pursuant to an individual or general NPDES permit, or waste discharge requirements, for discharges from the facility.~~

5. Dry weather non-storm water discharges to State Water Quality Protected Areas and Areas of Special Biological Significance (ASBS) are prohibited, except as a result of emergency fire fighting flows or where allowable under a State approved Ocean Plan Exception.

C. NON-STORM WATER DRY WEATHER NUMERIC EFFLUENT LIMITS

1. Section C of this Order incorporates numeric limits to assure non-storm water dry weather discharges from the Orange County MS4 into receiving waters are not causing, threatening to cause or contributing to a condition of pollution or nuisance and to protect designated Beneficial Uses.

2. Each Copermittee, beginning no later than the 3rd year following adoption of this Order, shall begin the non-storm water dry weather numeric effluent monitoring as described in Attachment E of this Order.

3. Each Copermittee shall implement all measures to comply with the numeric limits in Section C of this Order.

4. Monitoring of effluent will occur end-of-pipe prior to discharge into the receiving waters at all Major Outfalls, as defined in 40 CFR 122.26(B5-6) and Attachment E of this Order.

5. Each Copermittee shall monitor for and attain the non-storm water dry weather numeric limits, which are incorporated into this Order as Basin Plan Water Quality

Objectives, California Toxic Rule and/or USEPA Criteria as follows:

Table 3. Non-storm Water Dry Weather Numeric Limits

Constituents	Hydrological Area	BPO/CTR/USEPA
Total Dissolved Solids	Group 1*	1000
Total Dissolved Solids	Group 2**	500
Turbidity (NTU)	Group 1+2	20
pH	Group 1+2	Between 6.5-8.5
Iron	Group 1+2	0.3 mg/L
Dissolved Oxygen WARM	Group 1+2	5.0 mg/L
Dissolved Oxygen COLD	Group 1+2	6.0 mg/L
Total Phosphorus	Group 1+2	0.1 mg/L
Nitrite + Nitrate	Group 1+2	10 mg/L
Methylene Blue Active Substances (MBAS)	Group 1+2	0.5 mg/L
Arsenic, Dissolved	Group 1+2	0.05 mg/L
Cadmium, Dissolved	Group 1+2	0.005 mg/L
Chromium, Dissolved	Group 1+2	0.05 mg/L
Copper, Dissolved	Group 1+2	0.009 mg/L
Lead, Dissolved	Group 1+2	0.0025 mg/L
Nickel, Dissolved	Group 1+2	0.1 mg/L
Selenium	Group 1+2	0.05 mg/L
Zinc, Dissolved	Group 1+2	120 ug/L
E. coli Single Sample	Group 1+2	235/100
E. coli Geometric Mean	Group 1+2	126/100
Fecal Coliform REC 1 Single Sample	Group 1+2	400/100
Fecal Coliform REC 1 Geometric Mean	Group 1+2	200/100
Fecal Coliform REC 2 Single Sample	Group 1+2	4000/100
Fecal Coliform REC 2 Geometric Mean	Group 1+2	2000/100
Sulfate	Group 1*	500
Sulfate	Group 2**	250
Chlorides (Cl)	Group 1*	400
Chlorides (Cl)	Group 2**	250

* Group 1: Laguna Hydrologic Area
**Group 2: Mission Viejo, San Clemente, San Mateo Canyon and San Onofre Hydrologic Areas

D. MUNICIPAL ACTION LEVELS

1. Beginning Year 3 after Order adoption date, a running average of twenty percent or greater of exceedances of any discharge of storm water from the MS4 to waters of the United States that exceed the Municipal Action Levels (MALs) for the pollutants listed in Table 4 (below) will require each Copermittee to affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge

of the associated class of pollutants(s) to the MEP standard. Exceedances after Year 3 of the MAL(s) shall create a presumption that the Copermittee(s) have not complied to the MEP and have failed to implement adequate storm water control measures and BMPs to comply with the MEP requirement.

Table 4. Municipal Action Levels

Pollutant	Action Level
pH	6.0-9.0
TSS mg/L	211
COD mg/L	120
Kjedahl Nitrogen TKN mg/L	3.5
Nitrate & Nitrite total mg/L	1.116
P total mg/L	.82
Cd total µg/L	7.34
Cr total µg/L	20.4
Cu total µg/L	70.7
Pb total µg/L	62.2
Ni total µg/L	19.2
Zn total µg/L	756
Hg total µg/L	1.01

2. The end-of-pipe assessment points for the determination of MAL compliance are all major outfalls, as defined in 40 CFR 122.26(b)(5) and (b)(6).

3. The absence of MAL exceedances does not give rise to a presumption that the Copermittee(s) is in compliance with MEP criteria.

E. LEGAL AUTHORITY

1. Each Copermittee must establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Copermittee to:

a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;

b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 ~~including but not limited to:~~

~~Sewage;~~
~~Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;~~
~~Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;~~
~~Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;~~
~~Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;~~
~~Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;~~
~~Discharges of pool or fountain water containing chlorine, biocides, toxic amounts of salt, or other chemicals; discharges of pool or fountain filter backwash water;~~
~~Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and~~

c. Prohibit and eliminate illicit connections to the MS4;

d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;

e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);

f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;

g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees. Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as Caltrans, the Department of Defense, or Native American Tribes is encouraged;

h. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;

i. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s from storm water to the MEP; and

j. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of storm water pollutants to the MS4 to the MEP.

2. Each Copermittee must include as part of its JURMP submit within 365 days of adoption of this Order, a statement certified by its chief legal counsel that the Copermittee has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. This statement must include:

a. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under this Order. Include an up to date organizational chart specifying these departments and key personnel.

b. Citation of urban runoff related ordinances and the reasons they are enforceable;

c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of this Order;

d. A description of how urban runoff related ordinances are implemented and appealed; and

e. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

F. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM (JURMP)

Each Copermittee must implement all requirements of section D F of this Order no later than 365 days after adoption of the Order, unless otherwise specified in this Order. Prior to 365 days after adoption of the Order, each Copermittee must at a minimum implement its Jurisdictional URMP document, as the document was developed and amended to comply with the requirements of Order No. R9-2002-01.

Each Copermittee must develop and implement an updated Jurisdictional Urban Runoff Management Program (JURMP) for its jurisdiction. Each updated JURMP must meet the requirements of section D F of this Order, reduce the discharge of storm water pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

1. DEVELOPMENT PLANNING COMPONENT

Each Copermittee must implement a program which meets the requirements of this section and (1) reduces Development Project discharges of storm water pollutants from the MS4 to the MEP, (2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards, (3) prevents illicit discharges into the MS4; and (4) manages increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

a. GENERAL PLAN

Each Copermittee must revise as needed its General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) for the purpose of providing effective water quality and watershed protection principles and policies that direct land-use decisions and require implementation of consistent water quality protection measures for all dDevelopment and redevelopment pProjects.

b. ENVIRONMENTAL REVIEW PROCESS

Each Copermittee must revise as needed its current environmental review processes to accurately evaluate water quality impacts and cumulative impacts and identify appropriate measures to avoid, minimize and mitigate those impacts for all Development Projects.

c. APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS

For all proposed Development Projects, each Copermittee during the planning process, and prior to project approval and issuance of local permits, must prescribe the necessary requirements so that Development Project discharges of storm water storm water pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with Copermittee's ordinances, permits, plans, and requirements, and with this Order.

Performance Criteria: Discharges from each approved development project must be subject to the following management measures:The requirements must include, but not be limited to, implementation by the project proponent or municipality of the following:

(1) Source control BMPs that reduce storm water pollutants of concern in urban runoff, including prevention of illicit discharges into the MS4; minimization of preventing irrigation runoff; storm drain system stenciling or signage;

properly designed outdoor material storage areas; properly designed outdoor work areas; and properly designed trash storage areas;

(2) Site design BMPs where feasible which maximize infiltration, provide retention, slow runoff, minimize impervious footprint, direct runoff from impervious areas into landscaping, and construct impervious surfaces to minimum widths necessary.The following LID BMPs listed below shall be implemented at all Development Projects where applicable and feasible.
   (a) Conserve natural areas, including existing trees, other vegetation, and soils.
   (b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised and in accordance with section D.1.d.(4)(a)vi.
   (c) Minimize the impervious footprint of the project.
   (d) Minimize soil compaction to landscaped areas.
   (e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.)
   (f) Disconnect impervious surfaces through distributed pervious areas.

(3) Buffer zones for natural water bodies, where feasible. Where buffer zones are infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc;

(4) Measures necessary so that grading or other construction activities meet the provisions specified in section D.2 of this Order; and

(5) Submittal of proof of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

(6) Infiltration and Groundwater Protection

To protect groundwater quality, each Copermittee must apply restrictions to the use of treatment control BMPs that are designed to primarily function as centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions must be designed so that the use of such infiltration treatment control BMPs must not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device must meet the restrictions below, unless it is demonstrated that a restriction is not necessary to protect groundwater quality. The Copermittees may collectively or individually develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions are not intended to be applied to small infiltration systems

dispersed throughout a development project.

(a) Urban Rrunoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;

(b) All dry weather flows containing significant pollutant loads must be diverted from infiltration devices;

(c) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;

(d) Infiltration treatment control BMPs must be adequately maintained so that they remove storm water pollutants to the MEP;

(e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;

(f) The soil through which infiltration is to occur must have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;

(g) Infiltration treatment control BMPs must not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries;[3] and other high threat to water quality land uses and activities as designated by each Copermittee; and

(h) Infiltration treatment control BMPs must be located a minimum of 100 feet horizontally from any water supply wells.

(7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to waters of the United States.

d. STANDARD URBAN STORM WATER MITIGATION PLANS (SUSMPS) – APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS

[3] Except with regard to treated nursery runoff or clean storm water runoff.

Each Copermittee must implement an updated local SUSMP, within twelve months of adoption of this Order, which meets the requirements of section D.1.d of this Order and (1) reduces Priority Development Project discharges of storm water pollutants from the MS4 to the MEP, (2) prevents Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards, and (3) manages increases in runoff discharge rates and durations from Priority Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force and (4) implements the hydromodification requirements in section F.1.h.[4]

(1) Definition of Priority Development Project

Priority Development Projects are:

(a) All new Development Projects that fall under the project categories or locations listed in section DF.1.d.(2), and

(b) Those redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already developed site and the existing development and/or the redevelopment project falls under the project categories or locations listed in section DF.1.d.(2). Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SUSMP requirements, the numeric sizing criteria discussed in section DF.1.d.(6) applies only to the addition or replacement, and not to the entire development. Where redevelopment results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development.

(c) One acre threshold: In addition to the Priority Development Project Categories identified in section DF.1.d.(2), Priority Development Projects must also include all other pollutant-generating Development Projects that

[4] Updated SUSMP and hydromodification requirements must apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences. If lawful prior approval of a project exists, whereby application of an updated SUSMP or hydromodification requirement to the project is illegal, the updated SUSMP or hydromodification requirement need not apply to the project. Updated Development Planning requirements set forth in Sections D.1. (a) through (h) of this Order must apply to all projects or phases of projects, unless, at the time any updated Development Planning requirement commences, the projects or project phases meet any one of the following conditions: (i) the project or phase has begun grading or construction activities; or (ii) a Permittee determines that lawful prior approval rights for a project or project phase exist, whereby application of the Updated Development Planning requirement to the project is legally infeasible. Where feasible, the Permittees must utilize the SUSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SUSMP and hydromodification requirements in their plans.

result in the disturbance of one acre or more of land within three years of adoption of this Order.[5] As an alternative to this one-acre threshold, the Copermittees may collectively identify a different threshold, provided the Copermittees' threshold is at least as inclusive of Development Projects as the one-acre threshold.

(2) Priority Development Project Categories

Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SUSMP requirements.

(a) Housing subdivisions of 10 or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments.

(b) Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.

(c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).

(d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

(e) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet must meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement DF.1.d.(6) and hydromodification requirement DF.1.h.

[5] Pollutant generating Development Projects are those projects that generate pollutants at levels greater than natural background levels.

(f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.

(g) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10 percent or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

(h) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to ~~urban~~ runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

(i) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

(j) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

(3) Pollutants of Concern

As part of its local S~~U~~SMP, each Copermittee must implement an updated procedure for identifying pollutants of concern for each Priority Development Project. The procedure must address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land-use type of the Development Project and pollutants associated with that land use type; and (3) Pollutants expected to be present on site.

(4) Low Impact Development Site Design BMP Requirements

~~(a) Each Copermittee must require each Priority Development Project to implement site design BMPs which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and~~

protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss.

(a) Each Copermittee must require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss.

(a) (b)The following site design BMPs must be implemented at all Priority Development Projects as required below The following LID sustainability measures must be implemented:

(i) Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams) in drainage networks in preference to pipes, culverts, and engineered ditches. Each Copermittee must require LID storm water practices or make a finding of infeasibility for each Priority Development Project.

(ii) For Priority Development Projects with landscaped or other pervious areas, properly design and construct the pervious areas to effectively receive and infiltrate or treat storm water runoff to the MEP from impervious areas prior to discharge to the MS4. The amount of the impervious areas that are to drain to pervious areas must be based upon the total size, soil conditions, slopes, and other pertinent factors of the project. Each Copermittee must incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID storm water practices into the plan review process for Priority Development Projects.

(iii) For Priority Development Projects with low traffic areas and appropriate soil conditions, construct to the MEP walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials. The review of each Priority Development Project must include an assessment of potential collection of storm water for beneficial use on-site or off-site prior to discharging from the MS4.

(iv) The review of each Priority Development Project must include an assessment of techniques to infiltrate, filter, store, evaporate, or detain runoff close to the source of runoff;

(v) The review of each Priority Development Project must include an

assessment of alternatives to conventional storm water conveyance and management systems; and

(vi) Within 365 days after adoption of this Order, each Copermittee must review its local codes and ordinances and identify barriers therein to implementation of LID storm water practices. Following the identification of these barriers to LID implementation, where feasible the Copermittee must take appropriate actions to remove barriers directly under Copermittee control by the end of the permit cycle.

(b) ~~(c)The following site design BMPs listed below must be implemented at all Priority Development Projects where applicable and feasible. Each must require each Priority Development Project to demonstrate applicability and feasibility, or lack thereof, for each site design BMP listed below.~~ The following LID BMPs must be implemented at all Priority Development Projects as required below:

(i) ~~Minimize disturbances to natural drainages (e.g., creeks, natural swales, topographic depressions, etc.);~~ Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams) in drainage networks in preference to pipes, culverts, and engineered ditches.

(ii) ~~Conserve natural areas, including existing vegetation and soils;~~ Projects with landscaped or other pervious areas shall drain a portion of impervious areas (rooftops, parking lots, sidewalks, walkways, patios, etc) into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious areas shall correspond with the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.

(iii) ~~Protect slopes and channels;~~ Projects with landscaped or other pervious areas shall properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, prior to discharge to the MS4. Soil compaction for these areas shall be minimized. The amount of the impervious areas that are to drain to pervious areas must be based upon the total size, soil conditions, slope, and other pertinent factors.

(iv) ~~Minimize soil compaction of permeable soils;~~ Projects with low traffic areas and appropriate soil conditions shall construct walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.

~~(v) Construct streets to the minimum widths necessary based on~~

anticipated usage and public safety;
(vi) Design parking lots to reduce the impervious land coverage of parking areas and to filter runoff before it reaches the storm drain system;
(vii) Minimize the impervious footprint of the project;
(viii) Disconnect impervious surfaces through distributed pervious areas;
(ix) Provide pervious areas for parking and walking; and
(x) Design the layout of buildings to reduce street length and preserve open space.

(5) Source Control BMP Requirements

Each Copermittee must require each Priority Development Project to implement source control BMPs. The source control BMPs to be required must:

(a) Prevent illicit discharges into the MS4;
(b) Minimize storm water pollutants of concern in urban runoff;
(c) Minimize Eliminate irrigation runoff;
(d) Include storm drain system stenciling or signage;
(e) Include properly designed outdoor material storage areas;
(f) Include properly designed outdoor work areas;
(g) Include properly designed trash storage areas; and
(h) Include water quality requirements applicable to individual priority project categories; and
(i) Implement the hydromodification requirements in section F.1.h.

(6) Treatment Control BMP Requirements[6]

Each Copermittee must require each Priority Development Project to implement treatment control BMPs that meet the following requirements:

(a) All treatment control BMPs for a single Priority Development Project must collectively be sized to comply with the following numeric sizing criteria:

(i) Volume-based treatment control BMPs must be designed to mitigate (infiltrate, filter, or treat) the volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the County of Orange's 85th Percentile Precipitation Isopluvial Map[7]; or

[6] Low-Impact Development (LID) and other site design BMPs that are correctly designed to effectively remove pollutants from runoff can be considered treatment control BMPs.
[7] The isopluvial map is available from the County of Orange. The map can also be found as Figure A-1 Exhibit 7.II in the Model WQMP (September 2003), page 105 of 157 at http://www.ocwatersheds.com/StormWater/PDFs/2003_DAMP/2003_DAMP_Section_7_New_Development_Significant_Redevelopment.pdf.

(ii) Flow-based treatment control BMPs must be designed to mitigate (infiltrate, filter, or treat) either: a) the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event; or b) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two.

(b) Treatment control BMPs for all Priority Development Projects must mitigate (treat through infiltration, settling, filtration or other unit processes) the required volume or flow of runoff from all developed portions of the project, including landscaped areas.

(c) All treatment control BMPs must be located so as to remove pollutants from runoff prior to its discharge to any waters of the U.S. Multiple Priority Development Projects may use shared treatment control BMPs as long as construction of any shared treatment control BMP is completed prior to the use or occupation of any Priority Development Project from which the treatment control BMP will receive runoff.

(d) All treatment control BMPs for Priority Development Projects must, at a minimum:

(i) Be ranked with high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies are identified in the Copermittees' Model S~~U~~SMP or in the Copermittees' local S~~U~~SMPs as they are updated. Treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.

(ii) Be correctly sized and designed so as to remove storm water pollutants to the MEP.

(e) Target removal of pollutants of concern from ~~urban~~ runoff.

(f) Be implemented close to pollutant sources ~~(where shared BMPs are not proposed)~~, and prior to discharging into waters of the U.S.

(g) Not be constructed within a waters of the U.S. or waters of the State.

(h) Include proof of a mechanism under which ongoing long-term

maintenance will be conducted to ensure storm water pollutants are reduced to the MEP for the life of the project. The mechanisms may be provided by the project proponent or Copermittee.

(i) Be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.

(j) Be implemented in accordance with the hydromodification requirements in section F.1.h.

(7) Waiver Provision for Numeric Sizing of Treatment Control BMP Requirements

(a) A Copermittee may provide for a project to be waived from the requirement of implementing treatment BMPs with numeric sizing criteria (*section DF.1.d.(6)*) if infeasibility can be established. A waiver of infeasibility must only be granted by a Copermittee when all available treatment BMPs have been considered and rejected as infeasible under the numeric sizing criteria. Copermittees must notify the Regional Board within five days of each waiver issued and must include the following information in the notification:

(i) Name of the person granting each waiver;
(ii) Name of developer receiving the waiver;
(iii) Site location;
(iv) Reason for waiver; and
(v) Description of BMPs required.

(b) The Copermittees may collectively or individually develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Copermittee(s), to a storm water mitigation fund. This program may be implemented by all Copermittees that issue waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived project. The waiver mitigation program should, at a minimum, identify:

(i) The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for);
(ii) The range and types of acceptable projects for which mitigation funds may be expended;
(iii) The entity or entities that will assume full responsibility for each mitigation project including its successful completion; and
(iv) How the dollar amount of fund contributions will be determined.

(8) Low Impact Development (LID) Site Design BMP Substitution Program

The Copermittees may develop a LID site design BMP substitution program for incorporation into local SUSMPs, which would allow a Priority Development Project to substitute implementation of a high level of site design BMPs for implementation of some or all treatment control BMPs. At a minimum, the program must meet the requirements below:

(a) Prior to implementation, the program must clearly exhibit that it will achieve equal or better runoff quality from each Priority Development Project which participates in the program;

(b) For each Priority Development Project participating, the program must require all applicable source control BMPs listed in section DF.1.d.(5) to be implemented;

(c) For each Priority Development Project participating, the program must require that runoff originating from exposed impervious parking areas, work areas, storage areas, staging areas, trash areas, and other similar areas where pollutants are generated and/or collected, must be routed through pervious areas prior to entering the MS4;

(d) For each Priority Development Project participating, the program must require that all Low Impact Development site design BMPs listed in section DF.1.d.(4) be implemented;

(e) The program must only apply to Priority Development Projects and Priority Development Project categories with a relatively low potential to generate high levels of pollutants. The program must not apply to automotive repair shops or streets, roads, highways, or freeways that have high levels of average daily traffic;

(f) The program must develop and utilize specific design criteria for each site design BMP to be utilized by the program;

(g) The program must include mechanisms to verify that each Priority Development Project participating in the program is in compliance with all applicable SUSMP requirements; and

(h) The program must develop and implement a review process which verifies that each LID site design BMP to be implemented meets the designated design criteria. The review process must also verify that each Priority Development Project participating in the program is in compliance with all applicable SUSMP requirements.

(9) Site Design and Treatment Control BMP Design Standards

As part of its local SUSMP, each Copermittee must develop and require Priority Development Projects to implement siting, design, and maintenance criteria for each site design and treatment control BMP listed in its local SUSMP to determine feasibility and applicability and so that implemented site design and treatment control BMPs are constructed correctly and are effective at pollutant removal, runoff control, and vector minimization. LID techniques, such as soil amendments, must be incorporated into the criteria for appropriate treatment control BMPs. Development of BMP design worksheets which can be used by project proponents is encouraged.

(10) Implementation Process

As part of its local SUSMP, each Copermittee must implement a process to verify compliance with SUSMP requirements. The process must identify at what point in the planning process Priority Development Projects will be required to meet SUSMP requirements. The process must also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.

(11) Treatment BMP Review

(a) The Copermittees must review and update the BMPs that are listed in their local SUSMPs as options for treatment control during the third year of implementation of this Order. At a minimum, the update must include removal of obsolete or ineffective BMPs and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update must also add appropriate LID BMPs to any tables or discussions in the local SUSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update must include review and revision where necessary of treatment control BMP pollutant removal efficiencies.

(b) The update must incorporate findings from BMP effectiveness studies conducted by the Copermittees for projects funded wholly or in part by the State Board or Regional Board.

(c) Each Copermittee must implement a mechanism for annually incorporating findings from local treatment BMP effectiveness studies (e.g., ones conducted by, or on-behalf of, public agencies in Orange County) into SUSMP project reviews and permitting.

e. BMP CONSTRUCTION VERIFICATION

Prior to occupancy of each Priority Development Project subject to SUSMP requirements, each Copermittee must inspect the constructed site design, source control, and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order.

f. TREATMENT CONTROL BMP MAINTENANCE TRACKING

(1) Each Copermittee must maintain a watershed-based database to track and inventory approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction. At a minimum, the database must include information on treatment control BMP type, location, watershed, date of construction, party responsible for maintenance, maintenance certifications or verifications, inspections, inspection findings, and corrective actions, including whether the site was referred to the Vector Control District.

(2) Each Copermittee must verify that approved treatment control BMPs are operating effectively and have been adequately maintained by implementing the following measures:

(a) An annual inventory of all approved treatment control BMPs within the Copermittee's jurisdiction. The inventory must also include all treatment control BMPs approved for Priority Development Projects since July 2001;

(b) The designation of high priority treatment control BMPs. High-priority designation must include consideration of treatment control BMP size, recommended maintenance frequency, likelihood of operational and maintenance issues, location, receiving water quality, and other pertinent factors;

(c) Verify implementation, operation, and maintenance of treatment BMPs by inspection, self-certification, surveys, or other equally effective approaches with the following conditions:

(i) The implementation, operation, and maintenance of at least 90 percent of approved final project public and private SUSMPs (a.k.a. WQMPs) must be verified annually;
(ii) Operation and maintenance verifications must be required prior to each rainy season;
(iii) All (100 percent) projects with treatment control BMPs that are high priority must be inspected annually prior to each rainy season;
(iv) All (100 percent) public agency projects with treatment control BMPs must be inspected annually;

(v) At least 25 percent of projects with drainage insert treatment control BMPs must be inspected annually;
(vi) At least 20 percent of the total number of projects with approved treatment control BMPs must be inspected annually;
(vii) Appropriate follow-up measures (including re-inspections, enforcement, maintenance, etc.) must be conducted to ensure the treatment BMPs continue to reduce storm water pollutants to the MEP;
(viii) All inspections must verify effective operation and maintenance of the treatment control BMPs, as well as compliance with all ordinances, permits, and this Order; and
(ix) Inspections must note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the Copermittee must notify the Orange County Vector Control District.

g. Enforcement of Development Sites

Each Copermittee must enforce its storm water ordinance for all Development Projects and at all development sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit or occupancy denials for non-compliance.

h. Requirements for Hydromodification and Downstream 7

Each Copermittee must ensure its local SUSMP/WQMP includes effective hydromodification requirements for Priority Development Projects so that local hydrologic conditions of concern are identified and addressed. Site-specific hydromodification management measures must be required to protect downstream beneficial uses and prevent physical changes to downstream stream channels that would adversely affect the physical structure, biologic condition, and water quality of streams.

As part of its local SUSMP, each Copermittee must develop and apply requirements to Priority Development Projects so that runoff discharge rates, durations, and velocities from Priority Development Projects are controlled to maintain or reduce downstream erosion conditions and protect stream habitat. During SUSMP reviews, each Copermittee must consider the downstream channel conditions and the proposed changes in duration of time that erosive flows would occur, as described in the following sections.

(1) Assessment of Downstream Erosion

Each Copermittee must require evaluation of the adjacent and downstream conditions of receiving waters (i.e., waters of the U.S. and State) when evaluating Priority Development Projects. Factors to evaluate must include the designated beneficial uses of the receiving waters, type of channel receiving discharges, the stage of channel adjustment/alteration, channel slope, composition of bed and bank materials, underlying geology, watershed position (e.g., stream order and location), and connections between the streams and adjacent floodplains.

(2) Assessment of Discharge Hydrology

Each Copermittee must require evaluation of the proposed post-construction hydrology and hydraulics of Priority Development Projects in order to assess effects on adjacent and downstream conditions of receiving waters (i.e., waters of the U.S. and State). Factors to evaluate must include the local natural flow regime and the proposed flow regime of discharges from the MS4. Evaluation of factors for proposed discharges must include proposed changes in the discharge volumes, frequency of erosive discharges, duration of erosive discharges, and patterns of flow variability.

(3) Implement Hydromodification Management Strategy

Each Copermittee must implement, or require implementation of, a suite of management measures within each Priority Development Project to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels.

(a) The measures must be based on the assessments of downstream channel conditions and proposed discharge hydrology.

(b) The management measures must be based on a sequenced consideration of site design measures, on-site management controls, and then in-stream controls.

(i) Site design measures for hydromodification must be implemented on all Priority Development Projects.

(ii) Preference must be given to on-site controls over in-stream controls in situations where beneficial uses within the channels have not been adversely affected by hydromodification.

(iii) Implementation of in-stream controls must not adversely affect beneficial uses or result in sustained degradation of water quality of

waters of the U.S./State.

(c) On-site hydromodification control waivers: Copermittees may develop a strategy for waiving hydromodification requirements for on-site controls (not site design BMPs) in situations where assessments of downstream channel conditions and proposed discharge hydrology clearly indicate that adverse hydromodification effects to present and future beneficial uses are unlikely. The waivers must be based on the following determinations:

(i) Lack of discharge-caused hydrology changes: Waivers may be implemented where the total impervious cover on a site is increased up to 5 percent of the project area in new developments and decreased by at least 10 percent in redevelopments. These numeric criteria may be revised to be consistent with findings from reports from the Storm Water Monitoring Coalition, Southern California Coastal Waters Research Program, and other local studies. Alternatively, directly-connected impervious area or effective impervious cover may be used as an indicator, provided that numeric criteria for the indicators are used and are based on hydromodification studies conducted in southern California.

~~(ii) Degraded stream channel condition: Conditional waivers may be implemented in situations where receiving waters are severely degraded (highly unstable due to irrevocable changes to its form); concrete-lined or significantly hardened (e.g., with rip-rap, sackcrete, etc.) downstream to their outfall in bays or the ocean; or the project would discharge into underground storm drains discharging directly to bays or the ocean.~~

~~(a) Dry-weather discharges: All conditional waivers must include site design and on-site control measures for dry-weather discharges.~~

~~(b) Modified channel conditions: Conditional waivers in situations where receiving waters are severely degraded or significantly hardened must include requirements for in-stream measures designed to improve the beneficial uses adversely affected by hydromodification. The measures must be implemented within the same watershed as the Priority Development Project.~~

(4) Develop and Implement Hydromodification Management Plan ~~Develop and Implement Specific Hydromodification Criteria~~

~~Within three years of adoption of this Order, each Copermittee must revise its SUSMP/WQMP (see Section D.1.d) to implement updated hydromodification criteria for all Priority Development Projects. Criteria must~~

~~be based upon findings from local and regional hydromodification studies with explicit consideration for any descriptive or numeric criteria applicable to the San Juan Hydrologic Unit described therein. As part of this update, numeric criteria may also be developed for on-site hydromodification control waivers to supercede numeric criteria in D.1.h.3.c.~~
Each Copermittee must revise its SSMP/WQMP to implement a watershed specific Hydromodification Management Plan (HMP) to include specific criteria for minimizing and mitigating hydrologic modification at all development and redevelopment projects. Criteria must be based on findings from local and regional hydromodification studies with explicit consideration for any descriptive or numeric criteria applicable to the San Juan Hydrologic Unit described therein. The HMP shall identify:

(a) Stream classifications;
(b) Flow rate and duration control methods;
(c) Sub-watershed mitigation strategies; and
(d) Stream restoration measures which will maintain the stream and tributary Erosion Potential at 1 unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces.
(e) Areas where historic hydromodification has resulted in a negative impact to benthic macroinvertebrate and benthic periphyton scores of ecological health, in comparison to other chemical, biological, and toxicological data.

In addition, the HMP shall include:
(f) Hydromodification Management Standards;
(g) Natural Drainage Areas and Hydromodification Management Areas;
(h) Implementation requirements for all PDPs; ;
(i) Description of authorized Hydromodification Management BMPs;
(j) Hydromodification Management BMP Design Criteria;
(k) For flow duration control methods, the range of flows to control for, and goodness of fit criteria;
(l) Allowable low critical flow, Qc, which initiates sediment transport;
(m) Description of the approved Hydromodification Model;
(n) Stream restoration measures design criteria;
(o) Measures to improve Index of Biotic Integrity scores in areas identified per section F.1.h(4)(e) above; and
(p) Monitoring and Effectiveness Assessment; and Record keeping.

(5) HMP Implementation

(a) Within 2 years of adoption of the Order, the Copermittees shall submit to

the Regional Board a draft HMP that has been reviewed by the public, including the analysis that identifies the appropriate limiting range of flow rates.

(b) Within 180 days of receiving Regional Board comments on the draft HMP, the Copermittees shall submit a final HMP that addressed the Regional Board comments.

(c) Within 90 days of Regional Board approval of the final HMP, each Copermittee shall incorporate and implement the HMP for all Priority Development Projects.

(d) Prior to approval of the HMP by the Regional Board, the early implementation of measures likely to be included in the HMP shall be encouraged by the Copermittees in addition to the interim requirements in section D.1.h.(6).

(6) ~~(5)~~ Interim Requirements for Large Projects

(a) Within one year of adoption of this Order, each municipality must ensure that all PDPs ~~projects disturbing 20 acres or more~~ include and implement the following management measures.

(i) Disconnect impervious areas by reducing the percentage of Effective Impervious Area (EIA) to less than five percent of total project area; also disconnect impervious area from receiving waters using on-site or off-site storm water reuse, evapotranspiration, and/or infiltration for small precipitation events, based on limitations imposed by soil conditions, groundwater contamination potential and considerations for the use of amendments to improve soil conditions;~~Disconnect impervious areas from receiving waters using on-site or off-site storm water reuse, evapotranspiration, and/or infiltration for small precipitation events, based on limitations imposed by soil conditions, groundwater contamination potential, and considerations for the use of amendments to improve soil conditions;~~

(ii) Where stream channels are adjacent to, or are to be modified as part of, the development, establish buffer zones and setbacks for channel movement. Where in-stream controls are necessary, use geomorphically-referenced channel design techniques.

(iii) Control runoff through hydrograph matching for a range of return periods from 1 year to 10 years. Interim criteria for hydrograph matching must demonstrate that the pattern of storm water discharges over time (hydrograph) during evaluated storm events in the post-construction environment will closely mimic that which occurs in the pre-construction condition; or

Control runoff by matching the pre-development flows and durations for the continuous range of return periods from 10 percent of the two year to the 10-year storms, based on long-term records. Within this range, the post-project flow duration curve must not deviate above the pre-project flow duration curve flows by more than 10 percent and must not deviate above the pre-project flow duration curve flows more than 10 percent of the length of the curve. A site specific critical flow may substitute for the lower return period (10 percent of the two-year) if available; or

Control runoff through the use of a local implementation tool based on flow duration control, derived from continuous simulation modeling, in the form of nomographs relating percent impervious area and soil type (representing infiltration rates) to BMP volume and land area requirements. If this method is used, the Copermittee must closely collaborate with the Regional Board in the development of the nomograph tool.

i. TRAINING AND EDUCATION

(1) Municipal Departments and Personnel Education

Municipal Development Planning: Each Copermittee must implement an education program so that its planning and development review staffs and contractors (and Planning Boards and Elected Officials, if applicable) have an understanding of:

(a) Federal, state, and local water quality laws and regulations applicable to Development Projects;
(b) The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); and
(c) Methods of minimizing impacts to receiving water quality resulting from development, including:
  (i) Storm water management plan development and review;
  (ii) Local sensitive water bodies, including 303(d)-impairments and ESAs;
  (iii) Methods to control downstream erosion impacts;
  (iv) Identification of pollutants of concern;
  (v) Site design BMP techniques;
  (vi) Source control BMPs;
  (vii) Selection of the most effective treatment control BMPs for the pollutants of concern; and
  (viii) Public heath concerns related to storm water management infrastructure.

(2) Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties

(a) Each Copermittee must implement a New Development / Redevelopment education program using all media as appropriate to:

(i) Measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and

(ii) To measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment.

(b) Each Copermittee must educate each target community on the following topics where appropriate:

(i) The importance of educating all construction workers in the field about stormwater issues and BMPs though formal or informal training;

(ii) Federal, state, and local water quality laws and regulations applicable to new development and redevelopment activities;

(iii) Site design, source control, pollution prevention, and treatment BMPs;

(iv) General urban runoff concepts; and

(v) Other topics of local importance, including local water quality conditions, impaired waterbodies and environmentally sensitive areas.

2. CONSTRUCTION COMPONENT

Each Copermittee must implement a construction program which meets the requirements of this section, prevents illicit discharges into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MS4, reduces construction site discharges of storm water pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

a. ORDINANCE UPDATE

Within 365 days of adoption of this Order, each Copermittee must review and update its grading ordinances and other ordinances as necessary to achieve full

compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.

b. SOURCE IDENTIFICATION

Each Copermittee must maintain an updated watershed based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

c. SITE PLANNING AND PROJECT APPROVAL PROCESS

Each Copermittee must incorporate consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

(1) Each construction and grading permit must require proposed construction sites to implement designated BMPs and other measures so that illicit discharges into the MS4 are prevented and stormwater pollutants discharged from the site will be reduced to the maximum extent practicable and will not cause or contribute to a violation of water quality standards.

(2) Prior to permit issuance, the project proponent's erosion and sediment control plan (or equivalent construction BMP plan) must be required and reviewed to verify compliance with the local grading ordinance, other applicable local ordinances, and this Order.

(3) Prior to permit issuance, each Copermittee must verify that project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), have existing coverage under the General Construction Permit.

d. BMP IMPLEMENTATION

(1) Designate BMPs: Each Copermittee must designate a minimum set of BMPs and other measures to be implemented at all construction sites. The designated minimum set of BMPs must include:

(a) General Site Management:

(i) Pollution prevention, where appropriate;
(ii) Development and implementation of a site-specific storm water management plan;
(iii) Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;

(iv) Minimization of exposure time of disturbed soil areas;
(v) Minimization of grading during the wet season and correlation of grading with seasonal dry weather periods to the extent feasible;
(vi) Limitation of grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution;
(vii) Temporary stabilization and reseeding of disturbed soil areas as rapidly as feasible;
(viii) Wind erosion controls;
(ix) Tracking controls;
(x) Non-stormwater management measures to prevent illicit discharges and control stormwater pollution sources;
(xi) Waste management measures;
(xii) Preservation of natural hydrologic features where feasible;
(xiii) Preservation of riparian buffers and corridors where feasible;
(xiv) Evaluation and maintenance of all BMPs, until removed; and
(xv) Retention, reduction, and proper management of all storm water pollutant discharges on site to the MEP standard.

(b) Erosion and Sediment Controls:

(i) Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;
(ii) Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;
(iii) Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes during the rainy season and during rain events in the dry season; and
(iv) Permanent revegetation or landscaping as early as feasible.

(c) Designate enhanced BMPs[8] for 303(d) impairments and ESAs: Each Copermittee must implement, or require implementation of, enhanced measures to address the exceptional threat to water quality posed by all construction sites tributary to CWA section 303(d) water body segments impaired for sediment or turbidity. Each Copermittee must also

[8] Enhanced BMPs are control actions specifically targeted to the pollutant or condition of concern and of higher quality and effectiveness than the minimum control measures otherwise required. Enhanced in this Order means better, not simply more, BMPs.

implement, or require implementation of, enhanced, site-specific measures for construction sites within or adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in section Attachment C of this Order).

(i) Active Sediment Treatment: Each Copermittee must require implementation of advanced treatment for sediment at construction sites (or portions thereof) that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors must be considered by the Copermittee:

[a] Soil erosion potential or soil type;
[b] The site's slopes;
[c] Project size and type;
[d] Sensitivity of receiving water bodies;
[e] Proximity to receiving water bodies;
[f] Non-storm water discharges;
[g] Ineffectiveness of other BMPs;
[h] Proximity and sensitivity of aquatic threatened and endangered species of concern;
[i] Known effects of ATS chemicals; and
~~[h]~~[j] Any other relevant factors.

(d) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round. However, BMP implementation requirements can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season.

e. INSPECTION OF CONSTRUCTION SITES

Each Copermittee must conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Priorities for inspecting sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and receiving water quality.

(1) During the wet season, each Copermittee must inspect at least biweekly (every two weeks), all construction sites within its jurisdiction meeting any of the following criteria:

(a) All sites 30 acres or more in size with rough grading or active slopes occurring during the wet season;

(b) All sites one acre or more, and tributary to a CWA section 303(d) water body segment impaired for sediment or within or directly adjacent to, or discharging directly to, the ocean or a receiving water within an ESA; and

(c) Other sites determined by the Copermittees or the Regional Board as a significant threat to water quality. In evaluating threat to water quality, the following factors must be considered: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; (7) past record of non-compliance by the operators of the construction site; and (8) any other relevant factors.

(2) During the wet season, each Copermittee must inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section ~~D~~F.2.e.(1).

(3) During the wet season, each Copermittee must inspect construction sites less than one acre in size as needed to ensure compliance with its ordinances and this Order.

(4) Each Copermittee must inspect all construction sites as needed during the dry season. Sites meeting the criteria in section ~~D~~F.2.e.(1) must be inspected at least once in August or September each year.

(5) Re-inspections: Based upon site inspection findings, each Copermittee must implement all follow-up actions (i.e., reinspection, enforcement) necessary to comply with this Order. Reinspection frequencies must be determined by each Copermittee based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and receiving water quality.

(6) Inspections of construction sites must include, but not be limited to:

(a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;

(b) Assessment of compliance with Copermittee ordinances and permits related to ~~urban~~ runoff, including the implementation and maintenance of designated minimum BMPs;

(c) Assessment of BMP effectiveness;

(d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;

(e) Education and outreach on storm water pollution prevention, as needed; and

(f) Creation of a written or electronic inspection report.

(7) The Copermittees must track the number of inspections for each inventoried construction site throughout the reporting period to verify that each site is inspected at the minimum frequencies required.

f. ENFORCEMENT OF CONSTRUCTION SITES

(1) Each Copermittee must develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permit requirements and ordinances. This enforcement process must include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process must include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

(2) Each Copermittee must be able to respond to complaints received from third-parties and to ensure the Regional Board that corrective actions have been implemented.

g. REPORTING OF NON-COMPLIANT SITES

(1) In addition to the notification requirements in Attachment B, each Copermittee must notify the Regional Board when the Copermittee issues a stop work order or other high level enforcement to a construction site in its jurisdiction as a result of storm water violations.

(2) Each Copermittee shall annually notify the Regional Board, prior to the commencement of the wet season, of all construction sites with potential violations. Information provided shall include, but not be limited to, the following:

(a) WDID number if enrolled under the General Construction Permit

(b) Site Location, including address

(c) Current violations or potential violations

h. TRAINING AND EDUCATION

(1) Municipal Staff and Contractors: Requirements for municipal staff and contractors are described in the Municipal Component section of this Order.

(2) Construction Site Owner / Operator Responsibilities:

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee must implement a program to educate project applicants, developers, contractors, property owners, and other responsible parties. The education program must provide an understanding of the topics listed below, as appropriate for the audience being educated.

(a) The importance of educating all construction workers in the field about stormwater issues and BMPs though formal or informal training;

(b) Federal, state, and local water quality laws and regulations applicable to construction and grading activities;

(c) Site design, source control, pollution prevention, and treatment BMPs;

(d) General urban runoff concepts; and

(e) Other topics of local importance, including local water quality conditions, impaired waterbodies and environmentally sensitive areas.

3. EXISTING DEVELOPMENT COMPONENT

a. MUNICIPAL

Each Copermittee must implement a municipal program which meets the requirements of this section, prevents illicit discharges into the MS4, reduces municipal discharges of storm water pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification / Inventory

Each Copermittee must maintain an updated watershed-based inventory of municipal areas and activities. The inventory must include the name, address

(if applicable), and a description of the area/activity; which pollutants are potentially generated by the area/activity; whether the area/activity is adjacent to an ESA; and identification of whether the area/activity is tributary to a CWA section 303(d) water body segment and generates pollutants for which the water body segment is impaired. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended when applicable, but not required.

(2) General BMP Implementation

(a) Pollution Prevention: Each Copermittee must implement pollution prevention methods in its municipal program and must require their use by appropriate municipal departments, personnel, and contractors, where appropriate.

(b) Designate Minimum BMPs: Each Copermittee must designate a minimum set of BMPs for all municipal areas and activities. The designated minimum BMPs for municipal areas and activities must be area or activity specific as appropriate. BMPs must be designated for special events that are expected to generate significant trash and litter.

(c) Designate BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for municipal areas and activities tributary to CWA section 303(d) impaired water body segments when an area or activity generates pollutants for which the water body segment is impaired. Each Copermittee must also designate additional controls for municipal areas and activities within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

(d) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on its inventory to comply with this Order for each municipal area or activity within its jurisdiction.

(3) BMP Implementation for Management of Pesticides, Herbicides, and Fertilizers

Each Copermittee must implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal areas and activities to MS4s. Such BMPs must include, at a minimum:

(a) Educational activities, permits, certifications and other measures for municipal applicators and distributors;

(b) Integrated Pest Management (IPM) measures that rely on non-chemical solutions;
(c) The use of native vegetation;
(d) Schedules for irrigation and chemical application; and
(e) The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(4) BMP implementation for Flood Control Structures

(a) Each Copermittee must implement procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies.

(b) Each Copermittee must include water quality protection measures, where feasible, when retrofitting existing flood control structural devices.

(c) Each Copermittee must evaluate its existing flood control devices, identify devices causing or contributing to a condition of pollution, identify measures to reduce or eliminate the structure's effect on pollution, and evaluate the feasibility of retrofitting the structural flood control device. The inventory and evaluation must be completed by May 1, 201009 and submitted to the Regional Board with the Fall 201009 annual report.

(5) BMP Implementation for Sweeping of Municipal Areas

Where municipal area sweeping is implemented as an MS4 BMP for municipal roads, streets, highways, and parking facilities, each Copermittee must design and implement the program based on the following criteria:

(a) Optimize pickup of trash and debris based on land uses, trash collection schedules, seasonal factors (e.g., special events, tourism, etc.) and inspections of municipal areas/activities.

(6) Operation and Maintenance of Municipal Separate Storm Sewer System (MS4) and Structural Controls

(a) Treatment Controls: Each Copermittee must implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.

(b) MS4 and Facilities: Each Copermittee must implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities must, at a minimum, include:

(i) Inspection and removal of accumulated waste at least once a year between May 1 and September 30 of each year for all MS4 facilities;
(ii) Additional cleaning as necessary between October 1 and April 30 of each year for facilities that receive or collect high volumes of trash and debris;
(iii) Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less that every other year;
(iv) Open channels must be cleaned of observed anthropogenic litter in a timely manner;
(v) Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;
(vi) Proper disposal of waste removed pursuant to applicable laws; and
(vii) Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(7) Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance of Both

(a) Each Copermittee must implement controls and measures to prevent and eliminate infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that operates both a municipal sanitary sewer system and a MS4 must implement controls and measures to prevent and eliminate infiltration of seepage from the municipal sanitary sewers to the MS4s that must include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

(b) Each Copermittee must implement controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary. Such controls must include:
(i) Adequate plan checking for construction and new development,
(ii) Incident response training for municipal employees that identify sanitary sewer spills;
(iii) Code enforcement inspections;
(iv) MS4 maintenance and inspections;
(v) Interagency coordination with sewer agencies; and
(vi) Proper education of municipal staff and contractors conducting field operations on the MS4 or municipal sanitary sewer (if applicable).

(8) Inspection of Municipal Areas and Activities

(a) At a minimum, each Copermittee must inspect the following high priority

municipal areas and activities annually:

(i) Roads, Streets, Highways, and Parking Facilities;
(ii) Flood Management Projects and Flood Control Devices;
(iii) Areas and activities tributary to a CWA section 303(d) impaired water body segment, where an area or activity generates pollutants for which the water body segment is impaired.
(iv) Areas and activities within or adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order);
(v) Municipal Facilities:
[a] Active or closed municipal landfills;
[b] Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
[c] Solid waste transfer facilities;
[d] Land application sites;
[e] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
[f] Household hazardous waste collection facilities.
(vi) Municipal airfields;
(vii) Parks and recreation facilities;
(viii) Special event venues following special events (festivals, sporting events, etc.);
(ix) Power washing; and
(x) Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.

(b) Other municipal areas and activities must be inspected as needed and in response to water quality data, valid public complaints, and findings from municipal or contract staff.

(c) Based upon site inspection findings, each Copermittee must implement all follow-up actions necessary to comply with this Order.

(9) Enforcement of Municipal Areas and Activities

Each Copermittee must enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

(10) Training and Education

Each Copermittee must ensure that all municipal personnel and contractors that have responsibilities for selecting, implementing, and evaluating BMPs for municipal areas and activities are adequately trained and educated to

perform such tasks.

(a) Municipal Departments and Personnel Education

(i) Municipal Construction Activities: Each Copermittee must implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:

[a] Federal, state, and local water quality laws and regulations applicable to construction and grading activities;
[b] The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment);
[c] Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities;
[d] The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application;
[e] Current advancements in BMP technologies;
[f] S~~U~~SMP Requirements including treatment options, site design, source control, and applicable tracking mechanisms; and
[g] Other topics of local importance, including local water quality conditions, impaired water bodies, environmentally sensitive areas, and public health and disease vector issues associated with ~~urban~~ runoff.

(ii) Municipal Industrial/Commercial Activities: Each Copermittee must train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year. Training must cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data

(iii) Municipal Other Activities: Each Copermittee must implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

b. COMMERCIAL / INDUSTRIAL

Each Copermittee must implement a commercial / industrial program that meets the requirements of this section, prevents illicit discharges into the MS4, reduces

commercial / industrial discharges of storm water pollutants from the MS4 to the MEP, and prevents commercial / industrial discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

(a) Each Copermittee must maintain an updated watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. The inventory must include the following minimum information for each industrial and commercial site/source: name; address; pollutants potentially generated by the site/source; and identification of whether the site/source is tributary to a Clean Water Act section 303(d) water body segment and generates pollutants for which the water body segment is impaired; and a narrative description including SIC codes which best reflects the principal products or services provided by each facility.

At a minimum, the following sites/sources must be included in the inventory:

(i) Commercial Sites/Sources:

[a] Automobile repair, maintenance, fueling, or cleaning;
[b] Airplane repair, maintenance, fueling, or cleaning;
[c] Boat repair, maintenance, fueling, or cleaning;
[d] Equipment repair, maintenance, fueling, or cleaning;
[e] Automobile and other vehicle body repair or painting;
[f] Mobile automobile or other vehicle washing;
[g] Automobile (or other vehicle) parking lots and storage facilities;
[h] Retail or wholesale fueling;
[i] Pest control services;
[j] Eating or drinking establishments, including food markets;
[k] Mobile carpet, drape or furniture cleaning;
[l] Cement mixing or cutting;
[m] Masonry;
[n] Painting and coating;
[o] Botanical or zoological gardens and exhibits;
[p] Landscaping;
[q] Nurseries and greenhouses;
[r] Golf courses, parks and other recreational areas/facilities;
[s] Cemeteries;
[t] Pool and fountain cleaning;
[u] Marinas;
[v] Portable sanitary services;

[w] Building material retailers and storage;
[x] Animal facilities;
[y] Power washing services; and
[z] Other sites and sources with a history of un-authorized discharges to the MS4.

(ii) Industrial Sites/Sources:

[a] Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
[b] Operating and closed landfills;
[c] Facilities subject to SARA Title III; and
[d] Hazardous waste treatment, disposal, storage and recovery facilities.

(iii) ESAs and 303(d) Listed Waterbodies: All other commercial or industrial sites/sources tributary to a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

(iv) All other commercial or industrial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4.

(2) General BMP Implementation

(a) Pollution Prevention: Each Copermittee must require the use of pollution prevention methods by industrial and commercial sites/sources.

(b) Designate / Update Minimum BMPs: Each Copermittee must designate a minimum set of BMPs for all industrial and commercial sites/sources. Where BMPs have already been designated, each Copermittee must review its existing BMPs for adequacy. The designated minimum BMPs must be specific to facility types and pollutant-generating activities, as appropriate.

(c) Designate Enhanced BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for industrial and commercial sites/sources tributary to CWA section 303(d) impaired water body segments (where a site/source generates pollutants for which the water body segment is impaired). Each Copermittee must also designate

additional controls for industrial and commercial sites/sources within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

(d) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on inspections, incident responses, and water quality data to comply with this Order at each industrial and commercial site/source within its jurisdiction.

(3) BMP Implementation for Mobile Businesses

(a) Each Copermittee must develop and implement a program to reduce the discharge of storm water pollutants from mobile businesses to the MEP. Each Copermittee must keep as part of their commercial source inventory a listing of mobile businesses known to operate within its jurisdiction. The program must include:

(i) Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses;
(ii) Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses;
(iii) Notification of those mobile businesses known to operate within the Copermittee's jurisdiction of the minimum standards and BMP requirements and local ordinances;
(iv) Development and implementation of an outreach and education strategy; and
(v) Inspection of mobile businesses as needed to implement the program.

(b) If they choose to, the Copermittees may cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

(4) Inspection of Industrial and Commercial Sites/Sources

Each Copermittee must conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order.

(a) Inspection Procedures: Inspections must include but not be limited to:

(i) Review of BMP implementation plans, if the site uses or is required to use such a plan;

(ii) Review of facility monitoring data, if the site monitors its runoff;

(iii) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification Number), if applicable;

(iv) Assessment of compliance with Copermittee ordinances and permits related to ~~urban~~ runoff;

(v) Assessment of BMP implementation, maintenance and effectiveness;
(vi) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and

(vii) Education and training on storm water pollution prevention, as conditions warrant.

(b) Each Copermittee shall annually notify the Regional Board, prior to the commencement of the wet season, of all Industrial Sites and Industrial Facilities subject to the General Industrial Permit or other individual NPDES permit with potential violations. Information provided shall include, but not be limited to, the following:

(i) WDID number if enrolled under the General Industrial Permit;

(ii) Site Location, including address;

(iii) Current violations or potential violations; and

(iv) Past Violation history.

~~(b)~~(c) Frequencies: At a minimum, 20 percent of the sites inventoried as required in section ~~D~~F.3.b.(1) above (excluding mobile sources and food facilities) must be inspected each year. Mobile businesses must be inspected pursuant to the enforcement strategy developed pursuant to section ~~D~~F.3.b.(3). Other inspection frequencies must be based upon findings of the Copermittee's existing program and the following factors:

(i) Type of activity (SIC code);
(ii) Materials used at the facility;
(iii) Wastes generated;
(iv) Pollutant discharge potential;
(v) Non-storm water discharges;
(vi) Size of facility;
(vii) Proximity to receiving water bodies;

(viii) Sensitivity of receiving water bodies;
(ix) Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;
(x) Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;
(xi) Facility design;
(xii) Total area of the site, area of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff;
(xiii) The facility's compliance history; and
(xiv) Any other relevant factors.

~~(c)~~(d) Food Facilities: Each food facility must be inspected annually for compliance with the Copermittee's water quality ordinances and this Order. Each inspection of a food facility must, at a minimum, address the following concerns:
(i) Trash storage and disposal;
(ii) Grease storage and disposal;
(iii) Washwater discharges to the MS4 (e.g., from floor mats, driveways, sidewalks, etc.);
(iv) Identification of outdoor sewer and MS4 connections; and
(v) Education of property managers when grease and/or trash facilities are shared by multiple facilities.

~~(d)~~(e) Third-Party Inspections: Each Copermittee may develop and implement a third party inspection program for verifying industrial and commercial site/source compliance with its ordinances, permits, and this Order. To the extent that third party inspections are conducted to fulfill the requirements of this Order, the Copermittee will be responsible conducting and documenting quality assurance and quality control of the third-party inspections.

(i) Each inspection conducted by a third-party must, at a minimum, result in the following:

[a] Photo documentation of potential storm water violations identified during the third party inspection;
[b] Reporting to the Copermittee of identified significant potential violations, including imminent or observed illegal discharges, within 24 hours of the third party inspection;
[c] Reporting to the Copermittee of all inspection findings within one week of the inspection being conducted; and
[d] Copermittee follow-up and/or enforcement actions for identified potential storm water violations within two business days of the inspection or potential violation report receipt.

~~(e)~~(f) Based upon site inspection findings, each Copermittee must implement all follow-up actions and enforcement necessary to comply with this Order.

~~(f)~~(g) To the extent that the Regional Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year will be satisfied.

~~(g)~~(h) The Copermittees must track the number of inspections for the inventoried industrial and commercial sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in this Order.

(5) Enforcement of Industrial and Commercial Sites/Sources

Each Copermittee must enforce its storm water ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

(6) Training and Education for Owners and Operators of Commercial and Industrial Activities

(a) Each Copermittee must implement an education program using all media as appropriate to (1) measurably increase the knowledge of owners and operators of commercial and industrial activities regarding MS4s, impacts of ~~urban~~ runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce storm water pollutant releases and eliminate prohibited non-storm water discharges to MS4s and the environment. At a minimum, the education program must meet the requirements of this section and address the following issues:
(i) Laws, regulations, permits, & requirements;
(ii) Best management practices;
(iii) General ~~urban~~ runoff concepts; and
(iv) Other topics, including public reporting mechanisms, water conservation, low-impact development techniques.

(b) BMP Notification: At least twice during the five-year period of this Order, each Copermittee must notify the owner/operator of each inventoried industrial and commercial site/source of the BMP requirements applicable

to the site/source.

c. RESIDENTIAL

Each Copermittee must implement a residential program which meets the requirements of this section, prevents illicit discharges into the MS4, reduces residential discharges of storm water pollutants from the MS4 to the MEP, and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Threat to Water Quality Prioritization

Each Copermittee must identify residential areas and activities that pose a high threat to water quality. At a minimum, these must include:

(a) Automobile repair, maintenance, washing, and parking;
(b) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
(c) Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
(d) Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;
(e) Any residential areas tributary to a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
(f) Any residential areas within or directly adjacent to or discharging directly to a coastal lagoon, the ocean, or other receiving waters within an environmentally sensitive area (as defined in Attachment C of this Order).

(2) BMP Implementation

(a) Pollution Prevention: Each Copermittee must actively encourage the use of pollution prevention methods by residents.

(b) Designate BMPs: Each Copermittee must designate minimum BMPs for high threat to water quality residential areas and activities. The designated minimum BMPs for high threat to water quality residential areas and activities must be area or activity specific.

(c) Hazardous Waste BMPs: Each Copermittee must facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation must include educational activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Curbside collection of household hazardous wastes is encouraged.

(d) Implement BMPs: Each Copermittee must implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with Sections A and B of this Order. for high threat to water quality residential areas and activities.

(e) Each Copermittee must implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.

(3) Enforcement of Residential Areas and Activities

Each Copermittee must enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

(4) Evaluation of Oversight of Residential Areas and Activities

Each Copermittee must annually review the effectiveness of efforts to reduce residential discharges of storm water pollutants from the MS4 and eliminate illicit residential discharges into the MS4. The evaluation must consider findings from monitoring data, municipal employee comments, inspections, complaints, and other appropriate sources.

(5) Common Interest Areas (CIA) / Homeowner Association (HOA) Areas

Each Copermittee must implement measures specifically to ensure that urban runoff within common interest developments, including areas managed by associations, meets the objectives of this section and Order.

(a) BMP Implementation: Each Copermittee must implement management measures based on a review of pertinent factors, including:

(i) Current maintenance duties and procedures used by CIA / HOA maintenance associations within its jurisdiction;
(ii) Whether streets and storm drains are publicly or privately owned within the CIA/HOA;
(iii) Whether the CIA/HOA area has been identified as a high priority residential area;
(iv) Proximity to 303(d)-listed waterbodies, the ocean, environmentally sensitive areas;
(v) Evaluation of water quality monitoring data;
(vi) Evaluation of existing illegal discharge/illicit connection activities;
(vii) Other activities conducted or authorized by the HOA that may pose a significant risk to inland or coastal receiving waters.

(b) Legal Authority and Enforcement: Within twoone years of adoption of this Order, each Copermittee must review its Municipal Code to determine the most appropriate method to implement and enforce urban runoff management measures within CIA/HOA areas.

(6) Residential Education Program

(a) Each Copermittee must implement a Residential Education Program using all media as appropriate to (1) measurably increase the knowledge regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce storm water and eliminate prohibited non-storm water pollutant releases to MS4s and the environment.

(b) Copermittee educational programs must emphasize underserved target audiences, residents and managers of CIA/HOA areas, high-risk behaviors, and "allowable" behaviors and discharges. At a minimum, the education program must meet the requirements of this section and address the following issues:
(i) Laws, regulations, permits, & requirements;
(ii) Best management practices;
(iii) General urban runoff concepts;
(iv) Existing water quality, including local water quality conditions, impaired waterbodies and environmentally sensitive areas; and
(v) Other topics, including public reporting mechanisms, water conservation, low-impact development techniques, and public health and disease vector issues associated with urban runoff.

d. Retrofitting Existing Development

Each Copermittee must implement a retrofitting program which meets the requirements of this section, solves chronic flooding problems, reduces impacts from hydromodification, incorporates LID, supports stream restoration, systematically reduces downstream channel erosion, reduces the discharges of storm water pollutants from the MS4 to the MEP, and prevents discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification
The Copermittee must identify and inventory existing developments (i.e. municipal, industrial, commercial, residential) as candidates for retrofitting. Potential retrofitting candidates must include but are not limited to:

(a) Development that contributes pollutants to a TMDL or a ESA,
(b) Development contributing flows to downstream frequent flooding,
(c) Receiving waters channelized or otherwise hardened,
(d) Development tributary to receiving waters that are channelized or otherwise hardened,
(e) Developments tributary to receiving waters that are significantly eroded,
(f) Developments tributary to an ASBS or SWQPA,
(g) Development that causes hydraulic constriction.

(2) Each Copermittee shall evaluate and rank the inventoried existing developments to prioritize retrofitting. Criteria for evaluation must include:
(a) Feasibility,
(b) Cost effectiveness,
(c) Pollutant removal effectiveness,
(d) Impervious area potentially treated,
(e) Maintenance requirements,
(f) Landowner cooperation,
(g) Neighborhood acceptance, and
(h) Aesthetic qualities.
(i) Efficacy at addressing concern.

(3) Based on the results of the evaluation and rankings, each Copermittee must require select, qualified existing developments to implement source control and treatment control BMPs in accordance with the SSMP requirements within sections D.1.d.(3) through D.1.d.(8). In addition, the Copermittee shall encourage retrofit projects to implement where feasible the Hydromodification requirements in section D.1.h.

(4) When requiring retrofitting on existing development, the Copermittees will cooperate with private landowners to encourage retrofitting projects. The Copermittee may consider the following practices in cooperating and encouraging private landowners to retrofit their existing development:

(a) Demonstration retrofit projects;
(b) Retrofits on public land and easements;
(c) Education and outreach;
(d) Subsidies for retrofit projects;
(e) Requiring retrofit projects as mitigation or ordinance compliance;
(f) Public and private partnerships; and
(g) Fees for existing discharges to the MS4.

(5) The retrofit BMPs shall be tracked and inspected in accordance with section D.1.f. Treatment Control BMP Maintenance Tracking.

(6) Where a project or projects cannot feasibly retrofit due to existing constraints,

the Copermittee may propose a regional mitigation project to improve water quality. Such regional projects may include but are not limited to:

(a) Regional water quality treatment BMPs,
(b) Urban creek or wetlands restoration and preservation,
(c) Daylighting and restoring underground creeks,
(d) Localized rainfall storage and reuse, and
(e) Removal of invasive plant species.

(7) A retrofit project may qualify as a Watershed Water Quality Activity provided it meets the requirements in section E. Watershed Runoff Management Program.

4. ILLICIT DISCHARGE DETECTION AND ELIMINATION

Each Copermittee must implement a program which meets the requirements of this section to actively detect and eliminate illicit discharges and disposal into the MS4. The program must address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with section B of this Order.

a. PREVENT AND DETECT ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee must implement measures to prevent and detect illicit discharges to the MS4.

(1) Legal Authority: Each Copermittee must retain legal authority to prevent and eliminate illicit discharges and connections to the MS4.

(2) Inspections: Each Copermittee must include use of appropriate municipal personnel and contractors to assist in identifying illicit discharges and connections during their daily activities.

(a) Inspections for illegal discharges and connections must be conducted during routine maintenance of all MS4 facilities.

(b) Municipal staff and contractors conducting non-MS4 field operations must be trained to report suspected illegal discharges and connections to proper municipal staff.

b. MAINTAIN MS4 MAP

Each Copermittee must maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of a GIS is highly

recommended. The accuracy of the MS4 map must be confirmed during dry weather field screening and analytical monitoring and must be updated at least annually. The GIS layers of the MS4 map must be submitted with the updated Jurisdictional Runoff Management Plan within 365 days after adoption of this Order.

c. FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS - PUBLIC HOTLINE

Each Copermittee must promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee must facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines must be capable of receiving reports in both English and Spanish 24 hours per day and seven days per week.

d. DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING

Each Copermittee must conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program No. R9-20098-00021.

e. INVESTIGATION / INSPECTION AND FOLLOW-UP

Each Copermittee must implement procedures to investigate and inspect portions of the MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing illicit discharges, illicit connections, or other sources of pollutants in non-storm water.

(1) Develop response criteria for data: Each Copermittee must develop, update, and use numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed in response to water quality monitoring. The criteria must include consideration of 303(d)-listed waterbodies and environmentally sensitive areas (ESAs) as defined in Attachment C.

(2) Respond to data: Each Copermittee must investigate portions of the MS4 for which water quality data or conditions indicates a potential illegal discharge or connection.

(a) Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) must be investigated immediately.

(b) Field screen data: Within two business days of receiving dry weather field screening results that exceed action levels, the Copermittees must either

conduct an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation shall be included in the Annual Report.

(c) Analytical data: Within two business days of receiving analytical laboratory results that exceed action levels, the Copermittees must either conduct an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation shall be included in the Annual Report.

(3) Respond to notifications: Each Copermittee must respond to and resolve each reported incident (e.g., public hotline, staff notification, etc.) in a timely manner. Criteria may be developed to assess the validity of, and prioritize the response to, each report.

f. ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee must take immediate action to initiate steps necessary to eliminate all detected illicit discharges, illicit discharge sources, and illicit connections ~~as soon as practicable~~ after detection. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to the public's health or the environment must be eliminated immediately.

g. ENFORCE ORDINANCES

Each Copermittee must implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4 and to eliminate detected illicit discharges and connections to it MS4.

h. PREVENT AND RESPOND TO SEWAGE SPILLS (INCLUDING FROM PRIVATE LATERALS AND FAILING SEPTIC SYSTEMS) AND OTHER SPILLS

(1) Each Copermittee must implement management measures and procedures to prevent, respond to, contain and clean up all sewage and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Spill response teams must prevent entry of spills into the MS4 and contamination of surface water, ground water and soil ~~to the maximum extent practicable~~. Each Copermittee must coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies so that maximum water quality protection is available at all times.

(2) Each Copermittee must develop and implement a mechanism whereby it is notified of all sewage spills from private laterals and failing septic systems into its MS4. Each Copermittee must implement management measures and procedures to prevent, respond to, contain and clean up sewage from any such notification.

i. EDUCATION AND TRAINING

Each Copermittee must implement educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

5. PUBLIC PARTICIPATION COMPONENT

Each Copermittee must incorporate a mechanism for public participation in the updating, development, and implementation of the Jurisdictional Urban Runoff Management Program.

G. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM

1. Update the Watershed Urban Runoff Management Program

Each Copermittee must participate in implementing and updating a Watershed Urban Runoff Management Program (Watershed URMP), as described in this Section, with other Copermittees in the Watershed Management Area(s) (WMA) in Table 3 5 to coordinate management efforts for the highest priority watershed water quality problems. Each Copermittee must implement all requirements of this section no later than 365 days after adoption of this Order, unless otherwise specified. Prior to 365 days after adoption of this Order, each Copermittee must collaborate with the other Copermittees within its Watershed Management Area(s) to at a minimum implement its Watershed URMP document, as the document was developed and amended to comply with the requirements of Order No. 2002-01. At a minimum, each updated Watershed URMP must include the elements described below:

Table 35. Watershed Management Areas and Watershed Copermittees

WATERSHED MANAGEMENT AREA	RESPONSIBLE WATERSHED COPERMITTEE (S)	HYDROLOGIC AREA (HA) OR HYDROLOGIC SUBAREA (HSA)	MAJOR RECEIVING WATER BODIES
Aliso Creek	Aliso Viejo **County of Orange** Laguna Beach Laguna Hills Laguna Niguel Laguna Woods Lake Forest Mission Viejo Orange County Flood Control District	Aliso HSA	Aliso Creek, Pacific Ocean
San Juan Creek	**County of Orange** Dana Point Laguna Hills Laguna Niguel Mission Viejo Orange County Flood Control District San Juan Capistrano Rancho Santa Margarita	Mission Viejo HA	San Juan Creek, Trabuco Creek, Oso Creek, Canada Gobernadora, Bell Canyon, Verdugo Canyon, Pacific Ocean

Note: The designated Lead Watershed Copermittee for each watershed is bolded.

a. Lead Watershed Copermittee Identification

Watershed Copermittees may identify the Lead Watershed Copermittee for their WMA. In the event that a Lead Watershed Copermittee is not selected and identified by the Watershed Copermittees, by default the Copermittee identified in Table 3 as the Lead Watershed Copermittee for that WMA must be responsible for implementing the requirements of the Lead Watershed Copermittee in that WMA. The Lead Watershed Copermittees must serve as liaisons between the Copermittees and Regional Board, where appropriate.

b. Watershed Map

Watershed Copermittees must develop and periodically update a map of the WMA to facilitate planning, assessment, and collaborative decision-making. As determined appropriate, the map must include features such as receiving waters (including the Pacific Ocean); Environmentally Sensitive Areas Clean Water Act

section 303(d) impaired receiving waters; land uses, MS4s; major highways; jurisdictional boundaries; and inventoried commercial, industrial, and municipal sites. The Copermittees must submit the GIS layers containing the watershed map to the Regional Board with their updated JRMP within 365 days of adoption of this Order.

c. Annual Watershed Water Quality Assessment

(1) Assess Conditions: Watershed Copermittees must annually assess the water quality of receiving waters in their WMA and use the information to set priorities and to effectively update BMP implementation. This assessment must use applicable water quality data, reports, and analyses generated in accordance with the requirements of this Order and the Receiving Waters and Urban Runoff Monitoring and Reporting Program, as well as applicable information available from Copermittees and other public and private organizations.

(2) Identify Problems and Select Priority Pollutant(s): The assessment and analysis must annually identify the WMA's water quality problems that are partially or fully attributable to MS4 discharges. Identified water quality problems must include CWA section 303(d) listings, persistent violations of water quality standards, toxicity, degraded biological conditions, hydromodification, violations of permit prohibitions, impacts to beneficial uses, and other pertinent conditions. From the list of water quality problems, the high priority water quality problems of the WMA must be identified. High priority problems selected must include those water quality problems that most significantly exceed or affect water quality standards (water quality objectives, and beneficial uses, and the State Policy for maintaining high quality waters[9]).

(3) Identify Sources of Pollutants: The annual assessments must include identification of the likely sources of the WMA's high priority water quality problems. that have caused or contributed to exceedances of water quality objectives, or that if unaddressed, may result in exceedances of water quality objectives. The Annual Assessment must include, but is not limited to, focused water quality and sediment quality monitoring, watershed modeling of ambient constituents, flows, and pollutants. The Annual Assessments shall identify sources or source areas, linkages, waste loadings within the watersheds, and where necessary (I.e. exceedances of water quality objectives), waste load allocations needed to return to compliance with water quality objectives.

[9] State Water Resources Control Board, Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California.*

d. WATERSHED STRATEGY: EVALUATION AND SELECTION OF MANAGEMENT OPTIONS

Watershed Copermittees must develop a collective watershed strategy to abate the sources and reduce the discharges causing the high priority water quality problems of the WMA based on their assessment in section G.1.c. The strategy must guide Watershed Copermittee selection and implementation of Watershed URMP Activities, so that the Watershed Activities selected and implemented are appropriate for each Watershed Copermittee's contribution to the WMA's high priority water quality problems.

(1) Evaluation of Management Options: Watershed Copermittees within a WMA must evaluate management options in response to each annual watershed water quality assessment. Copermittees must identify actions necessary to reduce priority pollutant discharges from the MS4, including actions to resolve key uncertainties and to verify assumptions.

(2) Selection of Management Options / Watershed Activities List: Each Watershed Copermittee within a WMA must select management practices to implement in response to the annual evaluation of management options. Each Copermittee must establish an implementation schedule for the selected management options.

~~(3)Role of Lead Permittee~~

~~(a)The Lead Watershed Permittee must maintain results of the management option evaluations. For structural and nonstructural management practices evaluated, the assessment must contain a description of the practice(s), conclusions from the evaluation, and whether and when the practice is planned for implementation by a Permittee or group of Permittees.~~

~~(b)The Lead Watershed Permittee must maintain the updated schedule of actions to be taken by each Watershed Permittee. Each activity on the Watershed Activities List must include the following information:~~

~~(i)A description of the activity;~~
~~(ii)A time schedule for implementation of the activity, including key milestones;~~
~~(iii)An identification of the specific responsibilities of Watershed Permittees in completing the activity;~~
~~(iv)A description of how the activity will address the identified high priority water quality problem(s) of the watershed;~~
~~(v)A description of how the activity is consistent with the collective watershed strategy;~~
~~(vi)A description of the expected effectiveness and benefits of~~

implementing the activity; and
(vii)A description of how implementation effectiveness will be measured.

e. BMP IMPLEMENTATION AND ASSESSMENT

The Watershed Copermittees must implement and assess Watershed Activities that address improve the high priority water quality problems in the WMA. Watershed Activities include both "Water Quality Activities" and "Education Activities" that each specifically target the high priority water quality problems in the WMA. Water Quality Activities are structural or non-structural measures. other than education. Education Activities are outreach and training activities.

(1) BMP Implementation: Each Watershed Copermittee must implement Watershed Activities pursuant to established schedules in the Watershed URMP. During each reporting period, no less than two Watershed Water Quality Activities and one Watershed Education Activity must be put into effect that can be reasonably expected to provide quantifiable benefits to discharge or receiving water quality within each WMA as part of the iterative process for reducing storm water pollutants to the MEP and/or eliminating non-storm water runoff and pollutants (Additional Aliso Creek provisions are in Section E.5 below.) Watershed Activities may be implemented individually or collectively, and may be implemented at the watershed or jurisdictional level. Results from Watershed Activities shall be used in the design and implementation of future Watershed Activities as part of the iterative process. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's must exceed the baseline jurisdictional requirements of the jurisdictional URMP requirements (section D) of this Order. Watershed Activities do not include projects that are otherwise required by the Regional Board such as for JRMP or other NPDES permit requirements. The one exception is retrofitting sites, which can be considered a watershed activity.

(2) BMP Assessment: Watershed Copermittees must annually assess the success of each implemented BMP through monitoring, surveillance, and other effective means. The assessments must include consideration of the individual practice, expectations of the activity, adjacent receiving waters, and the WMA.

(3) BMP Summaries: For structural and nonstructural management practices implemented, the Watershed Copermittees must develop annual summaries that contain a description of the practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results.

f. INFORMATION EXCHANGE

(1) Copermittee Collaboration and Meetings: Watershed Copermittees must collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration must include frequent regularly scheduled meetings.

(2) Public Participation: Watershed Copermittees must implement a watershed-specific public participation mechanism within each watershed. The mechanism must encourage participation from other organizations within the watershed (such as water/sewer districts, Orange County Vector Control District, Caltrans, non-governmental organizations, etc.).

(3) The Lead Watershed Copermittee must make publicly available the management option evaluations, watershed activities list, and implemented BMP summaries.

g. WATERSHED URMP REVIEW AND UPDATES

Each Watershed URMP must be reviewed annually to identify needed modifications and improvements based on the BMP evaluations and assessments of water quality data, BMPs, and other pertinent information. Individual Watershed Copermittees must also review and modify their jurisdictional activities and JURMPs as necessary so that they are consistent with the Watershed URMP findings.

h. WATERSHED-BASED LAND USE PLANNING

The Watershed Copermittees must develop, implement, and modify, as necessary, a program for encouraging collaborative, watershed-based, land use planning in their jurisdictional planning departments.

2. Reporting

Each Copermittee must contribute to the development of an annual watershed URMP report to be submitted to the Regional Board annually by the Lead Watershed Copermittee. The annual watershed URMP report must contain the following information:

a. Annual water quality assessment with identification of highest priorities;
b. Updated watershed strategy;
c. Record of watershed meetings and collaborative progress;
c.d. Evaluation of BMPs considered to implement the watershed strategy;
d.e. Updated watershed URMP activities list, including the status and timeframe on all selected activities;

f. Estimated pollutant reductions from proposed and implemented Watershed Activities;

e.g. BMP assessments of implemented watershed URMP activities;

f.h. Summaries of implemented BMPs; how the BMPs addressed the identified high priority water quality problems; and the measured pollutant reduction;

g.i. Summary of progress toward abating sources and reducing pollutant discharges causing the identified high priority water quality problems in the WMA; and

h.j. Summary of progress toward achieving short-term and long-term goals; and.

k. Detailed schedules for adding and/or modifying BMPs to address the identified high priority problems.

3. Work Plan

The Watershed Permittees must develop, implement, and update annually, a Watershed Water Quality Work Plan that ranks each watershed's highest priority issues. The Watershed Water Quality Work plan shall identify planned watershed assessment, BMP evaluation, BMP selection, and BMP implementation efforts for each watershed planning area for the full 5-year Permit cycle. The goal of the work plan to is to demonstrate a responsive and adaptive approach for the judicious and effective use of available resources to attack the highest priority problems on a watershed basis.

3.4. Aliso Creek Watershed URMP Provisions

The following provisions apply to the Aliso Creek watershed URMP. Requirements in this subsection must supersede requirements prescribed by the Regional Board on October 18, 2005.[10]

a. Each Copermittee within the Aliso Creek Watershed must implement the monitoring and reporting program described in *Aliso Creek 13325 Directive, Revised Monitoring Program Design – Integration with NPDES Program*, December 2004 (Revised Aliso Creek Program).

b. Each Copermittee must provide annual reports by March 1 of each year beginning in 2008 for the preceding annual period of January through December. The annual reports must contain the following information:

(1) Water quality data and assessment from the Revised Aliso Creek Program. Each municipality must implement the monitoring and reporting program described in the Revised Aliso Creek Program. All information submitted in the report must conform to a SWAMP-Compatible Quality Assurance Project

[10] On October 12, 2005, the Regional Board accepted proposed changes to the bacteria monitoring program that had been conducted since Spring 2001 pursuant to an Investigative Order from the Regional Board's executive officer. The October 18, 2005, letter from the Regional Board's executive officer revised the Investigative Order and instituted the new monitoring and reporting requirements.

Plan[11]. The report must contain an assessment of compliance with applicable water quality standards for each monitoring station. The report must include data in tabular and graphical form, and electronic data must be submitted to the Regional Board upon request.

(2) Program Assessment. A description and assessment of each municipality's program implemented within the high-priority storm drain locations (as identified Revised Aliso Creek Program) to reduce discharges of indicator fecal bacteria/pathogens. Monitoring alone is not sufficient to assess progress of the municipal programs. Municipalities must demonstrate each year that their programs are effective and resulting in a reduction of bacteria sources.

(i) For structural and nonstructural management practices implemented, the assessment must contain a description of the practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results.

(ii) For structural and nonstructural management practices evaluated, the assessment must contain a description of the practice(s), conclusions from the evaluation, and whether and when the practice is planned for implementation by the municipality or group of municipalities.

(3) Status Reports. Updates on high-priority storm drain areas. Status reports must be provided by each municipality that discuss the causes of impairment and subsequent management activities implemented within the reporting period in the high priority areas and the planned activities for the next reporting period.

(4) Certification Statement. The technical reports submitted to the Regional Board must include the following certification statement signed by either the principal executive officer, ranking elected official, or duly authorized representative of that person:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there

[11] The State Water Resource Control Board (State Board) has prepared an electronic template for Quality Assurance Project Plans (QAPP) to assist in QAPP development, to provide a common format that will allow for review to be expedited, and to provide information on Surface Water Ambient Monitoring (SWAMP) consistency. Additional information and the template are available on-line at http://www.waterboards.ca.gov/swamp/qapp.html.

are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

c. The annual reports must be submitted until the Regional Board determines they are no longer warranted. If requested by a municipality, the monitoring program may be modified or reduced by the Regional Board. The monitoring program and annual reporting may be modified in response to adopted TMDLs and additional Clean Water Act 303(d) listings for impairment.

d. Municipalities must continue meeting on a quarterly basis to discuss efforts to reduce bacteria in the Aliso Creek watershed.

H. FISCAL ANALYSIS

1. Secure Resources: Each Copermittee must secure the resources necessary to meet all requirements of this Order.

2. Annual Analysis: Each Copermittee must conduct an annual fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs required by this Order. The analysis must include estimated expenditures for the reporting period, the preceding period, and the next reporting period.

a. Each analysis must include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

b. Each analysis must include a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.

3. Business Plan: Prior to expiration of this Order (five years after adoption), each Copermittee must submit to the Regional Board a Municipal Storm Water Funding Business Plan that identifies a long-term funding strategy for program evolution and funding decisions. The Business Plan must identify planned funding methods and mechanisms for municipal storm water management. It should identify the following items:

a. Program components of the municipal storm water program;
b. Linkages and dependencies among program components.
c. Problems addressed by the storm water program;
d. Storm water program priorities;
e. Services provided by the storm water program;
f. Public participation;
g. Available funding methods and mechanisms and associated legal constraints;
h. Partnerships with other public agencies;

i. Partnerships with the private sector;
j. Use of technology to improve efficiency; and
k. Anticipated local, state, and federal regulations that affect storm water management or funding options.

4. Annual Reporting: Each Copermittee must submit its annual fiscal analysis with the annual JURMP report.

I. TOTAL MAXIMUM DAILY LOADS

This section will incorporate adopted TMDL WLAs as numeric limits on a pollutant by pollutant, watershed by watershed basis. Reduction schedules and monitoring requirements for each pollutant will be inserted into this Order as individual Cleanup and Abatement Orders (CAOs), adopted by the Regional Board. CAOs for adopted TMDLs with compliance dates beyond the length of this permit will be incorporated into this Order as developed by the Regional Board. Early TMDL requirements, including monitoring, may be required and inserted into this Order pursuant to Finding E.12

J. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

1. Jurisdictional Program Effectiveness Assessments

a. OBJECTIVES OF EFFECTIVENESS ASSESSMENTS

Beginning with the Annual Report due in 20092010, each Copermittee must annually assess the effectiveness of its Jurisdictional Urban Runoff Management Program (JURMP) implementation at meeting the following objectives:

(1) Objective for 303(d) Waterbodies: Reduce pollutant loadings.

(a) Each Copermittee must establish annual assessment measures or methods specifically for reducing discharges of storm water pollutants from its MS4 into each downstream 303(d)-listed water body for which that waterbody is impaired. Assessment measures must be developed for each of the six outcome levels described by CASQA.[12]

(b) Each Copermittee must annually conduct each established assessment measure or method and evaluate the outcome. Each outcome must then be used to assess the effectiveness of implemented management measures toward reducing MS4 discharges of the specific pollutants

[12] Effectiveness assessment outcome levels as defined by CASQA are defined in Attachment C of this Order. See "*Municipal Stormwater Program Effectiveness Assessment Guidance"* (CASQA, May 2007) for guidance for assessing program activities at the various outcome levels.

causing or contributing to conditions of impairment.

(c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.

(2) Objective for Environmentally-Sensitive Areas: Prevent MS4 discharges from causing or contributing to conditions of pollution, nuisance, or contamination.

(a) Each Copermittee must establish annual measures or methods specifically for assessing the effectiveness of its management measures for protecting downstream ESAs from adverse effects caused by discharges from its MS4. Assessment measures must be developed for each of the six outcome levels described by CASQA.

(b) Each Copermittee must annually implement each established assessment measure or method and evaluate the outcome. Each outcome must be used to assess the effectiveness of implemented management measures toward reducing MS4 discharges of the specific pollutants causing or contributing to conditions of impairment.

(c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.

(3) Objectives for major program component outcomes: Determined by Each Copermittee.

(a) Each Copermittee must annually develop objectives for each program component in Section D F and the overall JURMP. The objectives must be established as appropriate in response to program implementation and evaluation of water quality and management practices.

(b) Assessment approaches for program implementation must include a mix of specific activities, general program components, and water quality data.

(c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.

(4) Objectives for actions taken to protect receiving water limitations in accordance with Section A.3this Order.

(a) Each Copermittee must develop and implement an effectiveness assessment strategy for each measure conducted in response to a determination to implement the “iterative” approach to prevent or reduce any pollutants that are causing or contributing to the exceedance of water

quality standards as outlined in Section A.3 of this Order

b. ASSESSMENT REVIEW

(1) Based on the results of the effectiveness assessments, each Copermittee must annually review its jurisdictional activities and BMPs to identify modifications and improvements needed to maximize JURMP effectiveness, as necessary to achieve compliance with Section A of this Order.

(2) Each Copermittee must develop and annually conduct an Integrated Assessment[13] of each effectiveness assessment objective above (Section GJ.1.a) and the overall JURMP using a combination of outcomes as appropriate to the objectives.[14]

2. Program Modifications

a. Each Copermittee must develop and implement a plan and schedule to address program modifications and improvements identified during annual effectiveness assessments.

b. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs must be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems must be modified and improved to correct the water quality problems.

3. Effectiveness Assessment and Program Response Reporting

a. Each Copermittee must include a description and summary of its annual and long-term effectiveness assessments within each Annual Report. Beginning with the Annual Report due in 20092010, the Program Effectiveness reporting must include:

(1) 303(d) waterbodies: A description and results of the annual assessment measures or methods specifically for reducing discharges of pollutants from its MS4 into each 303(d)-listed waterbody;

(2) ESAs: A description and results of the annual assessment measures or methods specifically for managing discharges of pollutants from its MS4 into

[13] Integrated assessment is defined in Attachment C. It is the process of evaluating whether program implementation is resulting in the protection or improvement of water quality. Integrated assessment combines assessments of program implementation and water quality.
[14] Not all program components need be addressed at each of the six outcome levels.

each downstream ESA;

(3) Other Program Components: A description of the objectives and corresponding assessment measures and results used to evaluate the effectiveness of each general program component. The results must include findings from both program implementation and water quality assessment where applicable;

(4) Receiving water protection: A description and results of the annual assessment measures or methods employed specifically for actions taken to protect receiving water limitations in accordance with Section A.3 of this Order;

(5) A description of the steps taken to use dry-weather and wet-weather monitoring data to assess the effectiveness of the programs for 303(d) impairments, ESAs, and general program components;

(6) A description of activities conducted in response to investigations of illicit discharge and illicit connection activities, including how each investigation was resolved and the pollutant(s) involved;

(7) Responses to effectiveness assessments: A description of each program modification, made in response to the results of effectiveness assessments conducted pursuant to Section GJ.1.a, and the basis for determining (pursuant to Section GJ.2.b.) that each modified activity and/or BMP represents an improvement with respect to reducing the discharge of pollutants from the MS4.

(8) A description of the steps that will be taken to improve the Copermittee's ability to assess program effectiveness using measurable targeted outcomes, assessment measures, assessment methods, and outcome levels 1-6. Include a time schedule for when improvement will occur; and

(9) A description of the steps that will be taken to identify aspects of the Copermittee's Jurisdictional Urban Runoff Management Program that will be changed based on the results of the effectiveness assessment.

4. Work Plan

Each Copermittee must develop a work plan to address their high priority water quality problems in an iterative manner over the life of the permit. The goal of the work plan is to demonstrate a responsive and adaptive approach for the judicious and effective use of available resources to attack the highest priority problems. The work plan shall include, at a minimum, the following:

a. The problems and priorities identified during the Annual Watershed Water Quality Assessment;
b. A list of priority pollutants and known or suspected sources;
c. A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
d. A description and schedule for new and/or modified BMPs. The schedule is to include dates for significant milestones;
e. A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
f. A description of implementation effectiveness metrics;
g. A description of how efficacy results will be used to modify priorities and implementation; and
h. A review of past activities implemented, progress in meeting water quality standards, and planned program adjustments.

The Copermittee shall submit the work plan to the Regional Board within 365 days of adoption of the Order. Annual updates are also required and shall be included with the annual JRMP report. The Regional Board will assess the work plan for compliance with the specific and overall requirements of the Order. To increase effectiveness and efficiencies, Copermittees may combine their implementation efforts and work plans within a hydrologic area or sub area. Each Copermittee, however, maintains individual responsibility for developing and implementing an acceptable work plan.

K. REPORTING

1. ~~Urban~~ Runoff Management Plans

a. JURISDICTIONAL ~~URBAN~~ RUNOFF MANAGEMENT PLANS

(1) Copermittees: The written account of the overall program to be conducted by each Copermittee to meet the jurisdictional requirements of section ~~D~~ F of this Order is referred to as the Jurisdictional ~~Urban~~ Runoff Management Plan (J~~U~~RMP). Each Copermittee must revise and update its existing ~~(~~J~~U~~RMP~~)~~ so that it describes all activities the Copermittee will undertake to implement the requirements of this Order. Each Copermittee must submit its updated and revised ~~(~~J~~U~~RMP~~)~~ to the Regional Board 365 days after adoption of this Order.

(2) At a minimum, each Copermittee's J~~U~~RMP must be updated and revised to demonstrate compliance with each applicable section of this Order.

b. WATERSHED ~~URBAN~~ RUNOFF MANAGEMENT PLANS

(1) Copermittees: The written account of the program conducted by each

watershed group of Copermittees is referred to as the Watershed Urban Runoff Management Plan. The Copermittees within each watershed are be responsible for updating and revising each Watershed Urban Runoff Management Plan, as specified in Table 3 5 above. Each Watershed Urban Runoff Management Plan must be updated and revised to describe all activities the watershed Copermittees will undertake to implement the Watershed Urban Runoff Management Plan requirements of section E of this Order.

(2) Lead Watershed Copermittee: Each Lead Watershed Copermittee is responsible for producing its respective Watershed Urban Runoff Management Plan, as well as for coordination and meetings amongst all member watershed Copermittees. Each Lead Watershed Copermittee is further responsible for the submittal of the Watershed Urban Runoff Management Plan to the Principal Copermittee by the date specified by the Principal Copermittee.

(3) Principal Copermittee: The Principal Copermittee must assemble and submit updated Watershed Urban Runoff Management Plans to the Regional Board on January 31, 20010 09 in the form of the WURMP annual report.

2. Other Required Reports and Plans

a. SUSMP Updates

(1) Each Copermittee must submit its updated local SUSMP in accordance with the applicable requirements of section DF.1 with the JURMP 365 days after adoption of this Order.

(2) For SUSMP-related requirements of Section DF.1 with subsequent implementation due dates, updated SUSMPs must be submitted with the JURMP annual report covering the applicable reporting period.

b. Report of Waste Discharge

The Principal Copermittee must submit to the Regional Board, no later than 210 days in advance of the expiration date of this Order, a Report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements. The fourth annual report for this Order may serve as the ROWD, provided it contains the minimum information below.

At a minimum, the ROWD must include the following: (1) Proposed changes to the Copermittees' urban runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts

of the Copermittees; and (6) Any other information necessary for the reissuance of this Order.

3. Annual Reports

a. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM (JURMP) ANNUAL REPORTS

(1) Copermittees: Each Copermittee must generate individual JURMP Annual Reports which cover implementation of its jurisdictional activities during the past annual reporting period. Each Annual Report must verify and document compliance with this Order as directed in this section. Each Copermittee must retain records through 2015, available for review, that document compliance with each requirement of this Order. Each Copermittee must submit to the Principal Copermittee its individual JURMP Annual Report by the date specified by the Principal Copermittee. The reporting period for these annual reports must be the previous fiscal year. For example, the report submitted September 30, 2008 2010 must cover the reporting period July 1, 20097 to June 30, 20082010.

(2) Principal Copermittee: The Principal Copermittee is responsible for collecting and assembling each Copermittee's individual JURMP Annual Report. The Principal Copermittee must submit Unified JURMP Annual Reports to the Regional Board by September 30 of each year, beginning on September 30, 200910. The Unified JURMP Annual Report must contain the 13 individual JURMP Annual Reports.

(3) Each JURMP Annual Report must contain, at a minimum, the following information:

(a) Information required to be reported annually in Section F H (Fiscal Analysis) of this Order;

(b) Information required to be reported annually in Section G J (Program Effectiveness) of this Order; and

(c) The Reporting Checklist Requirement found in Attachment D, and

(c)(d) Information for each program component by watershed as described in the following Table 64:

Table 4 6. Annual Reporting Requirements

Program Component	Reporting Requirement
New Development	1. Updated relevant sections of the General Plan and environmental review process and a description of planned updates within the next annual reporting period, if applicable

Program Component	Reporting Requirement
	2. Revisions to the local SSMP, including where applicable: (a) Identification and summary of where the SSMP fails to meet the requirements of this Order; (b) Updated procedures for identifying pollutants of concern for each Priority Development Project; (c) Updated treatment BMP ranking matrix; and (d) Updated site design and treatment control BMP design standards;
	3. Verification that site design, source control, and treatment BMPs were required on all applicable Priority Development Projects;
	4. Description of the application of LID and site design BMPs in the planning and approval process;
	5. Description of projects subject to the local waiver provision for numeric sizing of treatment control BMP requirements;
	6. Description and summary of LID site design BMP substitution program, if applicable;
	7. Description and summary of the process to verify compliance with SUSMP requirements;
	8. Updates to the BMPs that are listed in the local SSMP as options for treatment control;
	9. Description of the treatment control maintenance tracking process and verification that the requirements of this Order were met during the reporting period; (a) Updated watershed-based database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority treatment BMPs;
	10. Description of the process for identifying and evaluating hydrologic conditions of concern and requiring a suite of management measures within all Priority Development Projects to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels;
	11. Description of enforcement activities applicable to the new development and redevelopment component and a summary of the effectiveness of those activities;
Construction	1. Updated relevant ordinances and description of planned ordinance updates within the next annual reporting period, if applicable;
	2. A description of procedures used for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality;
	3. Designated minimum and enhanced BMPs;

Program Component	Reporting Requirement
	4. Summary of the inspection program, including the following information: (a) Number and date of inspections conducted at each facility including the facility address~~and number of facilities inspected~~; (b) Number of facilities lacking adequate BMPs; (c) The ~~most common types of~~ BMP violations identified during the inspection by facility; (d) Number, date, and types of enforcement actions by facility; (e) Narrative description of inspection findings and follow-up activities for each facility;
Municipal	1. Updated source inventory;
	2. Changes to the designated municipal BMPs
	3. Descriptions of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies;
	4. Summary and assessment of BMPs implemented at retrofitted flood control structures, including: (a) List of projects with BMP retrofits; and (b) List and description of structures retrofitted without BMPs;
	5. Description and assessment of the municipal structural treatment control operations and maintenance activities, including: (a) Number of inspections and types of facilities; and (b) Summary of findings;
	6. Description of the municipal areas/facilities operations and maintenance activities, including: (a) Number and types of facilities maintained; (b) Amount of material removed and how that material was disposed; and (c) List of facilities planned for bi-annual inspections and the justification;
	7. Description of the municipal areas/programs inspection activities, including: (a) Number and date of inspections conducted at each facility ~~and number of facilities inspected~~; (b) Number of facilities lacking adequate BMPs; (c) The ~~most common types of~~ BMP violations identified during the inspection by facility; (d) Number, date and types of enforcement actions by facility; (e) Narrative description of inspection findings and follow-up activities for each facility;
	8. Description of activities implemented to address sewage infiltration into the MS4;
Commercial /	1. Annual inventory of commercial / industrial sources;

Program Component	Reporting Requirement
Industrial	2. Summary of the inspection program, including the following information: (a) Number and date of inspections conducted at each facility including the facility address and number of facilities inspected; (b) Number of facilities lacking adequate BMPs; (c) The most common types of BMP violations identified during the inspection by facility; (d) Number, date, and types of enforcement actions by facility; (e) Narrative description of inspection findings and follow-up activities for each facility.;
	3. Changes to designated minimum and enhanced BMPs;
	4. A list of industrial sites, including each name, address, and SIC code, that the Copermittee suspects may require coverage under the General Industrial Permit for which a NOI has not been filed.
Residential	1. Updated minimum BMPs required for residential areas and activities;
	2. Quantification and summary of applicable urban runoff and storm water enforcement actions within residential areas and activities
	3. Description of efforts to manage urban runoff and storm water pollution in common interest areas;
Illicit Discharge Detection and Elimination	1. Changes to the legal authority to implement Illicit Discharge Detection and Elimination activities;
	2. Changes to the established investigation procedures;
	3. Public reporting mechanisms, including phone numbers and web pages;
	4. All data and assessments from the Dry Weather Effluent Field Screening and Analytical Monitoring activities;
	5. Response criteria developed for water quality data and notifications;
	6. Summaries of illicit discharges (including spills and water quality data events) and how each significant case was resolved;
	7. A description of instances when field screening and analytical data exceeded action levels, but for which no investigation was conducted;
	8. A description of enforcement actions taken in response to investigations of illicit discharges and a description of the effectiveness of those enforcement measures;
	9. A description of controls to prevent limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems.
Work Plan	Priorities, strategy, implementation schedule and effectiveness evaluation.

(4) Each JURMP Annual Report must also include the following information regarding non-storm water discharges (see Section B.2. of this Order):

(a) Identification of non-storm water discharge categories identified as a source of pollutants to waters of the U.S;
(b) A description of whether non-storm water discharge categories identified under section B.2 above will be prohibited or required to implement appropriate control measures to prevent reduce the discharge of pollutants to the MEP;
(c) Identification of any control measures to be required and implemented for non-storm water discharge categories identified under section (a) above; and
(d) A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.

b. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM (WURMP) ANNUAL REPORTS

(1) Lead Watershed Copermittee: Each Lead Watershed Copermittee must generate watershed-specific WURMP Annual Reports for its respective watershed(s), as they are outlined in Table 3-5 of Order No. R9-20089-00012. Copermittees within each watershed must collaborate with the Lead Watershed Copermittee to generate the WURMP Annual Reports.

(2) Each WURMP Annual Report must, at a minimum, contain the information required in sections EG.2 and EG.3 of this Order for the reporting period. Each WURMP Annual Report must also serve as an update to the WURMP.

(3) Principal Copermittee: The Unified WURMP Annual Report must contain the nine separate Watershed Urban Runoff Management Program Annual Reports. Each Lead Watershed Copermittee must submit to the Principal Copermittee a WURMP Annual Report by the date specified by the Principal Copermittee. The Principal Copermittee must assemble and submit the Unified WURMP Annual Report to the Regional Board by January 31, 201009 and every January 31 thereafter. The reporting period for these annual reports is the previous fiscal year. For example, the report submitted January 31, 201009 must cover the reporting period July 1, 20087 to June 30, 20098.

4. Interim Reporting Requirements

For the July 20078-June 20089 reporting period, Jurisdictional URMP and Watershed URMP Annual Reports must be submitted on January 31, 20089. Each Jurisdictional URMP and Watershed URMP Annual Report submitted for this

reporting period must, at a minimum, include comprehensive descriptions of all activities conducted to fully implement the Copermittees' Jurisdictional URMP and Watershed URMP documents, as those documents were developed to comply with the requirements of Order No. 2002-01. The Principal Copermittee must submit these documents in a unified manner, consistent with the unified reporting requirements of Order No. 2002-01.

5. Universal Reporting Requirements

All submittals must include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal. The Principal Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

L. MODIFICATION OF PROGRAMS

Modifications of Jurisdictional Urban Runoff Management Programs and/or Watershed Urban Runoff Management Programs may be initiated by the Executive Officer of the Regional Board or by the Copermittees. Requests by Copermittees must be made to the Executive Officer, and must be submitted during the annual review process. Requests for modifications should be incorporated, as appropriate, into the Annual Reports or other deliverables required or allowed under this Order.

1. Minor Modifications: Minor modifications to Jurisdictional Urban Runoff Management Programs, and/or Watershed Urban Runoff Management Programs, may be accepted by the Executive Officer where the Executive Officer finds the proposed modification complies with all discharge prohibitions, receiving water limitations, and other requirements of this Order.

2. Modifications Requiring an Amendment to this Order: Proposed modifications that are not minor must require amendment of this Order in accordance with this Order's rules, policies, and procedures.

M. PRINCIPAL COPERMITTEE RESPONSIBILITIES

Within 180 days of adoption of this Order, the Copermittees must designate the Principal Copermittee and notify the Regional Board of the name of the Principal Copermittee. The Principal Copermittee must, at a minimum:

1. Serve as liaison between the Copermittees and the Regional Board on general permit issues, and when necessary and appropriate, represent the Copermittees

before the Regional Board.

2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.

3. Integrate individual Copermittee documents and reports into single unified documents and reports for submittal to the Regional Board as required under this Order.

4. Produce and submit documents and reports as required by section H K of this Order and Receiving Waters Monitoring and Reporting Program No. R9-20098-00012.

N. RECEIVING WATERS AND URBAN RUNOFF MONITORING AND REPORTING PROGRAM

Pursuant to CWC section 13267, the Copermittees must comply with all the requirements contained in Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-20098-00021.

O. STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS

1. Each Copermittee must comply with Standard Provisions, Reporting Requirements, and Notifications contained in Attachment B of this Order. This includes 24 hour/5 day reporting requirements for any instance of non-compliance with this Order as described in section 5.e of Attachment B.

2. All plans, reports and subsequent amendments submitted in compliance with this Order must be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on (**DATE**).

_____ TENTATIVE _____
John H. Robertus
Executive Officer

ATTACHMENT A

BASIN PLAN PROHIBITIONS

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.

3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.

4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water

runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.

11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.

12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.

18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

ATTACHMENT B

STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE [40 CFR 122.41]

(a) *Duty to comply* [40 CFR 122.41(a)].

(1) The Copermittee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(2) The Copermittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.

(b) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)]. It shall not be a defense for the Copermittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

(c) *Duty to mitigate* [40 CFR 122.41(d)]. The Copermittee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.

(d) *Proper operation and maintenance* [40 CFR 122.41(e)]. The Copermittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Copermittee only when necessary to achieve compliance with the conditions of this Order.

(e) *Property rights* [40 CFR 122.41(g)].

(1) This Order does not convey any property rights of any sort or any exclusive privilege.
(2) The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

(f) *Inspection and entry* [40 CFR 122.41(i)]. The Copermittee shall allow the Regional Water Quality Control Board, San Diego Region (Regional Board), State Water

Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
(3) Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
(4) Sample or monitor, at reasonable times, for the purpose of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location.

(g) *Bypass* [40 CFR 122.41(m)]

(1) Definitions:

i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations - The Copermittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance (g)(3), (g)(4) and (g)(5) below.

(3) Prohibition of Bypass - Bypass is prohibited, and the Regional Board may take enforcement action against a Copermittee for bypass, unless:

i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
iii) The Copermittee submitted notice as required under Standard Provisions – Permit Compliance (g)(3) above.

(4) Notice

i) Anticipated bypass. If the Copermittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least ten days before the date of the bypass.
ii) Unanticipated bypass. The Copermittee shall submit notice of an unanticipated bypass as required in Standard Provisions 5(e) below (24-hour notice).

(h) *Upset* [40 CFR 122.41(n)] Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the Copermittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance (h)(2) below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(2) Conditions necessary for a demonstration of upset. A Copermittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i) An upset occurred and that the Copermittee can identify the cause(s) of the upset;
ii) The permitted facility was at the time being properly operated;
iii) The Copermittee submitted notice of the upset as required in Standard Provisions – Permit Compliance (5)(e)(ii)(B) below (24-hour notice); and
iv) The Copermittee complied with any remedial measures required under Standard Provisions – Permit Compliance 1(c) above.

(3) Burden of Proof. In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof.

2. STANDARD PROVISIONS – PERMIT ACTION

(a) *General* [40 CFR 122.41(f)] This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.

(b) *Duty to reapply* [40 CFR 122.41(b)]. If the Copermittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Copermittee must apply for and obtain new permit.

(c) *Transfers*. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA and the CWC.

3. STANDARD PROVISIONS – MONITORING

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR Section 122.41 (j) (1)]

(b) Monitoring results must be conducted according to test procedures under 40 CFR Part 136, or in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR Section 122.41(j)(4)][40 CFR Section 122.44(i)(1)(iv)].

4. STANDARD PROVISIONS – RECORDS

(a) Except for records of monitoring information required by this Order related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Copermittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application, This period may be extended by request of the Regional Water Board Executive Officer at any rime [40 CFR Section 122.41(j)(2)].

(b) *Records of monitoring information* [40 CFR 122.41(j) (3)] shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

(c) *Claims of confidentiality* [40 CFR Section 122.7(b)] of the following information will be denied:

(1) The name and address of any permit applicant or Copermittee; and
(2) Permit applications and attachments, permits and effluent data.

5. STANDARD PROVISIONS – REPORTING

(a) *Duty to provide information* [40 CFR 122.41(h)]. The Copermittee shall furnish to the Regional Board, SWRCB, or USEPA within a reasonable time, any information which

the Regional Board, SWRCB, or USPEA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Copermittee shall also furnish to the Regional Board, SWRCB, or USEPA, copies of records required to be kept by this Order.

(b) *Signatory and Certification Requirements* [40 CFR 122.41(k)]

(1) All applications, reports, or information submitted to the Regional Board, SWRCB, or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5(b)ii), 5(b)iii), 5(b)iv), and 5(b) (see 40 CFR 122.22)

(2) *Applications* [40 CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.

(3) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the Regional Board, SWRCB, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5(b)(2) above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

i) The authorization is made in writing by a person described in Standard Provisions-Reporting 5(b)(2) above;

ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and,

iii) The written authorization is submitted to the Regional Water Board and State Water Board.

(4) *Changes to authorization* [40 CFR Section 122.22(c)] If an authorization under Standard Provisions – Reporting 5(b)(3)of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5(b)(3) above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative.

(5) *Certification* [40 CFR Section 122.22(d)] Any person signing a document under Standard Provisions – Reporting 5(b)(2), or 5(b)(3) above shall make the following certification:

”I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(c) *Monitoring reports*. [40 CFR 122.41(l)(4)]

(1) Monitoring results shall be reported at the intervals specified in the Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program No. R9-20097-00021.

(2) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or SWRCB for reporting results of mentoring of sludge use or disposal practices.

(3) If the Copermittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board.

(4) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.

(d) *Compliance schedules*. [40 CFR Section 122.41(l)(5)] Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each schedule date.

(e) *Twenty-four hour reporting* [40 CFR Section 122.41(l)(6)]

(1) The Copermittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(2) The following shall be included as information, which must be reported within 24 hours under this paragraph:

i) Any unanticipated bypass that exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
ii) Any upset which exceeds any effluent limitation in this Order.

(3) The Regional Board may waive the above-required written report under this provision on a case-by-case basis if the oral report has been received within 24 hours.

(f) *Planned changes*. [40 CFR Section 122.41(l)(1)] The Copermittee shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are not subject to effluent limitations in this Order.

(3) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

(g) *Anticipated noncompliance*. [40 CFR Section 122.41(l)(7)] The Copermittee shall give advance notice to the Regional Board or SWRCB of any planned changes in the permitted facility or activity, which may result in noncompliance with Order requirements.

(h) *Other noncompliance* [40 CFR Section 122.41(l) 7)] The Copermittee shall report all instances of noncompliance not reported under Standard Provisions 5(c), 5(d), and 5(e) above, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5(e) above.

(i) *Other information* [40 CFR Section 122.41(l)(8)] When the Copermittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Board, SWRCB, or USEPA, the Copermittee shall promptly submit such facts or information.

6. STANDARD PROVISIONS – ENFORCEMENT

(a) The Regional Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

7. ADDITIONAL STANDARD PROVISIONS

(a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v)

must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;

(2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.26(d)(2)(v);

(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;

(5) Annual expenditures and budget for year following each annual report;

(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and

(7) Identification of water quality improvements or degradation.

(b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

(c) *Other Effluent Limitations and Standards* [40 CFR 122.44(b)(1)]. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

(d) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.

(e) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the Regional Board may review and revise this permit.

(f) *Termination or modification of Order* [CWC section13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:

(1) Violation of any condition contained in this Order;
(2) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
(3) A change in any condition that requires either a temporary or permanent

reduction or elimination of the permitted discharge.

(g) *Transfers*. When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.

(h) *Conditions not stayed*. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

(i) *Availability*. A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.

(j) *Duty to minimize or correct adverse impacts*. The Copermittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

(k) *Interim Effluent Limitations.* The Copermittee shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this Regional Board.

(l) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

(m) *Noncompliance*. Any noncompliance with this Order constitutes violation of the CWC and is grounds for denial of an application for modification of the Order (also see 40 CFR 122.41(a).

(n) *Director*. For purposes of this Order, the term "Director" used in parts of 40 CFR incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term "Regional Board" used elsewhere in this Order, except that in 40 CFR 122.41(h) and (l), "Director" shall mean "Regional Board, SWRCB, and USEPA."

(o) The Regional Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The Regional Board or SWRCB may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Copermittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.

(p) *Effective date*. This Order shall become effective on the date of its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. 2001-01 upon the effective date of this Order.

(q) *Expiration*. This Order expires five years after adoption.

(r) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.

(s) *Applications*. Any application submitted by a Copermittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.

(t) *Confidentiality*. Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the Regional Board office.

(u) *Severability*. The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

(v) R*eport submittal*. The Copermittee shall submit reports and provide notifications as required by this Order to the following:

NORTHERN WATERSHED UNIT
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9174 SKY PARK COURT, SUITE 100
SAN DIEGO CA 92123-4340
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY
US ENVIRONMENTAL PROTECTION AGENCY
REGION IX
PERMITS ISSUANCE SECTION (W-5-1)
75 HAWTHORNE STREET
SAN FRANCISCO CA 94105

Unless otherwise directed, the Copermittee shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the Regional Board and one electronic copy to the EPA.

ATTACHMENT C

ACRONYMS AND ABBREVIATIONS

ADT	Average Daily Traffic
ASBS	Area of Special Biological Significance
ATS	Active Treatment System
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
BU	Beneficial Use
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
DAMP	Drainage Area Management Plan
EIA	Effective Impervious Area
ESAs	Environmentally Sensitive Areas
FETD	Facilities That Extract, Treat, and Discharge from and to Waters of the U.S.
GIS	Geographic Information System
HMP	Hydromodification Management Plan
IBI	Index of Biotic Integrity
JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MAL	Municipal Action Level
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OCVCD	Orange County Vector Control District
Copermittees	County of Orange, the 11 incorporated cities within the County of Orange in the San Diego Region, and the Orange County Flood Control District
Regional Board	California Regional Water Quality Control Board, San Diego Region
RGOs	Retail Gasoline Outlets
ROWD	Orange County Copermittees' Report of Waste Discharge (application for NPDES reissuance)
RWLs	Receiving Water Limitations
SIC	Standard Industrial Classification Code
SSMP	Standard Urban Storm Water Mitigation Plan
State Board	State Water Resources Control Board
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WLA	Waste Load Allocation

WQBEL	Water Quality Based Effluent Limits
WQMP	Water Quality Management Plan
WRMP	Watershed Runoff Management Plan

DEFINITIONS

~~Advanced~~ Active Treatment- Using mechanical or chemical means to flocculate and remove suspended sediment from runoff from construction sites prior to discharge.

Anthropogenic Litter – Trash generated from human activities, not including sediment.

Basin Plan – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the Regional Board.

Beneficial Uses - The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. "Beneficial Uses" of the waters of the State that may be protected include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code Section 13050(f)].

Best Management Practices (BMPs) - Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. In the case of municipal storm water permits, BMPs are typically used in place of numeric effluent limits.

Bioassessment - The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biological integrity) of a water body.

Biocriteria - Under the CWA, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The USEPA defines biocriteria as: "numerical values or narrative expressions that describe the reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use… (that)…describe the characteristics of water body segments least impaired by human activities."

Biological Integrity - Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

Clean Water Act Section 402(p) [33 USC 1342(p)] - The federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d) Water Body - An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the CWA. The discharge of ~~urban~~ runoff to these water bodies by the Copermittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Construction Site – Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation.

Contamination - As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. 'Contamination' includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected."

Critical Channel Flow (Qc) – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

CWA – Federal Clean Water Act

CWC – California Water Code

Development Projects - New development or redevelopment with land disturbing activities; structural development, including construction or installation of a building or structure, the creation of impervious surfaces, public agency projects, and land subdivision.

Dry Season – May 1 through September 30 of each year.

Dry Weather – weather is considered dry if the preceding 72 hours has been without precipitation.

Effectiveness Assessment Outcome Level 1 - Compliance with Activity-based Permit Requirements – Level 1 outcomes are those directly related to the implementation of specific activities prescribed by this Order or established pursuant to it.

Effectiveness Assessment Outcome Level 2 - Changes in Attitudes, Knowledge, and Awareness – Level 2 outcomes are measured as increases in knowledge and

awareness among target audiences such as residents, businesses, and municipal employees.

Effectiveness Assessment Outcome Level 3 - Behavioral Change and BMP Implementation – Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation.

Effectiveness Assessment Outcome Level 4 - Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed.

Effectiveness Assessment Outcome Level 5 - Changes in ~~Urban~~ Runoff and Discharge Quality – Level 5 outcomes are measured as changes in one or more specific constituents or stressors in discharges into or from MS4s.

Effectiveness Assessment Outcome Level 6 - Changes in Receiving Water Quality – Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity, or beneficial use attainment.

Effective Impervious Area (EIA) – that portion of the impervious area or pervious area incapable of retaining design storm flow that is hydrologically connected via sheet flow or a discrete hardened conveyance to a drainage system or a receiving water body.

Effluent Limitations – Any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources into waters of the State. The limitations are designed to ensure that the discharge does not cause water quality objectives to be exceeded in the receiving water and does not adversely affect beneficial uses. Effluent limits are typically numeric (e.g., 10 mg/l), but can also be narrative (e.g., no toxics in toxic amounts).

Erosion – When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

Erosion Potential (E_P) - is determined as follows – The *total effective work* done on the channel boundary is derived and used as a metric to predict the likelihood of channel adjustment given watershed and stream hydrologic and geomorphic variables. The work index under urbanized conditions is compared to the work index under pre-urban conditions expressed as a ratio (E_P). The effective work index (W) is computed as the excess shear stress that exceeds a critical value for streambed mobility or bank material erosion integrated over time and represents the total work done on the channel boundary:

The effective work index for presumed stable stream channels under pre-urban conditions is compared to stable and unstable channels under current urbanized conditions. The comparison, expressed as a ratio, is defined as the Erosion Potential

(E_p)[1] (MacRae (1992, 1996).

$$E_P = \frac{W_{POST}}{W_{PRE}}$$

Where:

W_{POST} = work index estimated for the post-urban condition
W_{PRE} = work index estimated for the pre-urban condition

Environmentally Sensitive Areas (ESAs) - Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.

Feasibility Analysis – Detailed description of the selection process for the treatment control BMPs for a Priority Development Project, including justification of why one BMP is selected over another. For a Priority Development Project where a treatment control BMP with a low removal efficiency ranking (as identified by the Model SUSMP) is proposed, the analysis shall include a detailed and adequate justification exhibiting the reasons implementation of a treatment control BMP with a higher removal efficiency is infeasible for the Priority Development Project or portion of the Priority Development Project.

Flow Duration – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-project flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-project condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

GIS – Geographic Information System

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

[1] MacRae, C.R. 1992. The Role of Moderate Flow Events and Bank Structure in the Determination of Channel Responseto Urbanization. Resolving conflicts and uncertainty in water management: Proceedings of the 45th Annual Conference of the Canadian Water Resources Association. Shrubsole,D, ed. 1992, pg. 12.1-12.21; MacRae, C.R. 1996, Experience from Morphological Research on Canadian Streams: Is Control of the Two-Year Frequency Runoff Event the Best Basis for Stream Channel Protection. Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE Engineering Foundation Conference, Snowbird, Utag, pg. 144-162

Hazardous Material – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the waters of the U.S. or emitted into the environment.

Hazardous Waste - Hazardous waste is defined as "any waste which, under Section 600 of Title 22 of this code, is required to be managed according to Chapter 30 of Division 4.5 of Title 22 of this code" [CCR Title 22, Division 4.5, Chapter 11, Article 1].

Household Hazardous Waste – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

Hydromodification – The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

Illicit Connection – Any connection to the MS4 that conveys an illicit discharge.

Illicit Discharge - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

Implementation Assessment – Assessment conducted to determine the effectiveness of Copermittee programs and activities in achieving measurable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed.

Inactive Slopes – Slopes on which no grading or other soil disturbing activities are conducted for 10 or more days.

Integrated Assessment – Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality.

Jurisdictional ~~Urban~~ Runoff Management Plan (J~~U~~RMP) – A written description of the specific jurisdictional ~~urban~~ runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that storm water pollutant discharges in ~~urban~~ runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

Low Impact Development (LID) – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

Maximum Extent Practicable (MEP) – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their ~~urban~~ runoff management programs. Their total collective and individual activities conducted pursuant to the ~~urban~~ runoff management programs becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the Regional Board, the Regional Board defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

> "*To achieve the MEP standard, municipalities must employ whatever Best Management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:*
>
> *a. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?*
> *b. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?*
> *c. Public Acceptance: Does the BMP have public support?*
> *d. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?*
> *e. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?*
>
> *The final determination regarding whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, and not by the municipal discharger. If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit derived, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs*

that would address a pollutant source, or to pick a BMP base solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented."

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

National Pollutant Discharge Elimination System (NPDES) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

NOI – Notice of Intent

Non-Storm Water - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

Nuisance - As defined in the Porter-Cologne Water Quality Control Act a nuisance is "anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes."

Order – Order No. R9-20089-00012 (NPDES No. CAS0108740)

Person - A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof [40 CFR 122.2].

Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant - Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollution - As defined in the Porter-Cologne Water Quality Control Act: "the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses." Pollution may include contamination.

Pollutants of Concern – Pollutants for which water bodies are listed as impaired under CWA section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with urban runoff. Pollutants commonly associated with urban runoff include total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (decaying vegetation, animal waste, and anthropogenic litter).

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

Post-Construction BMPs - A subset of BMPs including structural and non-structural controls which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of developments.

Pre-Project or Pre-Development Runoff Conditions (Discharge Rates, Durations, Etc.) – Runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induces land activities occurred. This definition pertains to redevelopment as well as initial development.

Principal Copermittee – County of Orange

Priority Development Projects - New development and redevelopment project categories listed in Section FD.1.d(2) of Order No. R9-20098-00012.

Receiving Waters – Waters of the United States.

Receiving Water Limitations (RWLs) - Waste discharge requirements issued by the Regional Board typically include both: (1) "Effluent Limitations" (or "Discharge Limitations") that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Redevelopment - The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road

widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing ~~and reconfiguring surface parking lots and~~ existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

Runoff - All flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows).

Sediment - Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Shared Treatment Control BMP - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

Source Control BMP – Land use or site planning practices, or structural or nonstructural measures that aim to prevent ~~urban~~ runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and ~~urban~~ runoff.

State Water Quality Protection Area – A nonterrestrial marine or estuarine area designated to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, areas of special biological significance that have been designated by the State Water Resources Control Board through its water quality control planning process. Areas of special biological significance are a subset of State Water Quality Protection Areas, and require special protection as determined by the State Water Resources Control Board pursuant to the California Ocean Plan adopted and reviewed pursuant to Article 4 (commencing with Section 13160) of Chapter 3 of Division 7 of the California Water Code and pursuant to the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (California Thermal Plan) adopted by the state board.

Storm Water – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage.

Standard ~~Urban~~ Storm Water Mitigation Plan (S~~U~~SMP) – A plan developed to mitigate the impacts of ~~urban~~ runoff from Priority Development Projects.

Third Party Inspectors - Industrial and commercial facility inspectors who are not contracted or employed by a regulatory agency or group of regulatory agencies, such as the Regional Board or Copermittees. The third party inspector is not a regular facility employee self-inspecting their own facility. The third party inspector could be a contractor or consultant employed by a facility or group of businesses to conduct inspections.

Total Maximum Daily Load (TMDL) - The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Toxicity - Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part…"All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life….The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge".

Treatment Control BMP – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

~~**Urban Runoff** - All flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows).~~

Waste - As defined in CWC Section 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal."

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste, which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Water Quality Assessment – Assessment conducted to evaluate the condition of non-storm water and storm water discharges, and the water bodies which receive these discharges.

Water Quality Objective - Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans.

Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)

Water Quality Standards - The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) of water and the water quality objectives necessary to protect those uses.

Waters of the State - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

Waters of the United States - As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA."

Watershed - That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

Watershed ~~Urban~~ Runoff Management Plan (W~~U~~RMP) – A written description of the specific watershed ~~urban~~ runoff management measures and programs that each

watershed group of Copermittees will implement to comply with this Order and ensure that storm water pollutant discharges in ~~urban~~ runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

WDRs – Waste Discharge Requirements

Wet Season – October 1 through April 30 of each year.

ATTACHMENT D

SCHEDULED SUBMITTALS SUMMARY

Submittal	Permit Section	Completion Date	Frequency
BMPs or prohibitions on dry-weather discharges listed in Section B.2	B.2	365 days after adoption and in annual reports	Annual
Submit Certified Statement of Adequate Legal Authority	EC.2	365 days after adoption of the Order	One time
Flood Control Structure BMP Inventory and Evaluation	DF.3.a.(4)	Fall 20098	One time
Business Plan for Funding Municipal Storm Water Management	FH.3	Within five years after adoption of the Order	One time
Updated Jurisdictional Urban Runoff Management Plans	KH.1.a	365 days after adoption of the Order	One time
Updated Watershed Urban Runoff Management Plans	HK.1.b	January 31, 20090910	One time
Updated SUSMPs	KH.2.a	365 days after adoption of the Order	One time
Report of Waste Discharge	HK.2.b	At least 210 days prior to expiration of this Order	One time
Submit to Principal Copermittee(s) individual JURMP Annual Reports	KH.3.a.(1)	Prior to September 30, 20089 and annually thereafter (Principal Copermittee specifies date of submittal)	Annual
Principal Copermittee submits JURMP Annual Reports to Regional Board	HK.3.a.(2)	September 30, 20089 and annually thereafter	Annual
Lead Watershed Copermittees submit WURMP Annual Reports to Principal Copermittee	KH.3.b.(1)	Prior to January 31, 20090910 (Principal Copermittee specifies date of submittal)	Annual
Principal Copermittee submits WURMP Annual Reports to Regional Board	HK.3.b.(3)	January 31, 20090910 and annually thereafter	Annual
Principal Copermittee submits Notification of Principal Copermittee	JM	180 days after adoption of the Order	One Time
Principal Copermittee submits description of Receiving Waters Monitoring Program	Monitoring and Reporting Program (M&R Program), III.A.1	September 1, 20089 and annually thereafter	Annual
Receiving Waters and Urban Runoff Monitoring Annual Reports	M&R Program, III.A.2	April 1, 20089 and annually thereafter	Annual
Principal Copermittee submits interim Receiving Waters Monitoring Program Annual Report	M&R Program, III.B	January 31, 20098 and	Twice One Time
Hydromodification Management Plan	F.1.h.56	Draft within 2 years of adoption of the Order	One Time for Draft
Trash and Litter Impairment Special Study	M&R Program II.D.56	Draft Monitoring Protocol and Locations within 365 days of Order adoption	One Time

Jurisdictional Runoff Management Program Annual Report Checklist

In the JRMP Annual Report each Copermittee shall provide an Annual Report Checklist. The Annual Report Checklist must be no longer than 2 pages, be current as of the 1st day of the rainy season of that year, and include a signed certification statement. The Annual Report Summary Checklist must provide the following information:

Order Requirements
Were All Requirements of this Order Met?

Construction
Number of Active Sites
Number of Inactive Sites
Number of Sites Inspected
Number of Inspections
Number of Violations
Number of Construction Enforcement Actions Taken

New Development
Number of Development Plan Reviews
Number of Grading Permits Issued
Number of Projects Exempted from Interim/Final Hydromodification Requirements

Post Construction Development
Number of Priority Development Projects
Number of SUSMP Required Post-Construction BMP Inspections
Number of SUSMP Required Post-Construction BMP Violations
Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken

Illicit Discharges and Connections
Number of IC/ID Inspections
Number of IC/ID Detections by Staff
Number of IC/ID Detections from the Public
Number of IC/ID Eliminations
Number of IC/ID Violations
Number of IC/ID Enforcement Actions Taken

MS4 Maintenance
Number of Inspections Conducted
Amount of Waste Removed
Total Miles of MS4 Inspected

Municipal/Commercial/Industrial
Number of Facilities
Number of Inspections Conducted
Number of Facilities Inspected
Number of Violations
Number of Enforcement Actions Taken

Attachment E

RECEIVING WATERS AND ~~URBAN~~ RUNOFF MONITORING AND REPORTING PROGRAM NO. R9-2009-002

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I. PURPOSE

A. This Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program is intended to meet the following goals:
   1. Assess compliance with Order No. R9-2009-002;
   2. Measure and improve the effectiveness of the Copermittees' urban runoff management programs;
   3. Assess the chemical, physical, and biological impacts to receiving waters resulting from urban runoff discharges;
   4. Characterize ~~urban~~ runoff discharges;
   5. Identify sources of specific pollutants;
   6. Prioritize drainage and sub-drainage areas that need management actions;
   7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
   8. Assess the overall health of receiving waters.
   9. Provide information to implement required BMP improvements

B. In addition, this Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program is designed to answer the following core management questions1:
   1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
   2. What is the extent and magnitude of the current or potential receiving water problems?
   3. What is the relative ~~urban~~ runoff contribution to the receiving water problem(s)?
   4. What are the sources of ~~urban~~ runoff that contribute to receiving water problem(s)?
   5. Are conditions in receiving waters getting better or worse?

II. MONITORING PROGRAM

A. Receiving Waters Monitoring Program

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round watershed based Receiving Waters Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the watershed management areas. The

[1] Core management questions from "*Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California: A report from the Stormwater Monitoring Coalition's Model Monitoring Technical Committee.*" Technical Report No. 419. August 2004.

monitoring program must be designed to meet the goals and answer the questions listed in section I above. The monitoring program must include the following components:

1. MASS LOADING STATION (MLS) MONITORING

a. Locations: The following existing mass loading stations must continue to be monitored: Laguna Canyon, Aliso Creek, San Juan Creek, Trabuco Creek, Prima Deshecha Channel, and Segunda Deshecha Channel. The mass loading stations must be monitored at the frequency identified in Table 1.

b. Frequency: Each mass loading station to be monitored in a given year must be monitored twice during wet weather events and twice during dry weather flow conditions. ~~The exception is the 2008-2009 monitoring year, which must include monitoring of all mass loading stations for only one wet weather flow event only if the Copermittees participate in Bight '08.~~

c. Timing: Each mass loading station must be monitored for the first wet weather event of the season which meets the USEPA's criteria as described in 40 CFR 122.21(g)(7). Monitoring of the second wet weather event must be conducted after February 1. Dry weather mass loading monitoring events must be sampled at least three months apart between May and October. If flows are not evident in September or October for the second event, then sampling must be conducted during non-rain events in the wet weather season.

d. Protocols: If practicable, the protocols for mass loading sampling and analysis should be SWAMP comparable. At a minimum, analytical methods, target reporting limits, and data reporting formats should be SWAMP comparable. If the mass loading sampling and analysis are determined to be impracticable with the SWAMP standards, the Copermittees must provide explanation and discussion to this effect in the Receiving Waters and ~~Urban~~ Runoff Monitoring Annual Report. Wet weather samples may be time-weighted composites, collected for the duration of the entire runoff event, where practical, consistent with methods used by the Copermittees during for the Receiving Waters Monitoring Program conducted for Regional Board Order No. R9-2002-01. Where such monitoring is not practical, such as for large watersheds with significant groundwater recharge flows, composites must be collected at a minimum during the first 3 hours of flow. Dry weather event sampling may be time-weighted composites composed of 24 discrete hourly samples, whereby the mass loads of pollutants are calculated as the product of the composite sample concentration and the total volume of water discharged past the monitoring point during the time of sample collection.

(1) Automatic samplers must be used to collect samples from mass loading stations.
(2) Grab samples must be analyzed for temperature, pH, specific conductance, biochemical oxygen demand, oil and grease, total coliform, fecal coliform, and enterococcus.

e. Copermittees must measure or estimate flow rates and volumes for each mass loading station sampling event in order to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.

f. In the event that the required number of events is not sampled during one monitoring year at any given station, the Copermittees must submit, with the subsequent Receiving Waters Monitoring Annual Report, a written explanation for a lack of sampling data, including streamflow data from the nearest USGS gauging station.

g. The following constituents must be analyzed for each monitoring event at each station:

Table 1. Analytical Testing for Mass Loading, Urban Stream Bioassessment, and Ambient Coastal Receiving Waters Stations

Conventionals, Nutrients, Hydrocarbons	**Pesticides**	**Metals (Total and Dissolved)**	**Bacteriological**
• Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • pH • Specific Conductance • Temperature • Dissolved Oxygen • Total Phosphorus • Dissolved Phosphorus • Nitrite ˚ • Nitrate ˚ • Total Kjeldahl Nitrogen • Ammonia • Biological Oxygen Demand, 5-day • Chemical Oxygen Demand • Total Organic Carbon • Dissolved Organic Carbon • Methylene Blue Active Substances • Oil and Grease	Diazinon Chlorpyrifos *Malathion* *Carbamates** *Pyrethroids**	Arsenic Cadmium Chromium Copper Lead Nickel Selenium Zinc	Total Coliform Fecal Coliform Enterococcus

˚ Nitrate and nitrate may be combined and reported as nitrate + nitrite.

* Carbamate and Pyrethroid pesticides must initially be monitored in Prima Deshecha and Segunda Deshecha watersheds. If carbamate and/or pyrethroid pesticides are found to correlate with observed acute or chronic toxicity, then that pesticide must be added to all stations displaying toxicity.

h. Toxicity testing must be conducted for each monitoring event at each station according to the following Table 2:

Table 2. Toxicity Testing for Mass Loading, Urban Stream Bioassessment, and Ambient Coastal Receiving Waters Stations

Program Component	*Dry Weather Flows*		*Storm Water Flows*	
	Freshwater Organisms	**Estuarine & Marine Organisms**	**Freshwater Organisms**	**Estuarine & Marine Organisms**
Mass Loading	2 chronic 2 acute	1 chronic**	2 acute	2 chronic 1 acute
Urban Stream Bioassessment	2 chronic* 2 acute*	n/a	n/a	n/a
Ambient Coastal Receiving Waters	n/a	2 chronic 1 acute	n/a	2 chronic 1 acute
Sediment Toxicity Special Study	1 chronic 1 acute 1	n/a	n/a	n/a

Table Notes
* Urban Stream Bioassessment on Aliso Creek must also include use of *Pimephales promelas* (fathead minnow) for chronic and acute toxicity testing.
** Dry weather toxicity monitoring at a mass loading station may be omitted if either (a) the channel flows are diverted year-round in dry weather conditions to the sanitary sewer for treatment; or (b) dry weather toxicity with marine species is occurring at an Ambient Coastal Waters Receiving station where that channel reaches the Pacific Ocean.

Species Notes:
1. Freshwater acute toxicity testing must include *Hyalella azteca*.
2. Acute toxicity for may be determined during the course of chronic toxicity monitoring per U.S. EPA protocols.
3. *Americamysis bahia* may be used as a marine test organism if *Holmesimysis costata* cannot reasonably be obtained. The use of, and justification for, of *A. bahia* must be clearly reported in each Monitoring Report.

i. The presence of acute toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-012). The presence of chronic freshwater toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-013). The presence of chronic marine toxicity must be determined in accordance with USEPA guidance EPA 600/R95/136, except for chronic mysid tests that must be conducted in accordance with USEPA protocol EPA-821-R-02-014.

2. Urban Stream Bioassessment (BA) Monitoring

Copermittees must conduct Urban Stream Bioassessment Monitoring using a triad of indicators to assess the condition of biological communities in freshwater, urban receiving waters.

a. Locations: At a minimum, the program shall consist of station identification, sampling, monitoring, and analysis of data for six bioassessment stations in order to determine the biological and physical integrity of urban streams within the County of Orange. At least one urban bioassessment station shall be located within each watershed management area. In addition to the urban stream bioassessment stations, three reference bioassessment stations shall be identified, sampled, monitored, and analyzed. Locations of reference stations must be identified according to protocols outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.[2]

b. Frequency: Bioassessment stations must be monitored in May or June (to represent the influence of wet weather on the communities) and September or October (to represent the influence of dry weather flows on the communities). The timing of monitoring of bioassessment stations must coincide with dry weather monitoring of mass loading stations and Inland Aquatic Habitat stations.

[2] Ode, et al. 2005. "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams." Environmental Management. Vol. 35, No. 1, pp. 1-13.

(1) Alternative Frequency Plan / Special Studies: Upon approval of the Regional Board Executive Officer, the Copermittees may omit one of the annual bioassessment events and direct the saved resources toward specified special studies of the effects of physical habitat modification on the WARM, WILD, and/or COLD beneficial uses of inland receiving waters. Each special study must be able to produce a final report within 24 months after approval of the Executive Officer.

c. Parameters / Methods: The triad of indicators for urban stream bioassessment monitoring must include bioassessment, aquatic chemistry, and aqueous toxicity.

(1) Aquatic chemistry and aqueous toxicity must be conducted using the same parameters and methods as the mass loading station monitoring, with the addition of pyrethroid pesticides.

(2) Bioassessment analysis procedures must include calculation of the Index of Biotic Integrity (IBI) for benthic macroinvertebrates for all bioassessment stations, as outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.

(3) Monitoring of bioassessment stations must be conducted according to bioassessment procedures developed by the Surface Water Ambient Monitoring Program (SWAMP), as amended. [3]

[3] Ode, P.R.. 2007. Standard operating procedures for collecting macroinvertebrate samples and associated physical and chemical data for ambient bioassessments in California. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 001.

(4) ~~Beginning no later than Spring 2010~~, Monitoring of bioassessment stations must incorporate assessment of ~~periphyton~~ algae in addition to macroinvertebrates, using the USEPA's 1999 Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers[4] and SWAMP's Incorporating bioassessment using freshwater algae into California's Surface Water Ambient Monitoring Program (SWAMP)[5]. Assessment of freshwater algae must include algal taxonomic composition (diatoms and soft algae) and algal biomass. Future bioassessment shall incorporate algal IBI scores, when developed.

d. A qualified professional environmental laboratory must perform all sampling, laboratory, quality assurance, and analytical procedures.

3. FOLLOW-UP ANALYSIS AND ACTIONS

When results from the required ~~chemistry, toxicity, and bioassessment~~ monitoring ~~described above~~ indicate ~~urban~~ runoff-induced degradation at a mass loading station, bioassessment, or Inland Aquatic Habitat station (section II.A.6 below), Copermittees within the watershed must evaluate the extent and causes of ~~urban~~ runoff pollution in receiving waters and prioritize and implement management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) must be conducted to determine the cause of toxicity as outlined in Table 3 below. Other follow-up activities, which must be conducted by the Copermittees, are also identified in Table 3. Once the cause of toxicity has been identified by a TIE, the Copermittees must perform source identification projects as needed and implement the measures necessary to reduce the pollutant discharges and abate the sources causing the toxicity.

[4] USEPA, 1999. *Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers*. EPA-841-B-99-002.

[5] Fetscher, E. A., and K. McLaughlin. 2008. Incorporating bioassessment using freshwater algae into California's Surface Water Ambient Monitoring Program (SWAMP). Southern California Coastal Water Research Project. Costa Mesa, CA

Table 3. Triad Approach to Determining Follow-Up Actions[6]

	Chemistry	Toxicity	Benthic Alteration	Example Conclusions	Possible Actions or Decisions
1.	Exceedance of water quality objectives	Evidence of toxicity	Indications of alteration	Strong evidence of pollution-induced degradation	Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority
2.	No persistent exceedances of water quality objectives	No evidence of toxicity	No indications of alteration	No evidence of current pollution-induced degradation Potentially harmful pollutants not yet concentrated enough to cause visible impact	No immediate action necessary Conduct periodic broad scans for new and/or potentially harmful pollutants
3.	Exceedance of water quality objectives	No evidence of toxicity	No indications of alteration	Contaminants are not bioavailable Test organisms not sensitive to problem pollutants	TIE would not provide useful information with no evidence of toxicity Continue monitoring for toxic and benthic impacts Initiate upstream source identification as a low priority Consider whether different or additional test organisms should be evaluated
4.	No persistent exceedances of water quality objectives	Evidence of toxicity	No indications of alteration	Unmeasured contaminant(s) or conditions have the potential to cause degradation Pollutant causing toxicity at very low levels	Recheck chemical analyses; verify toxicity test results Consider additional advanced chemical analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
5.	No persistent exceedances of water quality objectives	No evidence of toxicity	Indications of alteration	Alteration may not be due to toxic contamination Test organisms not sensitive to problem pollutants	No action necessary due to toxic chemicals Initiate upstream source identification (for physical sources) as a high priority Consider whether different or additional test organisms should be evaluated
6.	Exceedance of water quality objectives	Evidence of toxicity	No indications of alteration	Toxic contaminants are bioavailable, but in situ effects are not demonstrable Benthic analysis not sensitive enough to detect impact Potentially harmful pollutants not yet concentrated enough to change community	Determine if chemical and toxicity tests indicate persistent degradation Recheck benthic analyses; consider additional data analyses If recheck indicates benthic alteration, perform TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority If recheck shows no effect, use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
7.	No persistent exceedances of water quality objectives	Evidence of toxicity	Indications of alteration	Unmeasured toxic contaminants are causing degradation Pollutant causing toxicity at very low levels Benthic impact due to habitat disturbance, not toxicity	Recheck chemical analyses and consider additional advanced analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority Consider potential role of physical habitat disturbance
8.	Exceedance of water quality objectives	No evidence of toxicity	Indications of alteration	Test organisms not sensitive to problem pollutants Benthic impact due to habitat disturbance, not toxicity	TIE would not provide useful information with no evidence of toxicity Initiate upstream source identification as a high priority Consider whether different or additional test organisms should be evaluated Consider potential role of physical habitat disturbance

4. AMBIENT COASTAL RECEIVING WATERS MONITORING (ACRW)

Copermittees must continue to conduct the Ambient Coastal Receiving Waters Monitoring (ACRW) program to assess the impact of ~~urban~~ runoff to ecologically-sensitive coastal areas by analyzing water chemistry and aqueous toxicity in both dry and wet weather and the magnitude of storm water discharge plumes to these areas. Copermittees must prioritize locations for further study and conduct special investigations.

[6] Orange County Storm Water Program, 2006. Report of Waste Discharge (San Diego Region), Section 11.

a. Locations: Copermittees must assess the existing Ambient Coastal Receiving Waters Monitoring (ACRW) stations to determine whether all ecologically-sensitive areas are represented. Stations must be established within all Areas of Special Biological Significance (ASBS) and Marine Life Refuges that receive significant MS4 discharges.

(1) Dana Point Harbor must continue to be monitored. ACRW monitoring in Dana Point Harbor may be suspended as long as the Harbor is being monitored pursuant to the Regional Harbor Monitoring Program[7] and follow-up investigations are conducted when appropriate based on guidance from the Storm Water Monitoring Coalition.

b. Parameters: Aquatic chemistry and aqueous toxicity must be conducted using the same parameters and methods as the mass loading station monitoring.

c. ACRW monitoring must be concurrent with the mass loading station monitoring whenever feasible.

d. Special investigations Ambient Coastal Receiving Waters: Special investigations must be designed and conducted to most effectively answer each of questions 1-5 of section I.B above, with an emphasis on answering question 4.

5. COASTAL STORM DRAIN MONITORING

The Copermittees must collaborate to develop and implement a coastal storm drain monitoring program to identify sections of the coastline that most consistently exceed water quality objectives for recreational uses as a result of MS4 discharges and then develop source identification and elimination activities. The monitoring program must include:

[7] On July 24, 2003, the Regional Board required the County of Orange to participate in an Investigative Order to comprehensively assess the receiving water conditions of Dana Point Harbor. The Regional Harbor Monitoring Program is described in the *Regional Technical Report: Harbor Monitoring Program for San Diego Region San Diego Bay, Mission Bay, Oceanside Harbor, and Dana Point Harbor,* MEC Analytical Systems and Brock Bernstein, February 2004.

a. An updated identification of all MS4 discharge points to coastal waters within one year of issuance of this Order.

b. Diverted drains: Sampling of ~~urban~~ runoff discharges from a subset of coastal storm drains whose flows are diverted to the sanitary sewer during dry weather. A minimum of two ~~to three~~ storm events must be sampled at each monitoring location.

c. Priority coastal storm drains: The Copermittees must continue existing coastal storm drain monitoring and must conduct followup investigations at sites in Table 4.

Table 4: Minimum Coastal Storm Drain Monitoring Stations

Continue Baseline Monitoring	**Conduct Special Investigations**
1. LINDAL (Linda Lane)	1. ACM1 (Aliso Creek Mouth)
2. MAINBC (Main Beach)	2. PEARL (Pearl Street)
3. MARIPO (Mariposa)	3. POCHE (Poche Beach)
4. BLULGN (Blue Lagoon)	4. SCM1 (Salt Creek Mouth)
5. CSBMP1 (Capistrano Beach)	5. SJC1 (San Juan Creek)
6. Others as determined by Copermittees	6. DSB-5 (North Creek, Doheny Beach)

(1) Baseline monitoring stations: Copermittees must continue to conduct weekly sampling of flowing coastal storm drains for total coliform, fecal coliform, and enterococcus[8]. Where flowing coastal storm drains are discharging to coastal waters, paired samples from the storm drain discharge and coastal water (25 yards down current of the discharge) must be collected. If flowing coastal storm drains are not discharging to coastal waters, only the storm drain discharge needs to be sampled. Storm drains whose flows are being diverted to the sanitary sewer for treatment do not need to be sampled unless the diversion is inoperable during the sampling week. If the direction of the current or effluent plume cannot readily be distinguished, then samples must be collected from the surfzone 25 yards upcoast and downcoast of the MS4 outfall. Additional sites must be added if determined by a Copermittee or the Regional Board to likely be contributing to persistent exceedances of water quality objectives along the coast.

(2) Special investigation stations: Copermittees must design and conduct special investigations at the identified stations to most effectively answer each of questions 1-5 of section I.B above, with an emphasis on answering question 4. At least two such investigations must be in progress during each reporting period. Each special investigation must be designed with specific benchmarks, expectations, and timelines for results. All special investigations must be concluded by June 30, 2011.

(3) Investigations of sources of bacterial contamination must occur immediately if evidence of abnormally high flows, sewage releases, restaurant discharges, and/or similar evidence is observed during sampling.

(4) Exceedances of public health standards for bacterial indicators must be reported to the County Department of Environmental Health as soon as possible.

[8] Coastal storm drains where sampler safety, habitat impacts from sampling, or inaccessibility are issues need not be sampled. Such coastal storm drains shall be added to the Copermittee's dry weather field screening and analytical monitoring program where feasible.

6. HIGH PRIORITY INLAND AQUATIC HABITATS:

a. The Copermittees must collaborate to develop and implement a Inland Aquatic Habitat monitoring program for areas supporting high priority aquatic and riparian species, including threatened and endangered species. The design of the program must be consistent with the questions in Section I.B of this Monitoring Program. The monitoring program must include:

(1) Identification of storm drains that discharge into receiving waters that support threatened or endangered species;
(2) Monitoring of ambient water quality conditions within those receiving waters for constituents likely to affect the threatened and endangered species;
(3) Monitoring of ~~dry and~~ wet weather storm drain discharges into the outfalls;
(4) Assessment of the monitoring results to determine the relative contribution, if any, of storm drain discharges to factors affecting those species; and
(5) Follow-up studies and source identification as necessary.

b. The Inland Aquatic Habitat monitoring program must be implemented by the beginning of the rainy season 2010 ~~Summer 2009~~.

B. Wet Weather ~~Urban~~ Runoff Monitoring

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round watershed based ~~Urban~~ Wet Weather Runoff Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the hydrologic units. The monitoring program must be designed to meet the goals and answer the questions listed in section I above. The monitoring program must include the following components;

1. MS4 OUTFALL MONITORING

   The Copermittees must collaborate to develop and implement a monitoring program to characterize pollutant discharges from MS4 outfalls in each watershed during wet ~~and dry~~ weather. The program must include rationale and criteria for selection of outfalls to be monitored. The ~~wet weather~~ program must, at a minimum, include collection of samples for those pollutants causing or contributing to violations of water quality standards within the watershed. This monitoring program must be implemented within each watershed and must begin no later than the 2009-2010 ~~2008-2009~~ monitoring year.

2. SOURCE IDENTIFICATION MONITORING

   The Copermittees must collaborate to develop and implement a monitoring program to identify sources of pollutants causing the priority water quality problems within each watershed. The monitoring program must include focused monitoring which moves upstream into each watershed as necessary to identify sources. This monitoring program must be implemented within each watershed and must begin no later than the 2008-2009 monitoring year.

~~3.Dry Weather Field Screening and Analytical Monitoring~~

~~As part of its Jurisdictional Urban Runoff Management Program, each Copermittee must update as necessary its dry weather field screening and analytical monitoring program to meet or exceed the requirements of this section. Dry weather analytical and field screening monitoring consists of (1) field observations; (2) field screening monitoring; and (3) analytical monitoring at selected stations.~~

~~The Dry Weather Field Screening and Analytical Monitoring program is not required to be SWAMP comparable. Each Copermittee's program must be designed to detect and eliminate illicit connections and illegal discharges to the MS4 using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations. Each Copermittee must conduct the following dry weather field screening and analytical monitoring tasks:~~

~~a.Select Dry Weather Field Screening and Analytical Monitoring Stations~~

~~Based upon a review of its past Dry Weather Monitoring Program, each Copermittee must select dry weather analytical monitoring stations within its jurisdiction. Stations must be selected according to one of the following methods:~~

~~(1) Stations must be either major outfalls or other outfall points (or any other point of access such as manholes) randomly located throughout the MS4 by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the MS4 or major outfall. This random selection has to use the following guidelines and criteria:~~

~~(a) A grid system consisting of perpendicular north-south and east-west lines spaced ¼ mile apart must be overlayed on a map of the MS4, creating a series of cells;~~
~~(b) All cells that contain a segment of the MS4 must be identified and one dry weather analytical monitoring station must be selected in each cell.~~
~~(c) Each Copermittee must determine alternate stations to be sampled in place of selected stations that do not have flow.~~

~~(2) Stations may be selected non-randomly provided adequate coverage of the entire MS4 system is ensured and that the selection of stations meets, exceeds, or provides equivalent coverage to the requirements given above. The dry weather analytical and field screening monitoring stations must be established using the following guidelines and criteria:~~

~~(a) Stations should be located downstream of any sources of suspected illegal or illicit activity;~~
~~(b) Stations must be located to the degree practicable at the farthest manhole or other accessible location downstream in the system within each cell;~~
~~(c) Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types must be considered in locating stations;~~
~~(d) Each Copermittee must determine alternate stations to be sampled in place of selected stations that do not have flow.~~

~~b.Complete MS4 Map~~

~~Each Copermittee must clearly identify each dry weather field screening and analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereafter referred to as a Dry Weather Field Screening and Analytical Stations Map. Each Copermittee must confirm that each drainage area within its jurisdiction contains at least one station.~~

~~c.Develop Dry Weather Field Screening and Analytical Monitoring Procedures~~

~~Each Copermittee must develop and/or update written procedures for dry weather field screening and analytical monitoring (for analytical monitoring only, these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:~~

~~(1)Determining Sampling Frequency: Dry weather field screening and analytical monitoring must be conducted at each identified station at least three times between May 1st and September 30th of each year or as more frequently as the Copermittee determines is necessary to comply with the requirements of section D.4 of this Order.~~

~~(2)If flow or ponded runoff is observed at a dry weather field screening or analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample. Record general information such as time since last rain, quantity of last rain, site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).~~

~~(3)At a minimum, collect samples for analytical laboratory analysis of the following constituents for at least twenty five percent (25%) of the dry weather monitoring stations where water is present:~~

~~(a)Total Hardness~~
~~(b)Oil and Grease~~
~~(c)Diazinon and Chlorpyrifos~~
~~(d)Cadmium (Dissolved)~~

~~(e)Copper (Dissolved)~~
~~(f)Lead (Dissolved)~~
~~(g)Nickel (Dissolved)~~
~~(h)Zinc (Dissolved)~~
~~(i)Enterococcus bacteria~~[9]
~~(j)Total Coliform bacteria~~[8]
~~(k)Fecal Coliform bacteria~~[8]

~~(4)At a minimum, conduct field screening analysis of the following constituents at all dry weather monitoring stations where water is present:~~

~~(a)Specific conductance (calculate estimated Total Dissolved Solids).~~
~~(b)Turbidity~~
~~(c)pH~~
~~(d)Reactive Phosphorous~~
~~(e)Nitrate Nitrogen~~
~~(f)Ammonia Nitrogen~~
~~(g)Surfactants (MBAS)~~

~~(5)If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.~~

~~(6)Develop and/or update criteria for dry weather field screening and analytical monitoring results whereby exceedance of the criteria will require follow-up investigations to be conducted to identify and eliminate the source causing the exceedance of the criteria.~~
~~(a)Criteria must include evaluation of the California Toxics Rule, U.S. EPA National Recommended Ambient Water Quality Criteria, the San Diego Region Basin Water Quality Control Plan (Basin Plan), LC_{50} levels for toxicity to appropriate test organisms, and statistical evaluations of existing data from south Orange County.~~

[9] Colilert and Enterolert may be used as alternative methods with Fecal Coliform determined by calculations.

~~(7)Assess the presence of trash in receiving waters and urban runoff at each dry weather field screening or analytical monitoring station. Assessments of trash must provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present.~~

~~(8)Dry weather field screening and analytical monitoring stations identified to exceed dry weather monitoring criteria for any constituents must continue to be screened in subsequent years.~~

~~(9)Develop and/or update procedures for source identification follow up investigations in the event of exceedance of dry weather field screening and analytical monitoring result criteria. These procedures must be consistent with procedures required in section D.4.d and D.4.e. of this Order.~~

~~(1)Develop and/or update procedures to eliminate detected illicit discharges and connections. These procedures must be consistent with each Copermittees' Illicit Discharge and Elimination component of its Jurisdictional Urban Runoff Management Plan as discussed in section D.4 and D.4.e. of this Order.~~

~~(a)Conduct Dry Weather Field Screening and Analytical Monitoring~~

~~The Copermittees must commence implementation of dry weather field screening and analytical monitoring under the requirements of this Order by~~ May 1, 2009~~. Each Copermittee must conduct dry weather analytical and field screening monitoring in accordance with its storm water conveyance system map and dry weather analytical and field screening monitoring procedures as described in section II.B.3 above. If monitoring indicates an illicit connection or illegal discharge, conduct the follow-up investigation and elimination activities as described in submitted dry weather field screening and analytical monitoring procedures and sections D.4.d and D.4.e of Order No. R9-2008-0001.~~

~~Until the dry weather field screening and analytical monitoring program is implemented under the requirements of this Order, each Copermittee must continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to Order No. 2002-01.~~

C. Dry Weather Non-Storm Water Effluent Limits

Each Copermittee must collaborate with the other Copermittees to conduct, and report on a year-round watershed based Dry Weather Runoff Monitoring Program. The monitoring program implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the hydrologic units. The monitoring program must be designed to assess compliance with numeric effluent limits in section C of this Order, adopted dry weather Total Maximum Daily Loads Waste Load Allocations and assessment of the contribution of dry weather flows to 303(d) listed impairments. The monitoring program must include the following components;

Each Copermittee's program must be designed to determine levels of pollutants in effluent discharges from the MS4 into receiving waters. Each Copermittee must conduct the following dry weather field screening and analytical monitoring tasks:

a. Dry Weather Effluent Analytical Monitoring Stations

(1) Stations must be all major outfalls. Other outfall points (or any other point of access such as manholes) identified by the Copermittees as potential high risk sources polluted effluent shall be sampled

(2) Each Copermittee must clearly identify each dry weather effluent analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereafter referred to as a Dry Weather Effluent Analytical Stations Map.

b. Develop Dry Weather Effluent Analytical Monitoring Procedures
Each Copermittee must develop and/or update written procedures for dry weather effluent analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:

(1) Determining Sampling Frequency: Dry weather effluent analytical monitoring must be conducted at each major outfall and identified station at least once between May 1st and September 30th of each year and at least once between October 1st and April 30th. Monitoring between October 1st and April 30th must be preceded by a minimum of 72 hours of dry weather.

(2) If ponded runoff is observed at a dry weather effluent analytical monitoring station, make observations and collect at least one (1) grab sample. If flow is evident composite samples must be taken. Record flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate).

(3) Effluent samples shall undergo analytical laboratory analysis for constituents in: *Table 1. Analytical Testing for Mass Loading, Urban Stream Bioassessment, and Ambient Coastal Receiving Waters Stations*. Additional analytical laboratory analysis on the effluent shall be done for all 303(d) listed pollutants for which the receiving water of the effluent is impaired.

(4) If the station is dry (no flowing or ponded runoff), make and record all applicable observations.

(5) Develop and/or update criteria for dry weather effluent analytical monitoring results where exceedances are detected and eliminate the source causing the exceedance of the criteria:

(a) Criteria must include numeric limits in Section C, Table 3 of this Order.
(b) Criteria must include evaluation of LC_{50} levels for toxicity to appropriate test organisms

(6) Develop and/or update procedures for source identification follow up investigations in the event of exceedance of dry weather effluent analytical monitoring result criteria. These procedures must be consistent with procedures required in section D.4.d and D.4.e. of this Order.

(7) Develop and/or update procedures to eliminate detected illicit discharges and connections. These procedures must be consistent with each Copermittees' Illicit Discharge and Elimination component of its Jurisdictional Runoff Management Plan as discussed in section D.4 and D.4.e. of this Order.

c. Conduct Dry Weather Effluent Analytical Monitoring

The Copermittees must commence implementation of dry weather effluent analytical monitoring under the requirements of this Order no later than the 3rd year following adoption of this Order. If monitoring indicates an illicit connection or illegal discharge, conduct the follow-up investigation and elimination activities as described in submitted dry weather field screening and analytical monitoring procedures and sections D.4.d and D.4.e of Order No. R9-2009-002.

Until the dry weather field effluent analytical monitoring program is implemented under the requirements of this Order, each Copermittee must continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to Order No. 2002-01.

D. Special Studies

1. Aliso Creek bacteria investigation: Each Copermittee within the Aliso Creek watershed must implement the Aliso Creek 13225 Directive Revised Monitoring Program Design – Integration with NPDES Program10 (December 2004). The Copermittees must include that monitoring program into the overall monitoring and reporting program.

~~2.Bight '08~~

[10] On October 12, 2005, the Regional Board accepted the revised Aliso Creek watershed bacteria monitoring plan proposal from the MS4 Copermittees. The Regional Board concluded that the scope of the current bacteria monitoring in the watershed was no longer warranted and that the proposed changes would constitute an effective interim program until adoption in the future of a Total Maximum Daily Load, requiring a bacteria reduction and assessment program for the watershed. In addition, the Regional Board recognized that as a result of reduced monitoring costs, the municipalities expect to direct additional resources toward implementation of management practices to reduce indicator bacteria and pathogens.

~~During the 2008-2009 monitoring year monitoring year, the Copermittees may participate in the Bight '08 study. The Copermittees must ensure that such participation results in collection and analysis of data useful in addressing the goals and management questions of the Receiving Waters Monitoring Program. Any participation must include the contribution of all funds, not otherwise spent on full implementation of mass loading station, ambient coastal waters, and bioassessment monitoring, to Bight '08. All other monitoring must continue during the 2008-2009 monitoring year as required. If the Copermittees partially participate in Bight '08, monitoring all regular must be conducted, with the exception of any monitoring offset by the contribution of funds to Bight '08.~~

~~3.~~2. The Copermittees must conduct special studies, including any monitoring required for TMDL development and implementation, as directed by the Executive Officer.

~~4.Facilities that Extract, Treat, and Discharge (FETDs): Projects that extract water from waters of the U.S., submit the water to treatment processes, then discharge the treated effluent to waters of the U.S. must implement the following monitoring program:~~

~~a.Locations: Monitoring stations must include the influent, effluent, and downstream receiving water conditions in a manner sufficient to characterize effectiveness of the treatment process.~~

~~b.Frequency: Monitoring must be implemented monthly from April through September and bimonthly from September through March during months discharges occur. Monitoring frequency for any parameter listed below may be reduced upon written authorization from the Regional Board Executive Officer, at the request of the Copermittee, if it is demonstrated that there is low variability and a low threat to beneficial uses for at least three consecutive months.~~

~~c.Protocol: Sampling, analysis, and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board.~~

~~d.Parameters: The following parameters must be monitored:~~

~~(1)Indicator fecal bacteria, if the purpose is to improve recreational beneficial uses in waters of the U.S.~~

~~(2)Metals: Metals (dissolved) must be monitored if existing water quality data demonstrates total or dissolved metal concentrations in the receiving waters likely exceed (before treatment) or would likely exceed (following treatment) the numeric criteria in U.S. EPA National Recommended Ambient Water Quality, the California Toxics Rule, or if appropriate, the California Ocean Plan.~~

~~(3)Pesticides: Monitoring must be conducted for chlorpyrifos and pyrethroids if the water contains runoff from urban, golf course, or agricultural land uses.~~

~~(4)Turbidity (or total suspended solids), pH, dissolved oxygen, and temperature.~~

~~(5)Any constituent for which the water body (extraction or discharge location) is listed as impaired pursuant to Clean Water Act Section 303(d).~~

~~(6)Toxicity: Testing for chronic toxicity must be initiated at the next sampling event if two consecutive sampling results display concentrations of metals or pesticides in excess of numerical criteria for the California Toxics Rule, or if appropriate, the California Ocean Plan. Toxicity testing must continue until results from three consecutive sampling events display no toxic effects or upon initiation of a TMDL implementation plan for toxicity in the water body. A toxicity identification evaluation must be conducted if three consecutive monitoring events display toxicity to the same species.~~

~~e.Based on results of a toxicity identification evaluation, the Copermittees within the source watershed must collaborate to develop and implement an upstream source identification program to identify sources of pollutants causing toxicity. This source identification program must begin within six months following results of the toxicity identification evaluation. The source identification program must include water quality monitoring and other source identification methods.~~

~~**f.**Results and data from the FETD monitoring programs must be submitted with the annual monitoring reports in accordance with Section III of this monitoring and reporting program.~~

~~5.~~3. Stormwater Monitoring Coalition Regional Monitoring of Southern California's Coastal Watersheds:

The Copermittees must implement the monitoring program developed by the Stormwater Monitoring Coalition for Regional Monitoring of the Southern California's Coastal Watersheds within the San Juan Hydrologic Unit. Each Copermittee must evaluate the results of the monitoring program within and downstream of its jurisdiction and integrate the results into program assessments and modifications.

4. Sediment Toxicity Study

Copermittees must develop, submit to the Regional Board for review, and implement an approved special study which will investigate the toxicity of sediment in urban streams. The Study must be submitted within 24 months of adoption of Order R9-2009-002. After Regional Board review, the Sediment Toxicity Study must be implemented in conjunction with the Urban Stream Bioassesment Monitoring and, at a minimum, contain the following:

a. Locations: At a minimum, 4 bioassessment locations must be sampled, including 1 reference site.

b. Frequency: At a minimum, sampling must occur once per year at each site for at least 2 years. Sampling must be done in conjunction with the bioassessment sampling required under Section II.A.2 of the Monitoring and Reporting Program of this Order.

c. Parameters/Methods: At a minimum, sediment toxicity analysis shall include the measurement of metals, pyrethroids and organochlorine pesticides. Analysis must include estimates of bioavailability based upon sediment grain size, organic carbon and receiving water temperature. Acute and chronic toxicity testing must be done using Hyalella azteca in accordance with Table 2.

d. Results: Results and a Discussion shall be included in the Monitoring Annual Report. The Discussion must include an assessment of the relationship between observed IBI scores under Section II.A.2 and all variables measured.

5. Trash and Litter Impairment Investigation

Copermittees must develop and implement a special investigation beginning no later than 2 years following the adoption of this Order to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale. Litter is defined in California Government Code 68055.1g as "litter means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or container constructed of steel, aluminum, glass, paper, plastic and other natural and synthetic ,materials, thrown or deposited on lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing." A lead Copermittee may be selected for each watershed, and will be responsible for the following:

a. Locations: The lead Copermittee will identify suitable sampling locations within each watershed.

b. Frequency: Trash at each location shall be monitored a minimum of twice during the wet season following a qualified monitoring storm event (minimum of 0.1 inches preceded by 72 hours of dry weather) and twice during the dry season.

c. Protocol: The lead Copermittee for each watershed shall use the Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds and A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region to develop a monitoring protocol for each Watershed. The draft monitoring protocol, including sampling locations and frequency, shall be submitted to the Regional Board for review no later than 365 days following the adoption of this Order. Although sampling must occur on a watershed basis, a County-wide protocol may be developed that incorporates each individual watershed.

d. Results and Discussion from the Trash and Litter Impairment Study shall be included in the Monitoring Annual Report.

E. Monitoring Provisions

All monitoring activities must meet the following requirements:

1. Where procedures are not otherwise specified in this Receiving Waters Monitoring and Reporting Program ~~(e.g., Dry Weather Field Screening and Analytical Monitoring)~~, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (SWRCB).

2. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity [40 CFR 122.41(j)(1)].

3. The Copermittees must retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or USEPA at any time and must be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]

4. Records of monitoring information must include [40 CFR 122.41(j)(3)]:

   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

5. All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this Receiving Waters Monitoring and Reporting Program or approved by the Executive Officer [40 CFR 122.41(j)(4)].

6. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order must, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. [40 CFR 122.41(j)(5)]

7. Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean unless otherwise specified in this Receiving Waters Monitoring and Reporting Program. [40 CFR 122.41(l)(4)(iii)]

8. All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.

9. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct its laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Copermittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Copermittee must submit documentation from the laboratory to the Regional Board for approval prior to raising the ML for any priority toxic pollutant.

10. The Regional Board Executive Officer or the Regional Board may make revisions to this Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program at any time during the term of Order No. R9-~~2008-001~~2009-002 and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

11. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance must, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [40 CFR 122.41(k)(2)]

12. Monitoring must be conducted according the USEPA test procedures approved under 40 CFR 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants under the Clean Water Act" as amended, unless other test procedures have been specified in this Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program, in Order No. R9-~~2008-001~~2009-002, or by the Executive Officer.

13. If the discharger monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring must be included in the calculation and reporting of the data submitted in the reports requested by the Regional Board. [40 CFR 122.41(l)(4)(ii)]

III. REPORTING PROGRAM

A. Monitoring Reporting

1. Planned Monitoring Program: The Principal Copermittee must submit a description of the Receiving Waters and ~~Urban~~ Runoff Monitoring Program to be implemented for every monitoring year. The submittals must begin on September 1, 200~~8~~9, and continue every year thereafter. The submittals must describe all monitoring to be conducted during the upcoming monitoring year. For example, the September 1, 200~~8~~9 submittal must describe the monitoring to be conducted from October 1, 200~~8~~9 through September 30, 200~~9~~10.

   ~~If the Copermittees participate in Bight '08, their submittal for the 2008-2009 monitoring year must describe the monitoring to be conducted for Bight '08 and exhibit how the monitoring will result in collection and analysis of data useful in addressing the goals and management questions of the Receiving Waters and Urban Runoff Monitoring Program.~~

2. Monitoring Annual Report: The Principal Copermittee must submit the Receiving Waters and ~~Urban~~ Runoff Monitoring Annual Report to the Regional Board on ~~April~~October 1 of each year, beginning on ~~April~~October 1, 200~~9~~10. Receiving Waters and ~~Urban~~ Runoff Monitoring Annual Reports must meet the following requirements:

   a. Annual monitoring reports must include the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component.

   b. Annual monitoring reports must include a watershed-based analysis of the findings of each monitoring program component. Each watershed-based analysis must include:

      (1) Identification and prioritization of water quality problems within each watershed.
      (2) Identification and description of the nature and magnitude of potential sources of the water quality problems within each watershed.
      (3) Exhibition of pollutant load and concentration increases or decreases at each mass loading and temporary watershed assessment station.

(4) Evaluation of pollutant loads and concentrations at mass loading and temporary watershed assessment stations with respect to land use, population, sources, and other characteristics of watersheds using tools such as multiple linear regression, factor analysis, and cluster analysis.
(5) Identification of links between source activities/conditions and observed receiving water impacts.
(6) Identification of recommended future monitoring to identify and address sources of water quality problems.
(7) Results and discussion of any TIE conducted, together with actions that will be implemented to reduce the discharge of pollutants and abate the sources causing the toxicity.

c. Aliso Creek Bacteria Investigation: Annual monitoring reports for the Aliso Creek Bacteria Investigation must contain the following information:

(1) Water quality data and assessment. The report must contain all data collected and an assessment of compliance with applicable water quality standards for each monitoring station;

(2) Program Assessment. A description and assessment of each municipality's program implemented within the high-priority storm drain locations to reduce storm water discharges of indicator fecal bacteria/pathogens. Water quality monitoring alone is not sufficient to assess progress of the municipal programs. Municipalities must demonstrate each year that their programs are effective and resulting in a reduction of bacteria sources.

(a) For structural and nonstructural management practices implemented, the assessment must contain a description of the practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results.

(b) For structural and nonstructural management practices implemented, the assessment must contain a description of the practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results

d. Annual monitoring reports must include discussions for each watershed which answer each of the management questions listed in section I.B of this Receiving Waters Monitoring and Reporting Program.

e. Annual monitoring reports must identify how each of the goals listed in section I.A of this Receiving Waters Monitoring and Reporting Program has been addressed by the Copermittees' monitoring.

f. Annual monitoring reports must include identification and analysis of any long-term trends in storm water or receiving water quality. Trend analysis must use nonparametric approaches, such as the Mann-Kendall test, including exogenous variables in a multiple regression model, and/or using a seasonal nonparametric trend model, where applicable.

g. Annual monitoring reports must provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to ~~urban~~ runoff for each of the watersheds specified in Table 3 of Order No. R9-2009-002.

h. Annual monitoring reports must, for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.

i. Annual monitoring reports must describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures, and sampling and analysis protocols.

j. Annual monitoring reports must use a standard report format and must include the following:

(1) A stand alone comprehensive executive summary addressing all sections of the monitoring report;
(2) Comprehensive interpretations and conclusions; and
(3) Recommendations for future actions.

k. All monitoring reports submitted to the Principal Copermittee or the Regional Board must contain the certified perjury statement described in Attachment B of this Order No. R9-2009-002.

l. Annual monitoring reports must be reviewed prior to submittal to the Regional Board by a committee of the Copermittees (consisting of no less than three members).

m. Annual monitoring reports must be submitted in both electronic and paper formats. Electronic formats must be CEDEN or SWAMP-uploadable.[11]

3. The Principal Copermittee must submit by July 1, 2008~~9~~, a detailed description of the monitoring programs to be implemented under requirement II.B.2 of Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program No. R9-2009-002. The description must identify and provide the rationale for the constituents monitored, locations of monitoring, frequency of monitoring, and analyses to be conducted with the data generated.

4. Monitoring programs and reports must comply with section II.D of Receiving Waters and ~~Urban~~ Runoff Monitoring and Reporting Program No. R9-2009-002 and Attachment B of Order No. R9-2009-002.

5. Following completion of an annual cycle of monitoring in October, the Copermittees must make the monitoring data and results available to the Regional Board at the Regional Board's request.

B. Interim Reporting Requirements

For the October 2008 to October 2009 ~~October 2007-October 2008~~ monitoring period, the Principal Copermittee must submit the Receiving Waters Monitoring Annual Report by January 31, 2010~~on January 31, 2009~~. The Receiving Waters Monitoring Annual Report must address the monitoring conducted to comply with the requirements of Order No. 2002-01.

[11] For updates to the SWAMP templates and formats, see http://www.waterboards.ca.gov/swamp.