



January 7, 2010

*Via electronic mail*

Executive Officer Gerard J. Thibeault and Members of the Board  
California Water Quality Control Board, Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, CA 92501

**Re: Comments on December 14, 2009 San Bernardino County MS4 Permit**

Dear Mr. Thibeault and Members of the Board:

We write on behalf of the Natural Resources Defense Council (“NRDC”). We have reviewed the December 14, 2009 draft of Tentative Order No. R8-2010-0036, NPDES No. CAS618036 (“Permit”), the latest draft of the Municipal Separate Storm Sewer System NPDES Permit for San Bernardino County, and appreciate the opportunity to submit the following comments. Overall, we support the draft Permit’s inclusion of Low Impact Development (“LID”) based onsite retention requirements for new development and significant redevelopment. However, we are concerned that as written, the Permit fails to fully implement provisions present in other MS4 permits throughout California, thereby failing to meet the Clean Water Act’s “maximum extent practicable” standard (*see* 33 U.S.C. 1342(p)(3)(b)(iii)), or otherwise requires clarification to ensure that its terms are enforceable.

**1. The Permit Should Ensure that Only Water Retained Onsite Counts Toward the Design Capture Volume**

Section XI.E.4 requires “each priority development project to infiltrate, harvest and use, evapotranspire, or bio-treat the 85<sup>th</sup> percentile storm event . . . . Any portion of the design capture volume that is not infiltrated, harvested, used, evapotranspired or bio-treated onsite by LID BMPs shall be treated and discharged in accordance with the requirements set forth in Section XI.E.10 and Section XI.G below.”

This language creates ambiguity as to the precise measures a development may use to satisfy its design capture requirement. Specifically, the language appears to allow measures that do not retain water onsite, such as bio-treatment, to count toward the design capture requirement. Critically, because bio-treatment allows for discharge of some quantity of stormwater to

receiving waters, any bio-treatment system would have to be 100% effective at removing pollutants, a condition almost certain not to be attained, in order to provide the equivalent water quality benefit derived from retaining the same volume of stormwater onsite.<sup>1</sup>

The above permit language is clarified in part by footnote 87, which states “[o]nly volume bio-treated and retained onsite qualifies towards the volume capture standard.” Board Staff have indicated in discussion that the intent of this section is to require that only stormwater retained onsite counts towards the design capture requirement. However, while the use of the conjunction “and” implies that stormwater will only count toward the volume capture standard if it possesses two characteristics – it has been bio-treated and it has been retained onsite – the next sentence in the footnote states: “A properly engineered and maintained bio-treatment system may be considered only if infiltration, harvesting and use and evapotranspiration cannot be feasibly implemented at a project site . . . .” This sentence seems to contrast bio-treatment, which would result in offsite discharge, with methods of compliance that retain stormwater onsite – infiltration, harvesting, use, and evapotranspiration. That contrast implies that bio-treated stormwater is not retained – and thus that non-retained water could count toward the volume capture standard.<sup>2</sup> As a result, use of the word “bio-treated” in the clause “[o]nly volume biotreated and retained onsite qualifies” (see footnote 87) is at best unnecessary, as only the volume retained onsite should count towards the design capture requirement, or at worst is confusing and contradictory. The Permit should be revised such that it clearly states that only water retained onsite may count towards this requirement, and the word “bio-treated” should be removed from this section such that the clause in footnote 87 reads: “[o]nly volume retained onsite qualifies towards the volume capture requirement.”<sup>3</sup>

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<sup>1</sup> In this vein, both environmentalists and industry representatives agree that “biofiltration,” or “bio-treatment” is a vague term that fails to provide sufficient guidance, and is therefore subject to abuse. (See Correspondence from Dr. Mark Grey to Mr. Michael Adackapara, Santa Ana regional Water Quality Control Board, February 13, 2009, at 6).

<sup>2</sup> While we argue here that bio-treated water should not count towards the onsite retention standard at all, should the Board determine otherwise, at a minimum bio-treatment should be available as an option only in cases of demonstrated technical infeasibility for onsite retention. (See Santa Ana Regional Water Quality Control Board (May 22, 2009), Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and The Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff Program, Orange County, Order No. R8-2009-0030, NPDES Permit No. CAS618030, at fn. 56).

<sup>3</sup> Likewise, Permit language under section XI.E.10.d, which appears to allow a site to “bio-treat” runoff as part of an alternative compliance scheme should be revised such that only runoff retained and infiltrated, harvested and used, or evapotranspired may count towards the design capture volume. We do not oppose the use of bio-treatment as a means of addressing stormwater runoff when onsite retention of the design storm is demonstrated to be technically infeasible, however, when bio-treatment is used it should trigger a requirement to provide alternative or in-lieu compliance under Section XI.E.10 and Section XI.G, and should not be a means of satisfying the requirements of these sections.

## **2. In Lieu and Alternative Programs Must Provide Water Quality Benefits at Least Equivalent to Those that Would Result From Compliance with Onsite LID Requirements**

The seeming intention of the Permit is to require projects that have demonstrated the infeasibility of complying with onsite retention requirements to participate in either the alternative compliance program (§ XI.E.10) or the in lieu or credit program (§ XI.G). The Permit does not clearly establish this requirement, however. Section XI.E.10, for instance, uses the permissive term “may” when defining which projects should follow the alternative compliance program.<sup>4</sup> The Board should clarify the Permit so that it expressly requires projects that do not meet the onsite design capture volume requirement to participate in the alternative compliance program, in lieu program, or credit program. *See, e.g.*, the MS4 permit for Ventura County (“When a permittee finds that a project applicant has demonstrated technical infeasibility, the permittee *shall* identify alternative compliance measures that the project will need to comply with as a substitute for the otherwise applicable post-construction requirements listed in subparts 4.E.III.1.(a)-(c) of this permit.”).<sup>5</sup>

### **a. In Lieu Payments Must Correspond to Water Quality Impairment that Will Result from Non-Compliance with Onsite Retention Requirements**

Section XI.G.2 allows a Permittee to establish an urban runoff fund when granting a waiver. As a preliminary matter, we believe the section should be changed to require the establishment of such a fund, as has been required by other recently adopted permits in California (*see, e.g.*, the South Orange County MS4 stormwater permit, which states: “The LID waiver program *shall* include a storm water mitigation fund . . .”).<sup>6</sup> While a fund is just one of several means by which the Permit allows projects to comply with LID requirements, leaving the establishment of a fund to the discretion of Permittees could potentially create a loophole allowing projects to avoid LID requirements altogether. For example, if a project demonstrating infeasibility of onsite retention is unable to either comply with the alternatives listed under section XI.E.10.d or demonstrate justification for an award of credits under section XI.G, absent

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<sup>4</sup> “If site conditions do not permit infiltration, harvesting and use, and/or evapotranspiration, and/or bio-treatment of the design capture volume at the project site as close to the source as possible, the alternatives a), b), and c) below, and the credits and in-lieu programs discussed under Section G, below, *may* be considered and implemented.” (Emphasis added).

<sup>5</sup> Los Angeles Regional Water Quality Control Board (May 7, 2009), Ventura County Municipal Separate Storm Sewer System Permit, Order No. 09-0057, NPDES No. CAS004002 (“Ventura County Permit”) § E.III.2.c. (Emphasis added).

<sup>6</sup> San Diego Regional Water Quality Control Board (Dec. 16, 2009) Order No. R9-2009-0002, NPDES No. CAS0108740, Municipal Separate Storm Sewer System Permit for the County of Orange, the Incorporated Cities or Orange County, and the Orange County Flood Control District Within the San Diego Region (“South Orange County Permit”), § F.1.d.7.h. (Emphasis added.)

the creation of a fund there is no means of ensuring the project will ultimately provide equivalent water quality benefits to onsite retention (or, alternately, no means of justifying the grant of a waiver absent their payment into a fund). In order to prevent this potential outcome, the creation of a fund should be required by the Permit.

Additionally, Section XI.G.2 currently requires contributions to in lieu programs “be at least equivalent to the cost savings for waived BMPs.” Tying the contribution amount to cost savings could allow projects to satisfy Permit requirements by contributing payments that are insufficient to address the water quality impairment that the failure to retain water onsite will cause. The Board should thus revise this section so that payment amounts are related to water quality impacts, not to cost savings claimed.

The Ventura County Permit, for instance, calculates payment amount in such a manner: “Regardless of the methods through which permittees allow project applicants to implement alternative compliance measures, the sub-watershed-wide (defined as draining to the same hydrologic area in the Basin Plan) result of all development must be at least the same level of water quality protection as would have been achieved if all projects utilizing these alternative compliance provisions had complied with subparts 4.E.III.1.(a)-(d) of the permit.”<sup>7</sup>

**b. The Credit System Should Only Award Credits to Projects Providing Equivalent Water Quality and Flow Volume Benefits**

The Permit allows Permittees to establish “a water quality credit system for alternatives to LID and hydromodification requirements.” § XI.G.4. It then lists twelve types of projects that may be considered for such a credit system. NRDC recognizes that many of these project types may provide laudable social and environmental benefits, and has, for example, long advocated for mixed use and in-fill development. However, their blanket inclusion as potential projects receiving water quality credits raises significant concerns.

First, a Permittee could create a credit system that awards credits that are not in proportion to the water quality benefits a project will offer. It is unclear how certain project types – such as those in the city center or in historic districts or historic preservation areas – would improve, or are even related to water quality and thus deserve credit under this provision. *See* § XI.G.4(i)-(j). But even for those project types that would seem to offer direct water quality benefits – such as redevelopment projects that reduce the overall impervious area – there is no requirement that the credit given be equivalent to the water quality benefit a project provides. § XI.G.4(a). The Board should revise this section such that any credit system will result in a project providing equivalent water quality benefits (e.g., reduction in pollutant load). Further, for projects undertaking offsite mitigation in order to receive a water quality credit, the Permit

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<sup>7</sup> § 4.E.III.2.d. *See also*, South Orange County Permit § F.1.d.7.a (“Prior to implementation, the LID waiver program must clearly exhibit that it will not allow PDPs to result in a net impact (after consideration of any mitigation and in-lieu payments) from pollutant loadings over and above the impact caused by projects meeting LID requirements”).

should require that any offsite mitigation must be performed in the same hydrologic subarea and provide water quality and flow volume benefits that are the same or better than the benefits that compliance with onsite retention requirements would provide.

Second, section XI.G.4 would allow Permittees to establish credit systems without public review or other form of oversight. By allowing for currently undefined credits to be granted for a broad array of project types, Permittees could potentially excuse projects from the Permit's LID and onsite retention requirements, a central provision of the Permit, altogether.<sup>8</sup> The Clean Water Act prohibits such self-regulatory systems. *Envtl. Def. Ctr., Inc. v. EPA* (9th Cir. 2003) 344 F.3d 832, 854-56. (“[S]tormwater management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity . . . Congress identified public participation rights as a critical means of advancing the goals of the Clean Water Act in its primary statement of the Act's approach and philosophy.”) The Board should thus either amend section XI.G.4 to require public review of credit systems, or delete the section in its entirety.<sup>9</sup>

Finally, the section lets Permittees establish systems that award credits for contributions to urban runoff funds. § XI.G.4(g). But another section of the Permit – XI.G.2 – already allows for in lieu payments. To have two sections – and potentially two parallel and even conflicting schemes – governing payments could risk confusing permittees, project developers, or others.

### **3. Where Onsite Retention is Infeasible, a Project Must Treat Water Before Discharging It**

Section XI.G creates in lieu and alternative programs for projects that cannot feasibly retain water onsite. While under the Permit projects may pursue these alternative programs after demonstrating the infeasibility of onsite retention, the Permit must require, pursuant to state SUSMP requirements as established by the State Water Resources Control Board in *In re Bellflower* SWRCB Order WQ2000-11, that projects must additionally at least treat the design capture volume onsite through conventional BMPs (or bio-treatment) before discharging it. As currently drafted, a project participating in the in-lieu or credit program could potentially discharge the full onsite design storm volume into receiving waters without any treatment whatsoever. The absence of a provision requiring onsite treatment of the design storm volume not only would violate the requirements of WQ2000-11, but stands in contrast to provisions adopted in multiple recent California MS4 permits. *See* Ventura County Permit (“The project must reduce the percentage of Effective Impervious Area to no more than 30 percent of the total

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<sup>8</sup> This issue is further exacerbated by the Permit's lack of any requirement that a credit system require equivalent water quality benefits be achieved.

<sup>9</sup> Note also that although it appears that any technical feasibility analysis for onsite retention to be developed by the Permittees would be included as an update to the WQMP or WQMP guidance (*see* § XI.E.7), it is unclear whether this is the case, or whether the criteria for feasibility are required to be submitted for public review and comment.

project area *and treat all remaining runoff pursuant to the design and sizing requirements of subparts 4.E.III.1.(b)-(d).*"<sup>10</sup>; South Orange County Permit ("If it is shown to be technically infeasible to treat the remaining volume up to and including the design capture volume using LID BMPs . . . *the project may implement conventional treatment control BMPs in accordance with Section F.1.d.(6) below and must participate in the LID waiver program in Section F.1.d.(8).*"<sup>11</sup>

#### **4. The Permit Must Require Multi-Stage Developments that Will Satisfy LID Requirements in Later Stages to Follow Through on Obligations**

Under section XI.G.3, "[t]he obligation to install structural site design and/or treatment control BMPs at a new development is met if, for a common plan of development, BMPs are constructed with the requisite capacity to serve the entire common project . . . ." In some instances, developers may build subdivisions in stages and, due to financial or other reasons, never complete the stage that would have included the required BMPs. The portion of the subdivision that is built would thus not have included BMPs and would fail to satisfy its LID requirements.

Such a risk is not hypothetical. In this recession, developers have left many subdivisions incomplete. To ensure that future abandoned projects do not contribute to water quality violations that exceed the requirements of the Permit, the Board should amend the Permit so that it requires developers who do not finish subdivisions to still satisfy LID requirements for the completed sites.

#### **5. Total Maximum Daily Load Provisions Should Clearly Detail How Monitoring and Other Requirements will Ensure Compliance with WLAs.**

NRDC is pleased to see the draft Permit incorporates applicable wasteload allocations (WLAs) for Total Maximum Daily Loads (TMDLs) adopted for San Bernardino County, as required under 40 C.F.R. § 122.44(d)(1)(vii)(B), and fully supports the Regional Board's decision to incorporate the WLAs as numeric effluent limitations. While BMPs may, under certain circumstances, serve as a means of achieving WLAs, U.S. EPA policy requires that a permit "demonstrate that the BMPs are expected to be sufficient to comply with the WLAs."<sup>12</sup> However, "given the uncertainties in the performance of many of the BMPs commonly used for stormwater pollution control, it is often difficult to make such a determination."<sup>13</sup> Use of numeric effluent limitations derived from the WLAs is therefore the soundest means of ensuring compliance with the requirements of TMDLs adopted for the region.

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<sup>10</sup> § E.III.2.c.1(emphasis added).

<sup>11</sup> § F.1.d.4.d.iii(emphasis added).

<sup>12</sup> Letter from Douglas E. Eberhardt, U.S. EPA, to Dale Bowyer, San Francisco Regional Water Quality Control Board (April 3, 2009), at 6.

<sup>13</sup> *Id.*

While we support the Regional Board's approach in this regard generally, we are concerned that the Permit's TMDL implementation provisions do not adequately specify requirements for monitoring sufficient to ensure that applicable WLAs are being, or will be met. For example, for the Middle Santa Ana River (MSAR) Watershed Bacterial Indicator TMDL, the Permit requires initially only that the Permittees continue to comply with the TMDL Implementation Plan. § V.D.1.a. Neither this provision, nor the Permit's requirements that the Permittees later submit a draft Comprehensive Bacteria Reduction Plan (§ V.D.2.b.i), adequately detail what will be required by the Permittees' monitoring program, or how the monitoring program will be designed to ensure compliance with the WLAs. We suggest that the Permit be revised to further detail what will be required for the monitoring programs for applicable TMDLs, in order to ensure compliance with the applicable WLAs and their overlying TMDLs.

### **Conclusion**

We appreciate the efforts made to date to implement sound LID standards in the Permit, and would be pleased to respond to any questions you may have about our comments. We believe the above suggested changes will significantly improve the effectiveness of the permit, and we urge that the Board implement these modifications before it is adopted.

Sincerely,

A handwritten signature in blue ink, appearing to read "David S. Beckman".

David S. Beckman  
Noah Garrison  
Natural Resources Defense Council