are not based upon any analysis of whether they are necessary for the Copermittee programs, which the Copermittees have funded successfully for 16 years. See discussion in Attachment B (pages 23-26).

Federal law requires neither a business plan nor identification of fiscal benefits of the MS4 program. The federal regulations require only that Copermittees provide, for each fiscal year to be covered by the permit,

[A] fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the program under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall 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.


Nor does state law require a business plan or identification of fiscal benefits. Section 13377 of the Water Code, which the Fact Sheet cites in support for the fiscal analysis requirement, simply requires the Regional Board to issue waste discharge requirements that apply and ensure compliance with all applicable provisions of the CWA. Because the CWA does not require a business plan or identification of fiscal benefits, neither does Section 13377 of the Water Code.

According to the Fact Sheet, the requirement for a business plan, including a long-term funding strategy, and the requirement to identify fiscal benefits are based on recommendations in guidance from the National Association of Flood and Storm water Management Agencies (NAFSMA). Fact Sheet at 111. These recommendations were prepared for small MS4s as a basis for developing fee-based programs and have no relevance to the Copermittees MS4 programs. This is discussed in more detail in the Attachment B (page 26).

Given that these Section F requirements are not required by state or federal law and are based on recommendations by NAFSMA that were not intended for Phase I MS4s, the County requests that Provision F of the Tentative Order be revised consistent with the requirements of applicable law.

VI. The Proposed Order Is Increasingly Prescriptive Without The Appropriate Findings Of Fact And Legal Or Technical Justification

A. The Prescriptive Nature of the Tentative Order is Inconsistent with Both State and Federal Law

The Tentative Order, both generally and particularly with respect to the JURMP/SUSMP requirements, is unlawfully prescriptive under Section 13360 of the Water Code and does not comport with the MS4 programs envisioned by USEPA in the CWA implementing regulations and subsequent USEPA guidance.

1. The Tentative Order Mandates The Particular Manner Of Achieving Compliance, Rather Than Allowing Compliance "In Any Lawful Manner" as Required by State Law
In its current form, the Tentative Order, not including its five separate attachments, is over 80 pages in length. By comparison, the current permit is approximately 80 pages in length including its five attachments. The principal reason for this added length is that the Regional Board staff continues to add detailed requirements that usurp the Copermittees’ right to determine how best to achieve the performance goals set out in the CWA regulations and the Tentative Order. This approach is unduly prescriptive and in direct conflict with Water Code Section 13360 which, as previously discussed, states:

No waste discharge requirement or other order of a regional board or the state board or decree of a court issued under this division shall specify the design, location, type of construction, or particular manner in which compliance may be had with that requirement, order, or decree, and the person so ordered shall be permitted to comply with the order in any lawful manner.

Cal. Water Code § 13360(a) (emphasis added).

Section 13360 grants a Copermittee unlimited authority to determine how best to meet the substantive obligations imposed under its storm water permit. This authority enables a Copermittee to constantly improve its programs while ensuring that its resources are used in the most efficient manner possible. During the term of the third-term permit, the Copermittees extensively evaluated the effectiveness of their programs. Based on these assessments, the Copermittees determined that most aspects of their programs were working well and identified areas that could be improved. Based on these assessments, the Report of Waste Discharge recommended the Regional Board reissue the permit substantially in its current form with the recommended changes designed to address needed improvements. While the Tentative Order reflects some of the Copermittees’ recommendations, it also includes many additional requirements that increase the burdens on Copermittees’ resources without any demonstration that they will achieve commensurate water quality improvements.

The Regional Board cannot and should not ignore the limitations on its statutory authority. While the Regional Board may set performance goals for the Copermittees, it cannot tell the Copermittees how to achieve these goals.

2. The Clean Water Act Regulations Were Designed To Preserve Flexibility And Allow Municipal Copermittees To Fashion Storm Water Management Programs Meeting Their Local Needs And Circumstances

When enacting the 1987 amendments to the CWA, which added the municipal storm water permit requirements, Congress was aware of the difficulties in regulating discharges from MS4s solely through traditional end-of-pipe treatment. See 55 Fed. Reg. at 48037-38. In earlier...
rulemakings, much of the criticism of the concept of subjecting discharges from MS4s to NPDES permits focused on the perception that “the rigid regulatory program applied to industrial process waters and effluents from [POTWs] was not appropriate for the site-specific nature and sources which are responsible for the discharge of pollutants from [MS4s].” *Id.* at 48038.

The water quality impacts of discharges from MS4s depend on a wide range of factors, including: the magnitude and duration of rainfall events, the time period between events, soil conditions, the fraction of land that is impervious to rainfall, land use activities, the presence of illicit connections, and the ratio of the storm water discharge to receiving water flow. *Id.* In enacting the 1987 amendments, Congress recognized that:

> Permit requirements for [MS4s] should be developed in a flexible manner to allow site-specific permit conditions to reflect the wide range of impacts that can be associated with these discharges.... “All types of controls listed in subsection [402(p)(3)(C)] are not required to be incorporated into each permit.”


Consistent with Congressional intent, the Phase I Storm Water regulations "set[] out permit application requirements that are sufficiently flexible to allow the development of site-specific permit conditions." *Id.* While USEPA believed that all municipalities should face essentially the same responsibilities and commitments for achieving the goals of the CWA, it “agree[d] that as much flexibility as possible should be incorporated into the [MS4] program.” *Id.*

USEPA’s *Interim Permitting Approach* is not inconsistent with the requirement of flexibility in MS4 permits.\(^9\) The guidance simply (and logically) provides that where existing BMPs are not adequately controlling the discharge of pollutants from MS4s, “expanded or better-tailored BMPs in subsequent permits” should be implemented. 61 Fed. Reg. at 43761. More specific conditions or limitations may be appropriate in MS4 permits only where “adequate information exists” and only where “necessary and appropriate.” *Id.* In other words, USEPA does not suggest each iteration of the MS4 should necessarily become increasingly prescriptive; more detailed MS4 conditions only may be prescribed where necessary and appropriate. The *Interim Permitting Approach* does not provide support for the Regional Board to make Copermittees’ MS4 permit ever more prescriptive simply for the sake of, for example, making it easier to enforce.

The prescriptive approach mandated by the Tentative Order clearly is at odds with both Congress’ intent in enacting the municipal storm water program and with USEPA’s intent in implementing it. Rather than allowing the Copermittees the flexibility to develop and implement

\(^9\) Notwithstanding that the Fact Sheet cites to the guidance in support of the prescriptive Tentative Order, USEPA’s mandate of flexibility is confirmed in USEPA’s Part 2 Guidance: “The Part 2 application requirements provide each MS4 with the flexibility to design a program that best suits its site-specific factors and priorities. . . . [F]lexibility in developing permit conditions is encouraged by allowing municipalities to emphasize the controls that best apply to their MS4.” Part 2 Guidance, *supra*, at p. 6-1.

their own storm water management programs within the parameters set forth by USEPA, the
Tentative Order would dictate more and more prescriptive programmatic requirements that are
not warranted in the context of the Orange County Storm Water Program. Attachment B
identifies numerous such overly prescriptive requirements.

B. To The Extent The Tentative Order's Prescriptive Requirements Are
Permissible And Appropriate, They Must Be Supported By Findings And A
Fact Sheet Providing Legal And Technical Justification

As discussed above, the requirements of the Tentative Order must be supported by a fact sheet
and findings, which in turn must be supported by substantial evidence. See, e.g., State Board
Order No. WQ 95-4; State Board Order No. WQ 2001-15; Topanga Association for a Scenic
Community v. County of Los Angeles, et al., supra at p. 8. Even assuming the prescriptive
nature of the Tentative Order did not run afoul of state and federal law as discussed above, it
still would be fatally flawed in that the prescriptive requirements are not supported by a fact
sheet providing legal or technical justification for the specific requirements nor are the
requirements supported by adequate findings.
ATTACHMENT B

ORANGE COUNTY TECHNICAL COMMENTS ON
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
TENTATIVE ORDER No. R9-2007-0002
NPDES NO. CAS0108740

INTRODUCTION

Attachment B contains the principal technical comments of the County of Orange (the "County") on Tentative Order No. R9-2007-0002 dated February 9, 2007 ("Tentative Order"). Although the supporting Fact Sheet/Technical Report dated February 9, 2007 ("Fact Sheet") is referenced occasionally in this attachment, the County has not attempted to provide detailed comments on the Fact Sheet.

These comments are divided into three sections: (1) General Comments, (2) Findings, and (3) Permit Provisions. The first section discusses the County's global concerns with the Tentative Order, whereas the latter two sections address issues relating to specific parts of the Tentative Order. At times, the issues and concerns raised will pertain to more than one section of the Tentative Order.

The County has endeavored to provide a complete set of comments on the Tentative Order. However, the County reserves the right to submit additional comments relating to Tentative Order No. R9-2007-0002 and the supporting Fact Sheet/Technical Report to the Regional Board up to the close of the public comment period.

GENERAL COMMENTS

TENTATIVE ORDER INAPPROPRIATELY USES THE TERM "VIOLATION" INSTEAD OF "EXCEEDANCE"

In several instances the language in the Tentative Order has been changed from the prior Order (R9-2002-0001) to replace the term "exceedance" with the term "violation". For example, "exceedances of water quality objectives" has been replaced with "violations of water quality objectives" (emphasis added). In some cases, the change is inappropriate.

The Tentative Order should use the term "exceedance" where it refers to a comparison of data with criteria such as water quality objectives that are relevant to evaluation of the data. The Tentative Order should use the term "violation" when it is referring to a failure to comply with a prohibition or other requirement of the Tentative Order. Careful use of these terms is important, because an "exceedance" does not equate with a "violation." For example, while it may be useful to compare water quality monitoring data to receiving water quality objectives and use identified "exceedances" to target potential
problems areas and pollutants, it is inappropriate to make this same comparison and determine that there is a "violation".

The use of the term "violation" to refer to any exceedance detected would, in effect, be using the water quality objectives or other relevant reference criteria as de-facto numeric effluent limitations.

The County requests modification of the Tentative Order language to use the word "exceedance" instead of "violation" when referring to the comparison of water quality monitoring data to reference criteria. The locations in the permit where these changes should be made are:

- Page 7, Finding D.1.b.
- Page 12, Finding E.1.
- Page 15, A.3.

The term "violation" in this section is inconsistent with SWRCB Order WQ 99-05 and needs to be modified to "exceedance". The iterative language in the receiving water limitations speaks to exceedances of water quality standards, not violations.

- For Monitoring and Reporting Program Page 12.B.1., we recommend the following alternative language:

  "The wet weather program must, at a minimum, include collection of samples for those pollutants on the 303(d) list and/or are Permittee pollutants of concern—causing or contributing to violations of water quality standards within the watershed."

**TENTATIVE ORDER IS OVERLY PRESCRIPTIVE AND DISMISSES THE IMPORTANCE OF THE DRAINAGE AREA MANAGEMENT PLAN**

The Fact Sheet states that the Tentative Order includes sufficient detailed requirements to ensure compliance and seemingly dismisses the DAMP as "procedural correspondence" which guides implementation and is not a substantive component of the Order.

This permitting approach fundamentally shifts the level of program detail to the permit instead of the Drainage Area Management Plan (DAMP). The increasingly prescriptive and detailed permits provisions continue to erode the flexibility and local responsibility of Copermittees for continued development and improvement of the MS4 program based upon their extensive and collective experience in managing the program. This shift runs counter to the purpose and intent of the federal stormwater management program and as set forth in the federal CWA regulations and USEPA guidance.

The CWA regulations speak to the necessity and importance of the stormwater management plan in the permitting process. The management program "shall include a comprehensive planning process.....to reduce the discharge of pollutants to the
maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. Proposed management program shall describe priorities for implementing controls. 40 CFR 122.16(d)(2)(iv).

A more flexible permitting approach sets the foundation for the Orange County Program and places upon the Copermittees the continuing responsibility of weighing economic, societal, and equity issues as they define the policies, standards and priorities to be employed in implementing the program.

In fact the DAMP and local JURMPs are fundamental and necessary elements of the MS4 program since they serve as the primary policy and guidance documents for the program and describe the methods and procedures that will be implemented to reduce the discharge of pollutants to the maximum extent practicable and achieve compliance with the MS4 permit performance standards. While the management plans must effectively address and be in compliance with the permit requirements, the necessary detail and prioritization of efforts in doing so must remain at the local level and be described within the Drainage Area Management Plan, not the permit.

The increasingly top down approach reflected in the Tentative Order also inadvertently reduces the ability of the Copermittees to adaptively manage their programs to meet the MEP standard. This seems contrary to the discussion of MEP in the Fact Sheet, which stresses the dynamic aspects the MEP standard and the need for continuous response to assessments of the program. "This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in 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." and "Reducing the discharge of stormwater pollutants to the MEP requires Copermittees to assess each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP." Finally, "...the Copermittees' urban runoff management programs to be developed under the Order are the Copermittees' proposals of MEP... The Order provides a minimum framework to guide the Copermittees in meeting the MEP standard."

These statements acknowledge that it is incumbent upon the Copermittees to ensure that the program is effective and adaptively managed to meet the ever-evolving MEP standard. The ability of the Copermittees to adaptively manage and develop their programs is undermined by the statement within the Fact Sheet that the DAMP is "procedural correspondence" and not a substantive component of the Order. In the

comments below the Copermittees request a number of language changes so that the necessary programmatic detail is developed within the DAMP instead of the permit.

**FINDINGS**

**DISCHARGE CHARACTERISTICS**

- **Categories of Pollutants (Finding C.2. Page 3)**
  Finding C.2. identifies common categories of pollutants in urban runoff. For some, but not all pollutants, the finding identifies sources [total suspended solids, sediment (due to anthropogenic activities)]. Since the Copermittees are not responsible for pollutants from all types of sources (atmospheric deposition, etc.), this Finding should be modified to identify the pollutants commonly found in urban runoff without specifying sources unless a more thorough discussion of sources is provided.

- **Clean Water Act 303(d) Impaired Waters (Finding C.6. Page 4)**
  Finding C.6. includes Table 2a. which is titled “Common Watersheds and CWA Section 303(d) Impaired Waters”. By paraphrasing the 303(d) list Table 2a unfortunately connotes systemic water quality issues that are, in fact, limited to specific water quality segments. In addition, a number of contaminants are incorrectly identified as causes of impairment. For example, Aliso Creek is not listed for benzo[b]flouranthene, dieldrin, and sediment toxicity. The table needs to present the 303(d) list exactly in accordance with the 303(d) list approved by the State Board on 10/25/06 or be deleted.

- **Water Quality Monitoring Data (Finding C.7. Page 5)**
  Finding C.7. states in part that “... water quality data submitted to date documents persistent violations...”. For the reasons discussed above and to be consistent with the Fact Sheet (page 8), the term “violation” should be changed to “exceedances.”

In addition, the Finding states that the water quality monitoring data collected to date indicates that there are exceedances of Basin Plan water quality objectives for a number of pollutants and that the data indicates that urban runoff discharges are the leading cause of impairment. While the receiving water quality may exceed Basin Plan objectives for constituents identified by the municipalities as pollutants of concern, there is inadequate data to make such a definitive statement that the urban discharges are the leading cause of impairment in Orange County. This statement does not take into account the other sources within the watershed or the uncertainty within many of the studies that have been conducted. Accordingly, the last sentence of that paragraph should be modified to read,
"In sum, the above findings indicate that urban runoff discharges are may be causing or contributing to water quality impairments, and are a warrant leading cause of such impairments in Orange County special attention.

URBAN RUNOFF MANAGEMENT PROGRAMS

- **New or Modified Requirements (Finding D.1.c. Page 7)**
  Finding D.1.c. states that the Tentative Order "contains new or modified requirements that are necessary to improve the Copermittees' efforts to reduce the discharge of pollutants to the MEP and achieve water quality standards". The Finding further states some of these new or modified requirements "address program deficiencies that have been noted in audits, report reviews, and other Regional Board compliance assessment activities." In fact, in many cases the new or modified requirements do not have adequate findings of fact and technical justification.

  In many instances the Fact Sheet not only provides little or no justification of the need for the new requirement, it also does not identify the "program deficiency" that warrants the modification. In many cases the Fact Sheet also ignores the thorough program analysis that the Copermittees conducted as a part of their preparation of the ROWO and the deficiencies and program modifications that Copermittees themselves identified as necessary for the program. The Permit Provisions comments in the next section of these comments identify many of the areas where new or modified provisions of the Tentative Order lack factual or technical support in the Fact Sheet.

- **Development Planning - Treatment Control BMPs (Finding D.2.b. Page 9)**
  Finding D.2.b. states that end-of-pipe BMPs are more effective when used as polishing BMPs. Treatment BMPs are not particularly effective as polishing BMPs and work best when the pollutant load is high. The finding should be modified to remove the statement that end-of-pipe BMPs are more effective when used as polishing BMPs.

- **Heavy Industrial Sites (Finding D.2.e. Page 9)**
  Finding D.2.e. states that the one-acre threshold for heavy industrial sites is appropriate "since it is consistent with the requirements in the Phase II NPDES stormwater regulations that apply to small municipalities". The Phase II stormwater regulations do not apply to the Phase I communities. 40 CFR 122.32. The reference to Phase II NPDES regulations and, as discussed below, the corresponding change in the permit provisions should be deleted.

- **Discharges "Into" the MS4 (Finding D.3.e Page 11)**
  Finding D.3.e. states that pollutants discharged "into" an MS4 must be reduced to the MEP. This appears to be an error. The corresponding Tentative Order Section A.2 prohibits only discharges "from" an MS4 that contain pollutants which have not been reduced to the MEP. Finding D.3.e should be revised accordingly.
STATUTE AND REGULATORY CONSIDERATIONS

- **Treatment and Waters of the U.S. (Finding E.7. Page 14)**
  Finding E.7. states that, "Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water." We believe that Finding E.7. is based on a misinterpretation of CWA regulations and misconstrues USEPA guidance on storm water treatment BMPs. This is discussed in detail in Attachment A (Pages 1-7). We wish to comment here on the implications it has for watershed restoration activities.

Prohibiting treatment and mitigation in receiving waters severely limits the potential locations for installation of treatment control BMPs and will adversely affect many watershed restoration projects. For example, this Finding may have unintended adverse effects for the Aliso Creek Water Quality SUPER Project.

The Aliso Creek Water Quality SUPER Project proposes a multi-objective approach to Aliso Creek watershed development and enhancement, accommodating channel stabilization, flood hazard reduction, economic uses, aesthetic and recreational opportunities, water quality improvements, and habitat concerns. The project is aimed at water supply efficiency and system reliability through reclamation, along with benefits for flood control and overall watershed management and protection. The ecosystem restoration and stabilization component of the project will include:

- Construction of a series of low grade control structures and reestablishment of aquatic habitat connectivity;
- Shaving of slide slopes to reduce vertical banks; and
- Invasive species removal and riparian revegetation and restoration of floodplain moisture.

The Copermittees are concerned that some of these activities may be deemed "urban runoff treatment and/or mitigation" in a receiving water and, thus, may not be allowed, compromising the project objectives.

In addition, this Finding seems to conflict with Section 3.a.(4) of the Tentative Order, which requires the Copermittees to evaluate their flood control devices and identify the feasibility of retrofitting the devices to provide for more water quality benefits.

Given the lack of any proper legal or factual basis for these limitations as well as the adverse impacts on watershed restoration efforts, the Finding should be deleted from the Tentative Order.
PERMIT PROVISIONS

LEGAL AUTHORITY

- **Effectiveness of BMPs (Section C.1.j. Page 19)**
  The Tentative Order includes a new provision that requires the Copermittees to demonstrate that they have the legal authority to require documentation on the effectiveness of BMPs. This provision is inappropriate. It ignores the fact that the New Development/Significant Redevelopment section of the DAMP (Section 7.0) establishes a process for the selection, design, and long-term maintenance of permanent BMPs for new development and significant redevelopment projects and requires development to select BMPs that have been demonstrated as effective for their project category. In addition, it ignores the fact that the Copermittees have already established legal authority for their development standards so that project proponents have to incorporate and implement the required BMPs. This Section C.1.j. should be deleted from the Order.

JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM

Development Planning Component

- **Infiltration and Groundwater Protection (Section D.1.c.(6) Page 22)**
  Section D.1.c.(6)(a) requires urban runoff to undergo pretreatment prior to infiltration. This is problematic for several reasons. First, this requirement unnecessarily constrains the use of infiltration devices, which should be at the discretion of the designer, and diminishes the beneficial aspects of infiltration devices. At the same time, the volume of stormwater that can be treated will be reduced since the volume will be limited to the sizing of the pretreatment device and not the sizing of the infiltration device. Besides, pollution prevention and source control BMPs are required prior to infiltration.

  Second, the Fact Sheet provides no technical basis for the requirement to provide pretreatment before infiltration. This restriction on the use of infiltration technology should not be included in the Tentative Order without a strong technical basis for the requirement that details the necessity of pretreatment before infiltration and the concerns related to infiltrating stormwater.

  Since the Fact Sheet does not currently provide a any technical basis for the requirement, Section D.1.c.(6)(a) should be deleted from the Tentative Order.

  Section D.1.c.(6)(g) restricts the use of infiltration treatment control BMPs in areas of industrial or light industrial activity and areas subject to high vehicular traffic. High vehicular traffic is defined as 25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway. There is no technical basis for this restriction or the definition of "high vehicular traffic" included within the Fact Sheet. As such, prescriptive
requirements should not be included in the Tentative Order unless there is a strong technical basis. Although SWRCB Order WQ 2000-11 provides guidance on some of the restrictions on the use of infiltration treatment control BMPs contained in the Tentative Order, there is no mention of restrictions related to areas subject to high vehicular traffic. Moreover, we are not aware of any demonstrated relationship between traffic counts and frequency of materials deposited on the street.

Since the Fact Sheet does not currently provide a technical basis for restricting the use of infiltration treatment control BMPs in areas of industrial or light industrial activity and areas subject to high vehicular traffic, Sections D.1.c.(6)(a) and D.1.c.(6)(g) should be deleted from the Tentative Order.

- **Standard Urban Storm Water Mitigation Plans (SUSMPs) (Section D.1.d. Page 23)**
  Section D.1.d. requires each Copermittee to implement an updated local SUSMP within twelve months of adoption of the Order. The schedule for the update of the SUSMP is overly aggressive and does not allow the time necessary for the Copermittees to incorporate changes and implement an updated SUSMP. Since the modifications for the SUSMP will take longer than the 12-month period identified in the Tentative Order, the provision should be modified to require each Copermittee to implement an updated local SUSMP within 24 months of adoption of the Order.

- **Definition of Priority Development Project (Section D.1.d.(1)(b) Page 23)**
  Section D.1.d.(1)(b) defines Priority Development Projects as "redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already developed site that falls under the project categories or locations listed in section D.1.d.(2)". This Section is not clear on whether the "already developed site" or the redevelopment project must fall under one of the categories in section D.1.d.(2) in order for the project to be considered a Priority Development Project. The Copermittees request clarification regarding this Section.

  The project categories listed in section D.1.d.(2) includes "single-family homes". Requiring SUSMP requirements for re-development projects of single-family homeowners presents an unnecessary burden in terms of cost and complexity and likely minimal water quality benefit. This provision should be modified to exclude single-family homes from SUSMP requirements.

- **Priority Development Project Categories (Section D.1.d.(2) Page 24)**
  Section D.1.d.(2) defines Priority Development Project Categories. In an introduction to the listed categories, this section states that, 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. As currently written this provision would require a new
development that has a 5,000 square foot parking lot feature and 100,000 square feet of other land uses that are not Priority Development Project Categories, to provide treatment for the entire project (105,000 square feet). This requirement would unduly burden the landowner in this case with the cost of treating runoff from 105,000 square feet when only 5,000 square feet should be subject to SUSMP requirements and treatment controls.

The need to treat runoff from a greatly increased land area will require an increase in the size of treatment controls, which will increase the volume of water treated without a likely commensurate increase in pollutant removal. This requirement will unnecessarily increase the cost of treatment control BMPs without commensurate pollutant removal benefits and likely discourage redevelopment.

The Fact Sheet fails to provide any information showing that development land uses that are not in the Priority Development Project Category contribute pollutants to the MS4 and are a threat to water quality. The Fact Sheet (page 78) states that this provision "is included in the Order because existing development inspections by Orange County municipalities show that facilities included in the Priority Development Project Categories routinely pose threats to water quality. This permit requirement will improve water quality and program efficiency by preventing future problems associated with partially treated runoff from redevelopment sites. This explanation does not demonstrate any connection between development land uses that are not in the Priority Development Project Category and the observed "threats to water quality." In addition, although the explanation focuses on the water quality benefits for redevelopment projects, the Section is for "new development" projects".

Since the Fact Sheet does not provide any technical information showing that land uses that are not Priority Development Project Categories are a significant source of pollutants and a threat to water quality, the introductory paragraph of Section D.1.d.(2) subjecting the entire project footprint to SUSMP requirements should be removed from the permit.

- **Commercial Developments (Section D.1.d.(2)(b) Page 24)**
  Section D.1.d.(2)(b) lowers the threshold criterion for commercial developments required to comply with SUSMP requirements from 100,000 square feet (2.3 acres) to one acre. The Fact Sheet states that this provision has been modified to be consistent with US EPA Phase II Guidance. However EPA Phase II guidance is not relevant to a Phase I permit.

  The Fact Sheet also states that this Provision is based on Copermittee findings that smaller commercial facilities pose high threats to water quality. This is not the case. The Copermittees indicated that commercial facilities of 100,000 square feet or less receive a score of 3 out 5 (a medium threat) in Table 9-8 in the 2007 DAMP. Since the Fact Sheet does not provide any technical basis for
lowering the threshold criterion for commercial developments required to comply with SUSMP requirements from 100,000 (2.3 acres) square feet to one acre, the category should be described as, “Commercial developments greater than 100,000 square feet.”

- **Industrial Developments (Section D.1.d.(2)(c) Page 24)**
  Section D.1.d.(2)(c) requires industrial developments of greater than one acre to comply with SUSMP requirements. The Fact Sheet states that this provision has been modified to be consistent with US EPA Phase II Guidance. Again EPA Phase II guidance is not relevant to a Phase I permit. In addition, the Fact Sheet does not provide a technical basis for adding industrial sites to the Priority Development Project Categories and consequently Section D.1.d.(2)(c) should be deleted from the permit.

- **Streets, Roads, Highways, and Freeways (Section D.1.d.(2)(i) Page 25)**
  Section D.1.d.(2)(i) includes as a Priority Development Project Category streets, roads, highways, and freeways including any paved surface of 5,000 square feet or greater that is used for transportation. It is unclear whether a project such as the addition of a right turn pocket to a roadway would subject the entire roadway to SUSMP requirements and treatment controls. This provision should be revised to include language clarifying that only the subdrainage area where the roadway improvements are occurring is subject to SUSMP requirements and required to include BMPs, not the entire roadway.

- **Retail Gasoline Outlets (Section D.1.d.(2)(j) Page 25)**
  Section D.1.d.(2)(j) includes as a Priority Development Project Category Retail Gasoline Outlets (RGOs) that meet the criteria of 5,000 square feet or more or have a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. SWRCB Order WQ 2000-11 provides guidance on whether RGOs are subject to SUSMP requirements. The State Board states in this Order that “In considering this issue, we conclude that construction of RGOs is already heavily regulated and that owners may be limited in their ability to construct infiltration facilities. Moreover, in light of the small size of many RGOs and the proximity to underground tanks, treatment may not always be feasible, or safe.” Although the State Board does not prohibit subjecting RGOs to SUSMP requirements, the State Board provides a number of reasons for not doing so, including that fact that RGOs are already heavily regulated. It should also be noted that the DAMP already prescribe a suite of BMPs specific to RGOs. Subjecting RGOs to SUSMP requirements imposes duplicity where it is not needed. Section D.1.d.(2)(j) should be removed from the permit.

- **Treatment Control BMP Requirements (Section D.1.d.(6)(ii)(f) and (g) Page 28)**
  Section D.1.d.(6)(ii)(f) require treatment control BMPs be implemented prior to discharging into waters of the U.S. and provision D.1.d.(6)(ii)(g) requires that treatment controls not be constructed within waters of the U.S. or waters of the
State. These provisions of the Tentative Order greatly limit the use of regional BMP and watershed-based approaches. The provisions demand a lot-by-lot approach in implementing BMPs that is analogous to the site-by-site septic tank approach that has been discredited as an effective strategy for sewage treatment in urban areas. Similarly, the Coppermitees submit that such an approach is also ineffective for stormwater and will lead to a diversion of limited resources to managing thousands of site-by-site treatment controls, which are managed by parties that have limited or no experience, instead of hundreds of regional controls, that are managed by parties and governmental agencies that have expertise in BMP management.

The Tentative Order encourages a renewed focus on the 'watershed approach' but the proposed restriction on regional BMPs is antithetical to a watershed approach. The USEPA in its National Management Measures Guidance to Control Nonpoint Source Pollution from Urban Areas, Management Measure 5: New Development Runoff Treatment dated November 2005 (page 5-38) states that "regional ponds are an important component of a runoff management program." and that the costs and benefits of regional, or off-site, practices compared to on-site practices should be considered as part of a comprehensive management program. The EPA guidance acknowledges that a regional approach can effectively be used for BMPs.

In addition, the Fact Sheet does not provide any technical justification for these provisions. Since neither the Findings nor the Fact Sheet provide any technical basis for precluding regional BMPs and EPA guidance recommends the use of regional BMPS, these provisions should be deleted from the permit.

- **Low Impact Development (LID) Site Design BMP Substitution Program (Section D.1.d (8) Page 30)**
  Section D.1.d.(8)(e) states that the LID Site Design BMP Substitution Program must not apply to automotive repair shops or streets, roads, highways, or freeways that have high levels of average daily traffic. The Coppermitees do not design, construct or operate freeways. It is suggested that the word "freeways" be removed from this provision.

- **Treatment Control BMP Maintenance Tracking (Section D.1.f Page 32)**
  Section D.1.f.(2)(c) requires a very prescriptive and resource intensive inspection program for the treatment controls. For example, (iii) requires Coppermitees to annually inspect of 100% of projects with treatment control BMPs that are high priority. Annual inspection of structural BMPs will create a burgeoning and resource intensive inspection program that is not warranted. The Provision should be amended to reduce the prescriptive nature of the inspection program and allow the Coppermitees to develop an inspection program that will meet the intent of the provision while balancing the need for a variety of approaches to complete this element of the program in a cost effective manner. This is important because such approaches include not only inspections but also
targeting identified or problem BMPs based on past reporting and investigations of water quality problems downstream.

- **Requirements for Hydromodification and Downstream Erosion (Section D.1.h. Page 33)**

  Section D.1.h. discusses the hydromodification requirements for Priority Development Projects. The hydromodification provisions are of concern to the Copermittees for several reasons.

  As a general matter, the hydromodification provisions may actually discourage smart growth and sustainable development and encourage urban sprawl. High density urban development generally does not have the space to allocate to onsite hydromodification controls. However, urban development has other water quality benefits such as incorporating subterranean parking garages, retail and office workspace, and residential space into a single impervious footprint. As a result, these types of developments have a much smaller impervious footprint than suburban developments that accommodate the same features. This Provision should be amended to include an exception for urban development based on impervious footprint.

  Section D.1.h.(3) (Page 34) requires each Copermitee to 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. This section should not apply to development where the project discharges in locations where the potential for erosion is minimal or not present. This would include those channels that are significantly hardened and engineered to accept flows from large impervious areas and discharges directly to water bodies not susceptible to erosion.

  In addition, this section should not apply to watersheds or watershed plans that already include sufficient hydromodification measures. For example, the County of Orange and major landowners, such as Rancho Mission Viejo have put in place a comprehensive watershed land use/open space strategy for the San Juan Creek Watershed/Western San Mateo Watershed which includes water quality/quantity management as an integral component. The Tentative Order should be amended to provide an exception to this section for those watersheds where a watershed plan that contains sufficient hydromodification measures has been developed.

  This section should also recognize that the common hydromodification management measures for complying with the hydromodification requirements don't necessarily apply directly to flood control projects.

  Section D.1.h.3.(b) (Page 34) requires that management measures must be based on a sequenced consideration of site design measures, on-site management controls, and then in-stream controls. The provision does not
include an option to address hydromodification on a regional or watershed basis. This provision should be amended to include an option to address hydromodification on a regional or watershed basis.

Section D.1.h.(3)(b)(i) (Page 34) requires that site design measures for hydromodification must be implemented on all Priority Development Projects. It is neither necessary nor prudent to require hydromodification controls on all priority projects. Some priority projects may be too small to have hydromodification effects and some may discharge into engineered channels, which makes these measures unnecessary. The receiving channel must always be part of the assessment of whether hydromodification controls will be required. This Provision should be amended to include language that the controls are required unless a waiver per paragraph (c) of this section is granted.

Section D.1.h.(3)(c) (Page 35) defines the on-site hydromodification control waivers. This provision does not address channels that have been engineered to accept the discharge from the urbanized landscape. Much of the lower part of the San Juan Creek watershed falls into this category. For example, San Juan Creek from its confluence with Trabuco Creek Channel is an example. The channel has been improved with soil cement side slopes, and drop structures, all specifically designed to accept the master plan development flows. It is also possible that future channels will be engineered with natural design concepts to accept master planned discharges. There are very few 'natural' channels in areas where development has yet to occur, and the hydromodification provisions of the Tentative Order must accommodate this fact. It is suggested that the provisions be amended to include an exception as part of the on-site hydromodification control waivers criteria, for channels that have been engineered to accept the discharge and flows of the Priority Development Project.

Section D.1.h.(3)(c)(ii)(b) requires hardened channels to include in-stream measures to improve the beneficial uses adversely affected by hydromodification. However, this section seems contradictory to the waiver concept since, in order to qualify for the waiver, the development must provide improvements to the channel to improve the beneficial uses. It is unclear how one would improve the beneficial uses of a severely altered or significantly hardened channel without removing the channel armoring. Therefore, it seems that this section does not provide an effective waiver option, and, thus this section should be deleted from the Tentative Order.

Section D.1.h.(4) (Page 35) requires the development and implementation of hydromodification criteria within two years of adoption of this order. This section is problematic for several reasons. First, the development of this criteria will likely take longer than two years since criteria must be established for specific projects and receiving waters. In addition, the criteria must be based on findings from the Hydromodification publications produced by the Stormwater Monitoring Coalition (SMC) and Southern California Coastal Water Research Project.
(SCCWRP), however, if there are any delays with these publications, the permit section does not provide an alternative to the two year timeframe. Due to these concerns, the language should be modified to state that, until the completion of the SMC Hydromodification Control Study, the Copermittees should implement interim hydromodification criteria.

Section D.1.h.(5) requires that within 180 days of adoption of the Order, each municipality must ensure that projects disturbing 20 acres or more include and implement the interim hydromodification management measures identified. Section D.1.d. of the Tentative Order allows the Copermittees 12 months (suggested amendment to 24 months) from permit adoption to update their Local WQMPs. In order to prevent confusion with regard to changes in the Local WQMPs, it is suggested that the requirement to place interim hydromodification requirements on large projects be extended so that it is in line with the Local WQMP update (as suggested by the Copermittees). It is also suggested that this section be amended to provide an exception to those watersheds where a watershed plan that contains sufficient hydromodification measures to meet the requirements of the section, has been incorporated into the JURMP and to those projects that have already designed BMPs to address hydromodification issues, received approval for the but have not started construction.

Section D.1.h.(5)(a)(iii) (Page 36) requires control of runoff through hydrograph matching for a range of return periods from 1 year to 10 years. An exception to this requirement should be Priority Development Projects that discharge to hardened channels or engineered channels. It is suggested that the provision be amended to include an exception for Priority Development Projects that discharge to hardened channels or engineered channels.

- **Reporting (Section D.1.j Page 37)**
  Section D.1.j. details the reporting requirements of the development Planning Component. This provision substantially increases the Copermittees' reporting obligations. This level of effort will divert program resources from pollution reduction projects. This provision should be amended to reflect the level of reporting requirements included in the current permit Order No. R9-2002-01.

**Construction Component**

- **Permit Fees**
  Although not directly addressed within the Tentative Order, the Copermittees take issue with the requirement that they must pay a significant fee for the municipal stormwater permit, which covers their construction responsibilities and are also required to pay an additional fee when they submit an NOI to obtain coverage under the Statewide Construction General Permit. Since there is some discretion in how the Regional Water Board addresses these fees, the Copermittees request that their municipal stormwater fees cover all municipal
activities including construction and that they not be held liable for additional fees when submitting NOIs.

- **Site Planning and Project Approval Process (Section D.2.c.(2) Page 39)**
  The Tentative Order requires that, prior to permit issuance, the Copermittees require and review a project proponent's stormwater management plan to verify compliance with local grading ordinances and other applicable ordinances. We interpret this to refer to the stormwater pollution prevention plan (SWPPP) required by the Statewide General Construction Stormwater Permit.

  The Fact Sheet (Page 92) discussion provided as technical justification for this new requirement is inaccurate and/or misapplied. The Fact Sheet cites USEPA guidance as stating that Copermittees should review site plans submitted by the construction site operator to ensure that the appropriate erosion and sediment controls are implemented before ground is broken. While the Copermittees agree with this, the requirement is to review site plans submitted in conformance with local requirements, not state requirements.

  The Fact Sheet goes on to state that audits of Orange County Copermittee stormwater programs found that the "site plan and SWPPP reviews were inadequate". While there may be issues related to the site plans, the Copermittees are not responsible for enforcement of the Statewide Construction General Permit and, therefore, do not review SWPPPs for conformance with local codes and ordinances prior to issuing local permits, they only review locally required plans such as erosion and grading control plans.

  The Copermittees take exception to this language and recommend that the language be modified as follows:

  (2) Prior to permit issuance, the project proponent's stormwater management plan—locally required plans such as grading plans and erosion and sediment control plans—must be reviewed to verify compliance with the local grading ordinance, other applicable local ordinances, and this Order.

- **BMP Implementation (Section D.2.d Page 40-41)**
  Section D.2.d.(1)(a)(ii) requires the development and implementation of a site-specific stormwater management plan. For the same reasons discussed above, the Copermittees recommend that this section be modified as follows:

  (ii) Development and implementation of a site-specific stormwater management plan—erosion and sediment control plan:

  Section D.2.d.(1)(c)(i) (Page 41) states that the Copermittees must require implementation of advanced treatment for sediment at construction sites that are determined to be an exceptional threat to water quality.
The Fact Sheet provides no justification for this requirement. The newly released preliminary draft Statewide Construction General Stormwater Permit identifies the Active Treatment System (ATS) as an advanced sediment treatment technology. The ATS prevents or reduces the release of fine particles from construction sites by employing chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment. The preliminary draft permit, requires the use of ATS or source controls where the project soils exceed 10% medium silt.

Since advanced sediment treatment is a newly emerging statewide issue that needs to be fully vetted to address a host of issues including potential byproducts and application of limitations and other options, this provision should be deleted until the costs and benefits of this particular BMP are better understood.

Municipal

- **Flood Control Structures (Section D.3.a.(4)(c) Page 47)**

Section D.3.a.(4)(c) requires the Copermittees to evaluate existing flood control devices to identify those that are 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 structure. This provision is problematic for several reasons as described below.

The current Order (Order No. R9-2002-0001) requires that the Copermittees “evaluate the feasibility of retrofitting existing structural flood control devices and retrofit where needed” [(F.3.a.(4)(b))]. The Copermittees completed this in November 2003 with the submittal of a technical memorandum Identification of Retrofitting Opportunities – Existing Channel Assessment. The purpose of the flood control channel assessment was to identify locations within the flood control channel system that, based on a qualitative assessment, appear to have potential for modification to enhance beneficial uses or provide a water quality (pollution control) function.

Based on an identification and field review of channel segment locations throughout the County, approximately 20 locations were identified as having the potential for reconfiguration, four (4) of which were in the San Diego Region. However, before final selection and implementation of these identified potential retrofit locations can occur, quantitative analyses must be conducted to ensure that the flood control/drainage function of the channels is not compromised, and project specific design, cost estimate, and environmental permitting/coordination work must be conducted. Thus, the provision is duplicative of work that has already been completed under the existing permit and, therefore, unnecessary.

The federal regulations [40 CFR, Part 122.26(d)(2)(vi)(A)(4)] focus on evaluating flood control devices and determining if retrofitting the device is feasible. The regulations state:
(4) A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from stormwater is feasible.

The language should be modified so that it is aligned with the current stormwater permit, recognizes the work that has been completed, is consistent with the intent of the federal regulations, and is consistent with the justification within the Fact Sheet. The proposed language modification is as follows:

(4). BMP Implementation for Flood Control Structures
   (c) Each Permittee who owns or operates flood control devices/facilities must continue to evaluate its existing flood control devices/facilities, identify devices causing or contributing to a condition of pollution, identify measures to reduce or eliminate the structure's effect on pollution, as needed and identify opportunities and the feasibility of configuring and/or reconfiguring channel segments/structural devices to function as pollution control devices to protect beneficial uses. The inventory and updated evaluation must be completed by July 1, 2008 and submitted to the Regional Board with the Fall 2008 annual report.

• Street Sweeping (Section D.3.a.(5) Page 48)

Section D.3.a.(5) requires the Copermittees to design and implement the street-sweeping program based on two new criteria including traffic counts and trash and debris. This provision is problematic for several reasons as described below.

First, the Copermittees are supportive of designing and implementing a street sweeping program that maximizes water quality benefits, and, in fact, have developed their existing program with this objective in mind. The Tentative Order should propose language that provides objectives for the program instead of strictly defining the criteria, especially since the criteria should be determined based on local needs and experience.

For example, if the street sweeping program has to “optimize the pickup of toxic automotive byproducts based on traffic counts”, there needs to be a strong technical basis for this requirement and for the relationship between traffic counts and frequency of materials deposited on the street. Although “toxic automotive byproducts” broadly includes oil, gasoline, transmission fluid, brake fluid, brake dust (specifically copper), radiator fluids and tire wear (specifically zinc), the street sweeping program is only effective at removing those byproducts which adhere to sediment particles or other large debris. Once the liquid byproducts absorb into the asphalt, the street sweeper will be ineffective at removing the material.
Second, if the Tentative Order is going to include new prescriptive street sweeping requirements, the findings must indicate why the existing street sweeping program is ineffective and the Fact Sheet must identify the technical basis for the finding and as well as demonstrate the correlation between the traffic counts and need for street sweeping.

All Copermittees maintain street sweeping programs in residential, commercial and/or industrial areas and, in 1993, the Copermittees compiled information regarding their existing street sweeping schedules and practices and subsequently changed elements of their programs such as the types of sweepers purchased, the frequency of sweeping, and the use of parking restrictions in order for the street sweeping program to more effectively aid in water quality improvements. In fact, the Copermittees have observed an 87% increase in the weight of material collected from 2001-2002 to 2004-2005 indicating a marked increase in effort and diversion of materials that would have otherwise ended up in the receiving waters⁴.

Since the findings and Fact Sheet do not currently support the new prescriptive requirements for street sweeping and the Copermittees have a program that has already been optimized for water quality benefits, Section D.3.a.(5) should be deleted. The Tentative Order should, instead, focus on the objectives for the program, the review/revision of model maintenance procedures as needed, and training to ensure that the program is consistently implemented.

- **Infiltration from Sanitary Sewer to MS4 (Section D.3.a.(7) Page 49)**
  Although the first portion of the Tentative Order provision (7)(a) is consistent with the current permit (Order No. R9-2002-0001), the Copermittees submit that this provision is more applicable to sanitary sewer agencies, not stormwater agencies, and is an unnecessary duplication of other regulatory programs. The State Board stayed a similar provision in the existing permit as leading "significant confusion and unnecessary control activities." WQ 2002-0014 at p.8. Since that time, the State Water Resources Control Board has adopted the Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006 and the Regional Water Board adopted Order No. R9-2007-0005 on February 14, 2007 (which is more stringent and prescriptive than the Statewide General WDRs).

  The Statewide General WDRs require public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans which, among other things, requires that the agencies describe and implement routine preventative operation and maintenance activities as well as a rehabilitation and replacement plan. The Regional Board requires that all

sewage collection agencies within the San Diego Region comply with Order No. R9-2007-0005 as well as the Statewide General WDRs.

Since there are now two regulatory mechanisms in place to address sanitary sewer exfiltration-related issues, part (a) of the provision (7) should be deleted from the Tentative Order.

While the Copermittees agree that stormwater agencies must also address various aspects of sanitary sewer overflows and connections, the provisions in (7)(b) are aspects of other portions of the stormwater program and should be moved to those sections of the Tentative Order. The proposed changes include:

i. Adequate plan checking for construction and new development – incorporate in the Construction and New Development programs

ii. Incident response training for municipal employees that identify sanitary sewer spills – incorporate in the Illegal Discharges/Illlicit Connections (ID/IC) program.

iii. Code enforcement inspections – delete, this is covered by other programs

iv. MS4 maintenance and inspections – incorporate in the Municipal program, provision D.3.a(6).

v. Interagency coordination with sewer agencies – incorporate in the ID/IC program

vi. Proper education of municipal staff and contractors conducting field operations on the MS4 or municipal sanitary sewer (if applicable) – incorporate in the Municipal program

Commercial/Industrial

- Commercial Sites/Sources (Section D.3.b.(1)(a) Page 53)
  The Tentative Order added four new categories of commercial sites/sources: food markets, building materials retailers and storage, animal facilities, and power washing services. The Fact Sheet notes that these facilities were added because these activities were identified as potentially significant sources of pollutants in annual reports.

Although we agree that those sites/sources that are identified by the Copermittees as contributing a significant pollutant load to the MS4 should be added to the list of sites/sources and incorporated into the inventory, unless universally identified as a significant source, those determinations made at a local level should only be incorporated into the local JURMP and not universally within the Tentative Order. If these determinations are made at a local level and then the requirement applied countywide, the Board staff may inadvertently be diverting resources from high priority issues to lower priority issues.

The new categories should be deleted from the Tentative Order and, instead, recognize that those sites/sources have been locally determined to contribute a
significant pollutant load to the MS4 be should be incorporated into the local JURMP(s).

- **Mobile Businesses (Section D.3.b(3)(a) Page 55)**

  The Tentative Order has added a new requirement to develop and implement a program to address discharges from mobile businesses. The program must include the identification of BMPs for the mobile business, development of an enforcement strategy, a notification effort, the development of an outreach and education program, and inspection as needed. This provision is problematic for several reasons as described below.

  If the Tentative Order is going require the development and implementation of a significant new element of the commercial program, the Findings must adequately support the new requirement. The Findings do not currently address this provision.

  The Fact Sheet must also provide a technical basis for the addition of the mobile business program to the commercial program, identify the basis for applying the requirement to all MS4s in their region, and ensure the water quality benefit will be commensurate to the resources necessary to develop and implement such a program.

  The Fact Sheet indicates that this provision is not significantly different than the existing requirements, but then acknowledges that "mobile businesses present a unique difficulty in stormwater regulation" for several reasons including:

  - The regular, effective practice of unannounced inspections is difficult to implement;
  - Tracking these mobile businesses is difficult because they are often not permitted or licensed; and
  - Mobile businesses are transient in nature and may have a geographic scope of several cities or the entire region

  The Copermittees agree that the development and management of a mobile business program will be very difficult and resource intensive. For all the inherent difficulties listed above, the development and implementation of a mobile business program is, in fact, significantly different from the existing commercial/industrial program, which largely focuses on fixed facilities.

  While the Copermittees understand the intent of the provision, the Tentative Order should include language that limits the scope of the provision until the costs and benefits of the program are better understood. As such, the Tentative Order should include language that allows the Copermittees to identify a mobile business category that may be a significant source of pollutants and to develop a pilot program for that category. The pilot program would allow the Copermittees to work together on a regional basis to develop an appropriate framework for addressing mobile business and determine whether the program is effective prior
to expending a significant amount of resources on multiple categories of mobile businesses.

- **Food Facility Inspections (Section D.3.b.(4)(c) Page 56)**
  The Tentative Order includes new, prescriptive requirements for food facility inspections and requires that the scope of the inspections be expanded to address maintenance of greasy roof vents (c)(iv) and identification of outdoor sewer and MS4 connections (c)(v). While the issue of grease on roof vents has been discussed at the Aliso Creek meetings, the Findings and Fact Sheet do not provide any justification for the additional requirements, any clarification as to how the Copermittees would inspect for these issues, or any rationale as to how this would make the inspection program more effective or improve water quality.

  In fact, the annual food facility inspection program that has been conducted over the past few years has been focused on the critical stormwater-related issues typically found at a food facility and has been effective. The existing food facility inspection program focuses on the major water-quality related issues associated with restaurants including disposal methods for food wastes, fats, oils and greases, wash water, dumpster management and floor mat cleaning. In 2004-2005 over 25,000 food facility inspections were conducted and over 1,400 were identified as having stormwater-related issues. In 2003-2004, over 12,000 inspections were conducted and about 1,300 were identified as having stormwater-related issues.

  This comparison suggests that the inspections and related outreach efforts are having a positive impact since the incidence of issues is decreasing from 1 in 10 inspections to 1 in 17 inspections.

  Since the food facility inspection program is focused on the major concerns that need to be addressed at a food facility and has been successful, provisions (c)(iv) and (c)(v) should either be deleted from the Tentative Order or the subject of further technical justification.

- **Third Party Inspections (Section D.3.b(4)(d) Page 57)**
  The Tentative Order includes new, prescriptive requirements for third party inspections that provide a significant amount of detail as to how the inspection program must be managed. However, the Findings and the Fact Sheet do not address the need for these expanded requirements or provide any rationale as to how these new requirements would make the third-party inspection program more effective.

  In fact, this level of detail should be determined locally and should be included as a part of the program within the model DAMP and local JURMPs. After the inclusion of the industrial and commercial inspection programs in the third term permit, the Copermittees determined that they could leverage their resources by utilizing and expanding upon existing inspection programs to assist them in
complying with the permit instead of creating duplicative inspection programs. The ability to utilize third-party inspections as an effective part of the program, has allowed the Copermittees to maximize their resources. An example of a third party inspection program that has been developed and implemented is the use of the Orange County Health Care Agency (OCHCA) inspectors to assist the Copermittees in inspecting 10,000 restaurants countywide on an annual basis. The Copermittees have developed this program in conjunction with OCHCA so that it is only an incremental burden on their limited resources, effective, and allows for clear communication between the inspectors and the Copermittees.

Since the Copermittees have already developed an effective framework for a third-party inspection program, provisions (i)(a) through (i)(d) are unnecessary and should be deleted from the Tentative Order.

**ID/IC Program**

- **Investigation/Inspection and Follow Up (Section D.4.e(2)(b) and (c) Page 63)**

  The Tentative Order requires that the Copermittees conduct an investigation or document why the discharge does not require an investigation within two days of receiving dry weather field screening or analytical laboratory results. Although the Copermittees understand and agree with the intent of the permit language, the existing language is onerous and does not recognize the resources that are necessary to conduct an investigation or the variability of the types of investigations that may be warranted.

  It is suggested that the language be modified to preserve the intent of the requirement as follows:

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

  (c) Analytical data: Within two business days of receiving analytical laboratory results the exceed action levels, the Copermittees must either conduct initiate 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.

- **Elimination of Illicit Discharges and Connections (Section D.4.f Page 64)**

  The Tentative Order requires that the Copermittees “take immediate action to eliminate all detected illicit discharges....” And that illicit discharges that pose a serious threat...."must be eliminated immediately”. Although the Copermittees understand and agree with the intent of the permit language, the existing language is onerous and does not recognize the time and/or resources that are
necessary to respond. It is suggested that the language be modified to preserve
the intent of the requirement as follows:

f. Elimination of Illicit Discharges and Connections
Each Permittee must take immediate action 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 in a timely manner.

Watershed Urban Runoff Management Program (Section E, page 66)
The Tentative Order includes increasingly prescriptive requirements for the Watershed
Urban Runoff Management Program (WURMP) including the designation of default
Copermittee leads for each of the watershed management areas, the specific role of the
Lead Permittee, the number of water quality and watershed activities that need to be
implemented on an annual basis within each WMA, and a requirement for the
description and assessment of each structural and non-structural management practice
implemented.

The Fact Sheet states that the increased prescriptiveness for the WURMP provision
was necessary because enforceability of the permit has been a critical aspect. The Fact
Sheet further states that:

“For example, the watershed requirements of Order No. R9-2002-01 were some
of the Order's most flexible requirements. This lack of specificity in the watershed
requirements resulted in inefficient watershed compliance efforts. This situation
reflects a common outcome of flexible permit language. Such language can be
unclear and unenforceable, and it can lead to implementation of inadequate
programs.”

Not only do the Copermittees take strong exception to this statement, but the Fact
Sheet is inconsistent with the Findings, which simply state that the WURMPs need to
focus on the high priority water quality issues. In addition, the Fact Sheet does not
acknowledge any of the notable Copermittee successes including 1) the development of
a South Orange County Integrated Regional Watershed Management Plan (IRWMP),
which resulted in a $25 million IRWMP competitive grant award, (2) the 303(d) de-listing
efforts that are ongoing and have been submitted for consideration; and 3) the efforts of
the County of Orange and major landowners, such as Rancho Mission Viejo to put in
place a comprehensive watershed land use/open space strategy for the San Juan
Creek Watershed/Western San Mateo Watershed through the approved Southern
Subregion Habitat Conservation Plan (HCP) and Special Area Management Plan
(SAMP) both of which include water quality/quantity management as an integral
component.

The Copermittees submit that the increased prescriptiveness of the Tentative Order is unwarranted and antithetical to a watershed management approach, which should be founded on a stakeholder driven process. Successful watershed-based programs follow a stakeholder driven process and are developed from the “bottom-up” not from the “top-down”. The Copermittees must be given latitude in how the watershed-based programs are developed and implemented, especially since many of the pollutants of concern (Cu, Zn, pesticides, pathogen indicators, etc.) and issues are the same within and among watersheds.

The language must be modified to provide the flexibility that is necessary within a watershed management program (similar to the language in Order No. R9-2002-0001) and, instead, focus on the major objectives for the program. Some language changes that would assist the Board in making these changes are provided below.

- **Lead Watershed Permittee (Section E.1.a. page 67)**
  The Tentative Order has designated which entity within the watershed should be the default lead Permittee and what those responsibilities entail. The Copermittees contend that this level of detail is inappropriate for a permit provision and should, instead, be a collaborative decision that is made among the various watershed stakeholders based on locally determined criteria and needs.

  The Copermittees propose that the language be modified as follows:
  
  a. Lead Watershed Permittee Identification
  
  Watershed Copermittees must identify the Lead Watershed Permittee for their WMA. In the event that a Lead Watershed Permittee is not selected and identified by the Watershed Copermittees, by default the Permittee identified in Table 3 as the Lead Watershed Permittee for that WMA must be responsible for implementing the requirements of the Lead Watershed Permittee in that WMA. The Lead Watershed Copermittees will serve as liaisons between the Copermittees and Regional Board, where appropriate.

- **BMP Implementation and Assessment (Section E.1.e. page 70)**
  The Tentative Order requires an arbitrary minimum number of “watershed program activities” to occur in each year (during each reporting period the Copermittees must implement no less than 2 “watershed water quality activities” and 1 “watershed education activity”). The Fact Sheet states that the Copermittees have completed the assessments, prioritization, and collaboration and now need to implement the activities identified.

  While the Copermittees agree that there are activities that will be undertaken in conformance with the WURMP, the Tentative Order should not presuppose that the Copermittees will not follow through with implementation of the WUMRPs now they have been developed. Since this requirement is unfounded, onerous,
arbitrary, and dictates a top-down approach for managing the watersheds, the language should be modified to incorporate the flexibility necessary for the stakeholders to identify the BMPs to be implemented and the details of that implementation. The Tentative Order language should be modified to remove the prescriptive detail and incorporate more flexible language that will ensure that the WURMPs contain performance standards, timeframes for implementation, responsible parties and methods for measuring the effectiveness of their programs.

Fiscal Analysis (Section F. Page 74)
Section F of the Tentative Order requires the Copemittees to secure the resources necessary to implement the permit, conduct a fiscal analysis of the stormwater program including the expenditures and fiscal benefits realized from the program, and develop a long-term funding strategy and business plan. While the Copemittees agree with Board staff that there is an identified need to prepare a fiscal reporting strategy to better define the expenditure and budget line items and to reduce the variability in the reported program costs and have committed to do such in the ROWD, the Copemittees take exception to the requirement to develop a long-term funding strategy and business plan and identify the fiscal benefits realized from the program. The concerns for both of these new requirements are discussed in further detail below.

Long Term Funding Strategy and Business Plan

The Tentative Order requires that each Copemittee submit a funding business plan that identifies the long-term strategy for program funding decisions. The Fact Sheet states that this requirement is based on the need to improve the long-term viability of the program and is based on the 2006 Guidance for Municipal Stormwater Funding from the National Association of Flood and Stormwater Management Agencies (NAFSMA). The Fact Sheet further indicates that, without a clear plan, that the Board has uncertainty regarding the implementation of the program.

The Copemittees submit that this requirement, which is, perhaps, more reasonable for a newly developing stormwater program, is an unnecessary and burdensome requirement for the Copemittees that will yield no commensurate benefit to water quality and divert precious resources away from the implementation of the program. In addition, the rationale for this provision is taken out of context and unnecessary for the Orange County Program for two reasons.

First, while Board staff rely heavily on the 2006 NAFSMA Guidance for Municipal Stormwater Funding to justify this new requirement, this national guidance document was developed to provide a resource to local governments as they address stormwater program financing challenges and primarily focuses on the considerations and requirements for developing a service/user/utility fee. While the guidance document states that the most "successful" programs have developed a business plan to guide the program evolution and funding decisions, it is not a one
size fits all approach that should be applied to every program, nor is it warranted for the Orange County Program.

Second, the Copermittees have a demonstrated history of compliance and leadership in developing, implementing and adequately funding the stormwater program. Regardless of the source of funds, a historical review of the expenditures to date provide undisputable evidence that the Copermittees are dedicated to the program, plan their budgets accordingly, and have adequately funded the program for the past 16 years (Figures 1 and 2).

The Copermittees have two types of costs: shared costs and individual costs.

- **Shared Costs** – Over the last three permit terms the shared costs have increased from just under $300,000 to almost $6 million. The shared costs are those costs that fund the activities performed by the County of Orange as Principal Permittee

- **Individual Costs** - Over the last three permit terms the individual costs have increased from just over $30 million to a projected amount of almost $102 million for 2006-2007. Individual costs are those costs incurred by the Copermittees for the implementation of their local program (including capital and operation and maintenance costs).

**Figure 1. Historical Review of Shared Costs (1990-2006)**
While the Co-permittees are committed to providing increased standardization for their reporting, they have a demonstrated history of adequately funding the program and committing additional resources as needed. As a result, this provision (F.3.) is unnecessary and should be deleted from the Tentative Order.

**Fiscal Benefits**

The Tentative Order requires the Co-permittees to include a qualitative or quantitative description of fiscal benefits realized from the implementation of the stormwater program. This requirement is problematic for three reasons. First, the requirement goes beyond the federal mandate to provide a fiscal analysis of the necessary capital and operation and maintenance expenditures to implement the program, second, the Board staff rely heavily on the 2006 NAFSMA *Guidance for Municipal Stormwater Funding* for justifying this new requirement.

The federal regulations [40 CFR, Part 122.26(d)(2)(vi)] require the following:

*(vi) Fiscal Analysis. For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the program under*
paragraphs (d)(2) (iii) and (iv) of this section. Such analysis shall 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.

Not only do the federal regulations not require a qualitative or quantitative
description of the fiscal benefits realized from the implementation of the program, it
is unclear as to how one would do this and the level of analysis that would be
required.

While the Fact Sheet indicates that this new requirement is based on the 2006
NAFSMA Guidance for Municipal Stormwater Funding, the concept is taken out of
context and misapplied within the Tentative Order. The national guidance document
does not suggest that stormwater programs should unilaterally identify the benefits
realized from the implementation of the program as a part of the annual fiscal
reporting, rather it discusses the need to identify benefits of a program if one is
establishing a utility/user fee so that there is a nexus between the fee and the
services or benefits provided to ensure that the fee is commensurate with such
services.

Since the Coperrmitees have already committed to preparing a fiscal reporting
strategy to better define the expenditure and budget line items included in the fiscal
report, which will enhance the reporting that is required pursuant to the federal
regulations, Section (F.2.c.) should be deleted from the Tentative Order.

Program Effectiveness Assessment (Section G. Page 75)
Section G. of the Tentative Order requires the Coperrmitees to assess the
effectiveness of their JURMP, identify necessary program modifications, and report
that information to the Regional Water Board on annual basis. Section G.1.A.
identifies specific water quality-based objectives for 303(d) listed water bodies,
environmentally sensitive areas (ESAs), and the major program components.

Although the concept and intent of the provision is understood and supported by the
Coperrmitees, the specificity and inclusion of the required water quality-based
objectives and focus on the 303(d) listed water bodies and ESAs is misplaced and
has not been developed within the context of the California Stormwater Quality
Association (CASQA) Guidance, the existing Orange County program effectiveness
assessment framework and metrics, or the recommendations within the ROWD
(Section 1.2.2). In addition, the Tentative Order also requires that each Coperrmittee
conduct their own assessments including integrated assessments, which are more
effective on a regional scale and over a longer timeframe. As written, this section of
the Tentative Order does not provide flexibility for the Coperrmitees to develop
objectives and an overall strategy for the effectiveness assessment and will result in
resources being expended without achieving the intended goal.

Since the Coperrmitees have already developed and implemented a program
effectiveness assessment framework and programmatic and environmental
performance metrics and have committed to developing metric definitions and
guidance to improve the efficacy of the assessments in the ROWD, the provision
should be modified to allow the Copermittees to functionally update their long-term
effectiveness assessment (LTEA). The updated LTEA would build on the existing
framework that has been utilized within the County for the past four years as well as
the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance
Document, which is due for release in early April, and would assess the
jurisdictional, countywide, and watershed-based elements of the stormwater
program. The long-term strategy would include the purpose, objectives, and
methods for the assessments and achieve the Regional Water Board staff
objectives.

The proposed language, which is provided below, would replace G.1. and G.2. of the
Tentative Order and is based on the current permit requirements.

The proposed language is:

a. As part of its individual Jurisdictional URMP, each Permittee shall develop update a
their long-term strategy for assessing the effectiveness of its individual Jurisdictional
URMP based on lessons learned from the existing program framework and available
guidance. The long-term assessment strategy shall identify the purpose, objectives,
methods and specific direct and indirect measurements that each Permittee will use to
track the long-term progress of its individual Jurisdictional URMP towards achieving
improvements in receiving water quality. Methods used for assessing effectiveness shall
include the following or their equivalent: surveys, pollutant loading estimations, and
receiving water quality monitoring. The long-term strategy shall also discuss the role of
monitoring data in substantiating or refining the assessment.
b. As part of its individual Jurisdictional URMP Annual Report, each Permittee shall
include an assessment of the effectiveness of its Jurisdictional URMP using the direct
and indirect assessment measurements and methods developed in its long-term
assessment strategy. The updated long-term strategy shall be submitted within 365 days
after adoption of the permit.

i. Long-term strategy for assessing the effectiveness of the Watershed URMP. As part of
the WURMPs, the watershed Copermittees shall update their long-term strategy for
assessing the effectiveness of the WURMPs based on lessons learned from the existing
program framework and available guidance. The long-term assessment strategy shall
identify the purpose, objectives, methods and specific direct and indirect performance
measurements that will track the long-term progress of Watershed URMP towards
achieving improvements in receiving water quality impacted by urban runoff discharges.
Methods used for assessing effectiveness shall include the following or their equivalent:
surveys, pollutant loading estimations, and receiving water quality monitoring. The long-
term strategy shall also discuss the role of monitoring data in substantiating or refining
the assessment. The updated long-term strategy shall be submitted within 365 days
after adoption of the permit.

Reporting (Section H. Pages 77-80 and Section E. Page72)
Section H of the Tentative Order requires the Copermittees to submit the following reports:

- Individual and Unified JURMP annual reports - September 30 of each year (July 1 – June 30)
- Individual and Unified WURMP annual reports - January 31 of each year (July 1 – June 30)

Although the Copermittees understand that the Tentative Order included these changes to allow for a longer time period between the two sets of submittals, the Copermittees would receive more benefit from keeping the two timelines for the submittals aligned. As such, the language should be revised so that the JURMPs and WURMPs are submitted January 31\(^6\) of each year. This will allow the Copermittees to assess their stormwater program and water quality monitoring program and conduct an integrated assessment to identify water quality improvements.

Section E.3. requires that the Copermittees submit the Aliso Creek WURMP annual report by March 1 of each year for the period January – December of the previous year. Since the Watershed Action Plan Annual Report for the Aliso Creek Watershed has historically been submitted in November of each year and has been based on the fiscal year like the other WURMP reports, it is unclear why Board staff are requiring this change. As such, the Aliso Creek WURMP submittal is now inconsistent with the other WURMP submittals both in the date for submittal and the time period for which the report covers.

The submittal date for the Aliso Creek WURMP annual report should be modified to be aligned with the other WURMP submittals. The proposed language modification is as follows:

3. Aliso Creek Watershed URMP Provisions
   b. Each Permittee must provide annual reports by March 1 January 31 of each year beginning in 2008\(^6\) for the preceding annual period of January July 1 through December June 30.\ldots\ldots

\(^6\) Reporting schedules will need to be aligned with the Santa Ana Permit reporting schedules.
ATTACHMENT C

ORANGE COUNTY ENVIRONMENTAL MONITORING COMMENTS ON CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
TENTATIVE ORDER No. R9-2007-0002
NPDES NO. CAS0108740

INTRODUCTION

Attachment C contains the principal technical comments of the County of Orange (the “County”) regarding the monitoring and reporting requirements of Tentative Order No. R9-2007-0002 dated February 9, 2007 ("Tentative Order").

These comments are divided into two sections: (1) General Comments, and (2) Specific Comments. The first section discusses the County's strategic concern with the Tentative Order's requirement, whereas the latter section addresses issues relating to specific requirements.

The County has endeavored to provide a complete set of comments on the Tentative Order. However, the County reserves the right to submit additional comments relating to Tentative Order No. R9-2007-0002 and the supporting Fact Sheet/Technical Report to the Regional Board in the future.

GENERAL COMMENTS

The principal goal of the Copermittees' environmental monitoring program is to support the Drainage Area Management Plan. This goal is entirely consistent with other observations on the role of monitoring. For example, “monitoring is most useful when it results in more effective management decisions, specifically management decisions that protect or rehabilitate the environment.” (NAS, 1991\(^1\)). A number of the proposed modifications to the monitoring program do not appear to be supportive of this goal. Further, as changes in protocols and procedures are mandated there is a significant risk that they start to compromise the integrity and value of what is increasingly being recognized as one of the most comprehensive urban stormwater quality data sets in the United States. Finally, while the Board's interest in moving toward greater regional consistency is recognized, the Permittees are concerned that requirements are being prescribed without due consideration of the needs of south Orange County.

SPECIFIC COMMENTS

E.II.A.1.c. Timing of Mass Loading Station (MLS) Monitoring

The requirement to sample the first wet weather event of the year at each MLS needs to be considered in the context of the entire Orange County effort. Including the six MLSs

\(^1\) Managing Troubled Waters, National Academy of Sciences, 1991
in the tentative order, there would in future be eighteen MLSs in Orange County requiring “first flush” sampling.

Proposed modification:

The requirement to increase the “first flush” sampling effort needs to be predicated on an assessment and finding of need.

E.II.A 1.d. Flow-weighting of Wet Weather Samples

The requirement to collect flow-weighted composite stormwater samples will not allow accurate comparisons to CTR criteria for chronic toxicity due to dissolved metals. The County’s present method provides a more thorough and reliable characterization of a storm with respect to comparison to water quality standards. 3-5 time-weighted composite samples are collected during a 4-day period to characterize a storm and its subsequent effects (see example below). The first flush sample is collected over an hour period and is comprised of six discrete samplings 12 minutes apart. The subsequent composite samples are prepared from bi-hourly samples.

The analyte concentrations from each of the composite samples are combined with the respective discharge volumes during the composite samplings to calculate the individual and total stormwater loads. The dissolved metals concentrations from each of the samples are compared to the CTR acute criteria. The time-weighted average dissolved metals concentrations for the 4-day sampling period are compared to the CTR chronic criteria.

Flow-weighted compositing by field instrumentation (automatic sampler linked to portable flowmeter) has many disadvantages including:

- Since the components are linked, if one component fails the system fails.
• When programming the autosampler the operator must have a fairly accurate prediction of the size of the storm. If the magnitude is over predicted the sampler will not collect enough volume for all of the required analyses. If the magnitude is under predicted the autosampler will collect too frequently and the latter part of the storm will be missed unless the autosampler is serviced before or immediately after the time of the last sampling. Since the County will be required to monitor 18 MLSs during the first measurable rain event of the season this type of maintenance is not possible.

• The channel rating must be accurate at the time of sampling. Flow rates are calculated from the water level records using the channel rating (stage-discharge relationship). Presently, water level records are processed at the end of monitoring year (quarterly for Santa Ana Region TMDL programs). The water level records are adjusted (with shifts) to reflect changes in the stage-discharge relationship arising from sediment deposition/scouring or new instantaneous discharge measurements. These adjustments can result in significant differences in the calculated discharge rates.

If the County were required to modify its current automatic sampling procedure for stormwater, manpower limitations would dictate that the process be conducted by flow-weighted compositing in the laboratory as described in EPA 833-B-92-001 Exhibit 3-20 (constant time – volume proportional to flow rate). Aliquots from each bottle, proportional to flow rate at the time of collection would be composited into a single large container. Aliquots from the container would be submitted for the required analyses.

Advantages:

• The autosampler and the flowmeter are not linked, reducing the likelihood of sampling failure.
• Unscheduled autosampler servicing (to reprogram the collection frequency due to changes in storm magnitude) would not be required.

Disadvantages:

• The volume of a composite sample may not be great enough to accommodate all of the chemical and toxicity testing analyses. For short duration storms the volume of the composite sample would be much smaller. Presently Orange County analyzes chronic toxicity in mass emissions samples with multiple dilution tests. Some of these tests require substantial volume. Approximately 4 gallons of sample are required for toxicity tests currently conducted on stormwater samples under the third term permit.
• The space limitations of the County’s laboratory would severely hinder expeditious processing of all of the samples from the first measurable event of each year.

Two automatic samplers, operating simultaneously, would be used to collect bi-hourly samples. Each sampler contains eight 1.8-liter glass bottles and the site would have to be serviced at least every 16 hours to change bottles and power supplies. The maximum volume collected in each bi-hourly sampling is $2 \times 1.8 = 3.6$ liters. The volume from each bi-hourly sampling used in the composite sample is calculated as:
Vi = Vi[(Vmax/Qmax) / (Vmax/Qmax)] where

Vi = volume from each bi-hourly sampling
VL = volume required for all analyses
Vmax = volume of the bi-hourly sample corresponding to the greatest discharge rate
Q = flow rate for sample i
Qmax = maximum flow rate recorded for any bi-hourly sampling

(Vmax/Qmax) must first be calculated to ensure that it is greater than VL. If it is not, the equation becomes:

Vi = Vmax/Qmax

The following two discharge hydrographs illustrate the disadvantages of flow-composite sampling using automatic sampling and laboratory compositing. The first storm spans approximately two days and has a significant peak discharge. Assuming a maximum sample bi-hourly sample volume of 3.6 liters, the total volume of the composite sample would be just 12.9 liters. The sample volumes required for chemical and toxicity tests used in the program are tabulated below.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Req. Vol. (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrients incl. TSS</td>
<td>1.5</td>
</tr>
<tr>
<td>Trace Metals (total)</td>
<td>0.25</td>
</tr>
<tr>
<td>Trace Metals (diss)</td>
<td>0.25</td>
</tr>
<tr>
<td>OP + Pyrethroid Pesticides</td>
<td>2.0</td>
</tr>
<tr>
<td>Carbamate Pesticides</td>
<td>1.0</td>
</tr>
<tr>
<td>DOC</td>
<td>0.25</td>
</tr>
<tr>
<td>TOC</td>
<td>0.25</td>
</tr>
<tr>
<td>TDS</td>
<td>0.25</td>
</tr>
<tr>
<td><strong>Toxicity Tests</strong></td>
<td>0-1 dilutions</td>
</tr>
<tr>
<td>1 Ceriodaphnia survival/reproduction</td>
<td>6</td>
</tr>
<tr>
<td>2 Hyalella survival</td>
<td>1.5</td>
</tr>
<tr>
<td>3 Selenastrum growth</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total Chem + Tox 1-3</strong></td>
<td>14.75</td>
</tr>
<tr>
<td>4 Mysid survival/growth</td>
<td>10</td>
</tr>
<tr>
<td>5 Sea Urchin fertilization</td>
<td>1</td>
</tr>
<tr>
<td>6 Fathead Minnow survival</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total Chem + Tox 1,5,6</strong></td>
<td>22.75</td>
</tr>
<tr>
<td><strong>Total Chem + Tox 1,4,5,6</strong></td>
<td>32.75</td>
</tr>
</tbody>
</table>

Storm 2 spans more than seven days and would generate enough volume in the composite to accommodate all analyses. However, these seven days of sampling would yield approximately 90 bi-hourly samples (90 1.8-liter bottles) which would have be stored and refrigerated until the sampling was completed and the maximum discharge rate determined.
Proposed Modification:

Clearly the choice of automatic sampling options is not an easy one. The present method and the constant time – volume proportional to flow rate method each have advantages and disadvantages. The choice should not be solely based on costs or logistics. The County recommends that a pilot study be conducted to determine the differences between the two methods rather than making such a significant change to the direction of the monitoring program through the permit process.

Until the study is completed, the monitoring protocols would remain the same as in the third permit.
E.II.A.1.d. Dry Weather Composite Sampling

The proposed frequency of sample collection (minimum 3 samples / hour) during dry weather monitoring at MLSs does not support the objective of identifying illegal discharges and illicit connections and presents significant technical challenges. During a "typical" 24-hour period, flow rate at an MLS does not vary significantly and the changes in water chemistry at an MLS would be muted because of the large size of the watershed and the number of stormdrain inputs.

In order to comply with this requirement these composite samples would have to be prepared using the constant time – volume proportional to flow increment method (EPA 833-B-92-001 Exhibit 3-19) or constant time – volume proportional to flow rate method (Exhibit 3-20). Either method would require that 72 discrete samples be collected during a 24-hour period and that the samples be flow-composited in the laboratory. Automatic samplers linked to flowmeters will not accommodate both constant time collection and flow-compositing during the same sampling period. To collect 3 samples/hour and produce a flow-composite sample, three automatic samplers would be required at each site for each event.

The flow rate at an MLS, as noted above, does not vary significantly during a typical 24-hour day. Below is a graphic showing the hourly flow rate in Aliso Creek at the streamgauge in Aliso/Wood Canyon Wilderness Park during June of 2006. As can be seen from the graph, the greatest difference between the maximum and minimum hourly flow rates during any 24-hour period is less than 35% of the maximum value (9.9 cfs at 13:00 on 6/3 and 6.5 cfs at 12:00 on 6/4). To produce a flow-composite sample, aliquots from each of the 72 samples collected during the 24-hour period would be combined in a single container. The volume of each of the aliquots would be proportional to the flow rate \( q/q_i \) at the time of sample collection and the volume of the sample collected at the maximum flowrate. Unless the pollutant discharge occurred over several hours or if the concentration of the pollutant was several orders of magnitude above the baseline concentration, it would be difficult to detect intermittent illegal discharges from the composite sample concentration.
Proposed Modification:
Conduct dry-weather monitoring at MLSs with time-weighted composite samples composed of 24 discrete hourly samples. Compute the mass loads of pollutants 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.

E.II.A.1.g. Analytical Testing for Mass Loading, Bioassessment, and Ambient Coastal Receiving Waters

Nitrite is readily oxidized to nitrate in the natural aquatic environment. Analysis of this form of nitrogen would not provide any added benefit and would significantly increase program costs. Presently and in prior permit monitoring programs, the concentrations of nitrite + nitrate has been determined and reported as NO$_3$.

Proposed Modification:
Analyze nitrite + nitrate together as in prior monitoring programs.

Pyrethroid Pesticides

Pyrethroid pesticides are very insoluble and tend to bind to sediment. They would not be detected in an aqueous sample unless the sample had a very high concentration of suspended solids.

Proposed Modification:
Analyze Pyrethroid pesticides in sediments at Bioassessment sites and in Dana Point Harbor.

E.II.A.1.h.(1) DDE Monitoring at the San Juan Creek MLS

Assuming that the requirement to add DDE monitoring was a product of the 303(d) listing of San Juan Creek for DDE, the MLS is not within the water quality limited segment defined by the 303(d) list. The listing was based on samplings conducted at SWAMP station San Juan Creek 9. The 2006 303(d) list states that the estimated size affected is 1 mile. The San Juan Creek MLS is two miles upstream of San Juan Creek 9.

Proposed Modification:
Do not add DDE monitoring at the San Juan Creek MLS.

E.II.A.1.i. Toxicity Testing at MLSs

The proposed requirement would result in a change in toxicity testing organisms at MLSs. Presently toxicity of stormwater discharges is measured using multiple dilution tests with marine organisms to assess the impact of stormwater on the coastal
environment. In the Santa Ana Region monitoring program, testing with marine and freshwater organisms is used.

The TDS concentration in at least two (Prima and Segunda Deschecha Channels) of the six MLSs is great enough to negatively affect the toxicity test using Ceriodaphnia dubia. The seepage of local saline groundwater into these channels causes these high TDS concentrations.

Proposed Modification:

For dry-weather samples conduct toxicity testing with:

1. Chronic (7-day) survival test with Ceriodaphnia dubia. Measure the specific conductance of the sample first. If the conductance exceeds 2500 mhos/cm, substitute Daphnia magna and conduct chronic toxicity test (EPA/600/D-87/080, March 1987).
2. Chronic (96-hour) growth test with Selenastrum capricornutum
3. Acute survival test with Hyalella azteca.

For stormwater samples conduct toxicity testing with:

1. Chronic (7-day) survival test with Ceriodaphnia dubia. Measure the specific conductance of the sample first. If the conductance exceeds 2500 mhos/cm, substitute Daphnia magna and conduct chronic toxicity test (EPA/600/D-87/080, March 1987).
2. Chronic (96-hr) survival/growth test with Americamysis bahia.
3. Chronic (40-min exposure) fertilization test with Strongylocentrotus purpuratus.
4. Chronic (96-hr) survival/growth with larval Pimphales promelas.

E.II.A.4.b. Toxicity Testing at ACRW Sites

The Tentative Order proposes the use of freshwater organisms for toxicity testing. Historically, the aqueous toxicity tests have been conducted with marine organisms since the intent of the program is to evaluate the impact of urban runoff on the coastal receiving waters.

Proposed Modification:

Continue to use marine organisms for toxicity testing at the ACRW sites.

E.II.A.5.c.(1) Continue Baseline Monitoring at CSDO Sites

The list of sites to continue baseline monitoring (weekly sampling of indicator bacteria in the stormdrain and the surfzone) includes four stormdrains (MAINBC, LINDAL, BLULGN and PEARL) which are diverted during the AB-411 season. There should be no requirement to sample while drains are being diverted.
E.II.A.5.c.(2) Special Investigations

The Permittees have conducted numerous bacterial source investigations in the Region including:


2. San Juan Creek Microbial Source Tracking Study conducted by the Orange County Health Care Agency and the University of South Florida, 2002. The Report can be found on the Watershed and Coastal Resources Website at: http://www.ocwatersheds.com/watersheds/sanjuan_reports_studies_Qtr1_section1.asp

3. Bacterial Source Tracking Study on Prima Deshecha Channel conducted by MEC/Weston Solutions on behalf of the County and San Clemente, 2006.

These studies need to be explicitly recognized in the Tentative Order and duplicative efforts not required.

Proposed Modification:

Requirements for bacterial source investigations should be stayed pending development of emerging source tracking methodologies.

E.II.B.1 MS4 Outfall Monitoring During Wet Weather

The requirement to monitor MS4 outfalls during wet weather does not support source investigations.

Proposed Modification:

Continue to use the Dry-weather Reconnaissance data as the primary monitoring effort to identify potential sources within the watershed.
Economic Issues (p.11)

The Fact Sheet’s discussion of Economic Issues considers the costs and benefits of water quality protection and management. This discussion is prefaced with a reference to the work of Ribaudo and Hellerstein (2002). These authors note that that a “knowledge of benefits and costs to water users is required in any complete assessment of policies to create incentives for water quality improving changes in agricultural practices.” The paraphrasing of this work in the Fact Sheet unfortunately omits consideration of the context and scope of this work. Since their work is advocating cost-benefit analysis to initially inform policy development rather than subsequently validate its implementation, Ribaudo and Hellerstein’s target audience are clearly the policy writers (or permit writers) and not the practitioners of agricultural production. This key point is missed by the Fact Sheet author.

The scope and limitations of environmental cost-benefit analysis also have to be recognized. Indeed, the beach closure studies noted in the Fact Sheet quite possibly represent the limits of meaningful cost-benefit analysis as it can be applied to water quality protection and management in Orange County. In environmental cost-benefit analysis there are no markets for environmental quality and no prices with which to completely measure environmental value. Consequently, such analyses have to determine economic effects through the measurement of observed changes in the behavior of water users (e.g. a reduction in beach use) and the determination of direct use values. However, direct use values such as those identified by Lew et. al. (2001) only capture a portion of the total economic value of an environmental asset. For example, NOAA observes that indirect use values (e.g. biological support, climate regulation etc.), non-use values (e.g. potential future use), and intrinsic values (biota has a value irrespective of usefulness to humanity) also have to be considered in the evaluation of an environmental resource.

In summary, cost-benefit analysis requires that the natural environment be translated into monetary terms. The Center for Progressive Regulation (CPR) (2007) believes that this feature is one aspect of cost-benefit analysis that “makes it a terrible way to make decisions about environmental protection, for both intrinsic and practical reasons.” CPR also believes that “it is not useful to keep cost-benefit analysis around as a kind of regulatory tag-along, providing information that regulators may find useful even if not decisive. Cost-benefit analysis is exceedingly time- and resource-intensive, and its flaws are so deep and so large that this time and these resources are wasted on it.” Part of this latter observation is underscored by the 1998 the state of Minnesota’s scoping study on a cost-benefit model to analyze water-quality standards. Its task force estimated costs of $3.6 to $4.4 million over four years to support model development and the project was stopped at the conclusion of the scoping study. If the Fact Sheet retains a discussion of cost benefit analyses, this discussion should be revised to explicitly recognize the limited utility of the approach when applied to environmental protection.
Discharge Characteristics (p.21)

The Fact Sheet presents a chronological record of investigations into the environmental significance of dry and wet weather runoff from urban areas starting with Nationwide Urban Runoff Program (NURP). This discussion is overly selective in its sources and needs to temper some of the assertions predicated on NURP and the federal assessments of water quality with more recent research (see discussion below).

Illicit Connections/Discharges: NURP clearly identified illicit connections as an issue of concern with respect to dry weather processes. However, the NURP studies of this issue were predominantly from the older urban environments of the East Coast. For example, USEPA’s investigative guidance cites studies from Washtenaw County, Michigan; Toronto, Canada; and Inner Grays Harbor, Washington. While the Fact Sheet reports that NURP “found pollutant levels from illicit discharges were high enough to significantly degrade receiving water quality,” and thereby connotes the potential significance of this issue in Orange County, the Permittees’ extensive and repeated inspections of their storm drain infrastructure during the first and second term permits found very few illicit connections. Moreover the most recent annual report identified only 12 illegal discharges identified through the dry weather reconnaissance program. The Fact Sheet needs to recognize this significant regional disparity.

Fecal Indicator Bacteria: The Fact Sheet notes Haile et. al’s (1996) epidemiological study conducted in the summer of 1996 to assess adverse impacts from swimming in ocean water receiving untreated urban runoff. The study presents adverse health effects as risk ratios, comparing the risk to swimming near storm drains with swimming varying distances (1-50, 51-100, and >400 yards) from storm drains. It also assessed risk by Fecal Indicator Bacteria (total coliform, fecal coliform, enterococcus, and E. coli), and by virus. The study found elevated risk for the majority of the disease symptoms, most notably for Highly Credible Gastro-intestinal Illness (HCGI) when swimming near the storm drain. However, the only statistically significant results were for a subset of symptoms: fever, chills, ear discharge, cough and phlegm, and significant respiratory disease. The correlation between health effect and FIB was poor. For HCGI, the relationship was strongest with the FIB enterococcus since the risk increases with concentration. However, this risk was not statistically significant.

The Fact Sheet is significantly remiss in not discussing Colford et al. (2005) who conducted an epidemiological study at Mission Bay, California during the summer of 2003. The study’s goal was to evaluate health impacts in relation to traditional fecal indicator bacteria where non-point sources, non-human fecal sources are dominant. One important finding was that no significant correlation was observed between increased risk of illness and increased levels of traditional water quality indicators, including enterococcus, fecal coliform, or total coliform (see Table 15 in Colford et al., which summarizes health outcome and odds ratio). The Table shows a weak correlation, or an odds ratio greater than 1 for various symptoms, but the confidence intervals indicate the results are not statistically significant. On the other hand, significant associations were observed between the levels of male-specific coliphage and HCGI-1 (vomiting and
diarrhea, or fever; or cramps and fever), HCGI-2 (vomiting and fever), nausea, cough, and fever—but this was a rare circumstance, possibly indicative of the presence of human sewage, and not many swimmers were exposed.

The results from the epidemiological studies conducted both at Santa Monica and Mission Bay agree that fecal indicator bacteria do not adequately assess risk. However, it is anticipated that the results from a new epidemiological study being conducted by Southern California Coastal Water Research Project (SCCWRP) in association with the City of Dana Point will offer insight about the impact from fecal indicator bacteria reaching beaches. The Fact Sheet needs to be revised to correct its current oversimplification of epidemiological understanding and omission of both current and impending research in this area.

Environmentally Sensitive Areas (ESAs): The Fact Sheet contends that CWA 303(d) impaired waterbodies have a much lower capacity to withstand pollutant shocks than might be acceptable in other areas. This contention appears contrary to the Permittees’s bioassessment data which finds degraded habitats to be characterized by diminished biological diversity and higher numbers of a limited range of pollutant tolerant taxa. CWA 303(d) impaired waterbodies might be better characterized as pollution insensitive areas.

Infiltration and Groundwater Protection: The Fact Sheet notes the Tentative Order’s incorporation of existing guidance regarding urban runoff infiltration and groundwater quality protection. This discussion needs to be re-considered in the context of studies that suggest that the threat to groundwater may be overstated. Nightingale (1987) examined the impact of urban runoff on water quality beneath five retention/recharge basins in Fresno as part of NURP. He concluded that “no significant contamination of percolating soil water or groundwater underlying any of the five basins has occurred for the constituents monitored in the study.” More recently, the Los Angeles Basin Water Augmentation Study (2005) has specifically examined the fate and transport of urban runoff-borne pollutants by monitoring storm water quality as it infiltrates through the soil to groundwater. The data collected during this study showed no immediate impacts, and no apparent trends to indicate that storm water infiltration will negatively impact groundwater.

In Summary: Regarding urban stormwater discharges, it has been observed that:

- Impacts to water quality in terms of chemistry tend to be transient and elusive, particularly in streams;
- Impacts to habitat and aquatic life are generally more profound and are easier to see and quantify than changes in water column chemistry;
- Impacts are typically complex because urban stormwater is one of several sources of adverse impact including agricultural and non-urban area runoff; and
- Impacts are often interrelated and cumulative. For example, the condition of an urban stream system’s biological resources reflects both degraded water quality and hydromodification.
Prefacing the Discharge Characterization discussion with an equivalent summary would help balance the chronological presentation of information that has the effect of perhaps overly connoting the significance of urban stream chemistry.

Urban Runoff Management Programs (p.34)

**Sweeping of Municipal Areas:** Street sweeping was essentially discredited as a BMP after the 1983 NURP report. However, since that time technological advances, specifically the development of vacuum assisted dry sweepers, have led to street sweeping as a practice that can potentially be effective in improving water quality. For example, RWMWD (2005) reports a number of studies that show regenerative air and vacuum sweepers capable of 70% total suspended solids (TSS) removal. Higher rates of TSS recovery are reported by Bannerman (2007).

On the specific issue of effectiveness and the relative significance of street sweeping frequency, frequency is clearly subordinate to other considerations. The Center for Watershed Protection (2002) notes that “arguably the most essential factor in using street sweeping as a pollutant removal practice is to be sure to use the most sophisticated sweepers available.” The Center also notes the ability to regulate parking as another important aspect. Martinelli (2002) concludes that “…freeway sweeping with a high efficiency sweeper can be a BMP for the control of stormwater runoff pollutant...” and that his study supports the purchase and use of high efficiency sweepers. [These findings are consistent with the current and proposed 2007 DAMP.]

The significance of the technology is also a recurrent message in the extensive annotated bibliography of street sweeping studies in RWMWD (2005). RWMWD notes street sweeping effectiveness begins first with the choice of the right equipment. Other important variables include the timing of sweeping in relation to rainfall events and the speed of sweeper operation. Where frequency has been examined, the Center for Watershed Protection also observes that efficiency at greater frequencies than weekly declines because of (1) only small incremental gain and (2) higher removal could be obtained on residential streets versus heavily traveled roads. This finding contradicts CASQA’s (2002) recommendation to increase frequency in high traffic areas.

It is clear from a review of the available literature there is no robust technical justification for working to try to optimize street sweeping based on traffic counts. Consequently, while street sweeping will continue to be a focus of the Permittees efforts with respect to pollutant load reduction efforts. The requirement to try to optimize frequency based upon traffic counts needs to be deleted from the Order.
April 3, 2007

By Email and U.S. Mail

John H. Robertus
Executive Officer
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4353

Subject: Comments for Tentative Order No. R9-2007-0002; NPDES No. CAS0108740

Dear Mr. Robertus:

The City of Laguna Hills has reviewed the subject order dated February 9, 2007, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds 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. R9-2007-0002) (NPDES No. CAS0108740). The City of Laguna Hills as Co-Permittee, welcomes the opportunity to provide comments on the Tentative Order. The City supports the comment letter prepared by the County of Orange (Principal Permittee) and would also like to address specific technical comments that may affect the City locally.

Overall, the Tentative Order establishes general standards of care to be met for water quality as a result of urban runoff. Hence, the permit includes specific regulations affecting City operations including development planning, construction and municipal activities, watershed urban runoff management, fiscal analysis of local NPDES funding, etc. The City of Laguna Hills believes that some of the specific regulations in the Tentative Order may adversely affect our ability to effectively deliver the water quality improvements that the Board and the City are seeking to obtain. Consequently, the City of Laguna Hills working through the Principal Permittee would like to work closely with the Regional Water Board staff to revise the Tentative Order to ensure that the most effective strategies are implemented to ensure water quality.

Throughout the Tentative Order, certain actions are directed to be taken by the Permittees. These directives limit the City’s discretion and the flexibility in addressing water quality issues in our community. Some of the directives and provisions of concern are as follows:

- Section (D.1.d) of Tentative Order requires the Permittees to implement an updated local SUSMP within twelve months of adoption of the Order. The City believes this schedule for the update of the SUSMP is aggressive and does not allow sufficient time for the Permittees to
incorporate changes and implement an updated SUSMP. Since the modifications for the SUSMP will take longer than the 12 month period identified in the Tentative Order, the section should be modified to require the Permittees to implement an updated local SUSMP within 24 months of adoption of this Order.

- Section (D.1.f(2)c(iii)) of Tentative Order requires that 100% of projects with treatment control BMPs that are high priority must be inspected annually by the Permittees. This will create an intensive inspection program that is not warranted. The Provision should be amended to reduce the prescriptive nature of the program and allow the Permittees to develop an inspection program that will meet the intent of the provision while balancing the need for a variety of approaches to complete this element of the program in a cost effective manner.

- Section (D.3.a(4)c) of the Tentative Order requires an evaluation of all existing flood control devices to include identifying devices causing or contributing to a condition of pollution, identifying measures to reduce or eliminate the structure’s effect on pollution, and evaluation of the feasibility of retrofitting the structural flood control device. This evaluation is to be completed by July 1, 2008. This requirement is new in that the third term NPDES permit only required the Permittees to evaluate the feasibility of retrofitting existing flood control devices where needed. The new requirement places a deadline on the City without clearly defining a “flood control device”. City Staff believes the new requirement should more clearly define a flood control device and not place a deadline on performing an evaluation and should give the Permittees the flexibility to upgrade any structures only as needed over time.

- Section (D.3.a(5)a) of the Tentative Order requires that the Permittees design and implement a street sweeping program based on criteria which includes optimizing the pickup of “toxic automotive byproducts” based on traffic counts. The term “toxic automotive byproducts” is not defined and these products are not specifically known to the City as we do not regulate the automobile industry. This is a Federal and State issue. Staff postulates that such byproducts might include commonly utilized automotive products such as oil, gasoline, transmission fluid, brake fluid, brake dust and radiator fluids and could include air deposited byproducts of combustion (an air quality issue). However, none of these products are intended to be the primary refuse to be collected by street sweeping operations and their deposit on a street is not necessarily related to traffic volumes as contrasted with parked vehicles. It is also unlikely that a street sweeper could collect any liquid byproducts that have soaked into the pavements. Traffic counts also seemingly have nothing to do with the frequency of material deposited on a street such as organic plant and tree materials, litter and sediments, the primary constituents suitable for street sweeping pick up. The City of Laguna Hills believes the Tentative Order should delete this provision or propose language that provides objectives for the program instead of strictly defining the criteria. The street sweeping criteria should be determined based on local needs.

- Section (D.3.b(3)a) of the Tentative Order requires the Permittees to develop and implement a program to reduce the discharge of pollutants from Mobile Businesses; to keep a listing of Mobile Businesses within the Co-Permittees jurisdiction; to develop minimum standards and Best Management Practices (BMP’s) for the various types of Mobile Businesses; to notify the Mobile Businesses known to operate within the Permittees jurisdiction of the