



May 29, 2008

NATURAL RESOURCES DEFENSE COUNCIL

Via electronic mail and U.S. mail

Chair Francine Diamond and Members of the Board  
California Regional Water Quality Control Board, Los Angeles Region  
Attention: Xavier Swamikannu, Storm Water Permitting  
320 West 4th Street, Suite 200  
Los Angeles, CA 90013

Dear Chair Diamond and Members of the Board:

On behalf of the Natural Resources Defense Council and Heal the Bay, we submit the following comments on the April 29, 2008, Draft Tentative Order, Ventura County Municipal Separate Storm Sewer System Permit ("Permit"), NPDES Permit No. CAS004002. These comments focus on the Permit's Planning and Land Development Program and in particular on the use of low-impact development ("LID") site design techniques to mitigate the deleterious impacts of urban runoff, principally stormwater pollutant loading and adverse hydromodification. Our previous submissions have highlighted the multiple benefits of LID and the feasibility of implementing LID in Ventura County. While we are pleased to see that the Regional Board has required the integration of LID principles into project design, we are concerned about several provisions of the Planning and Land Development Program that threaten to undermine the Permit's objectives.

The critical remaining issues, discussed in our previous letter of October 15, 2007, and again in more detail below, are:

- (1) The Permit limits the applicability of post-construction treatment control requirements to projects above certain threshold sizes (§ 5.E.II), even though LID, which the Permit prioritizes for BMP selection, is demonstrably superior to other stormwater treatment methods and can be adapted to all sites;
- (2) Regional Board staff have appropriately chosen to include an "Effective Impervious Area" limitation to guide LID implementation at regulated projects (§ 5.E.III.1), but the Permit's 5% limitation does not represent the MEP standard and is higher than scientifically advisable for preventing the degradation of Ventura County's watersheds;
- (3) The Integrated Water Quality/Flow Reduction/Resources Management Criterion (§ 5.E.III.1) does not clearly include the necessary sizing standard to ensure that surfaces are truly rendered "ineffective;" and

- (4) The Alternative Post Construction Storm Water Mitigation Programs section (§ 5.E.IV.4) is unlawfully vague and could undercut the potential benefits of other sections of the Permit.

Below, we have provided our recommendations for rewriting these provisions to ensure that LID measures are implemented properly and that stormwater pollution is reduced to the maximum extent practicable, as required by the Clean Water Act.

**I. The Permit requires the implementation of post-construction treatment controls only for projects above certain threshold sizes, but LID techniques offer demonstrably superior water quality results and are adaptable to all sites.**

Section 5.E.II of the Permit outlines various developments that, if sufficiently large, are required to implement post-construction treatment controls, and section 5.E.I.1(e) prioritizes LID measures as the preferential treatment option. However, projects that do not meet the threshold size criteria are not required to implement these stormwater controls. This runs counter to the first draft of the Permit—“All new development and redevelopment projects shall integrate Low Impact Development ... principles into project design”<sup>1</sup>—and to LID’s adaptability. This current approach is ill-advised and inconsistent with the MEP standard. As we have highlighted in our previous comments and in technical reports by Dr. Richard Horner, even small project sites have the capacity to implement LID with extraordinary results. Indeed, every site *should* incorporate LID to the maximum extent because LID designs are a proven, cost-effective, and superior means of reducing stormwater pollution that would otherwise be discharged from developed sites. At the very least, basic LID requirements should apply to these projects.

**II. The Permit’s “Effective Impervious Area” (“EIA”) limitation of 5% will not reduce pollution to the maximum extent practicable and will not adequately ensure the health of Ventura County’s waters.**

As demonstrated in our previous submissions, an EIA limitation of 3% is both advisable from an ecological viewpoint and achievable from a technical standpoint. Watershed research has shown that the threshold for negative effects on streams in semi-arid regions of California is 2-3% EIA,<sup>2</sup> not 5%, as proposed in the Permit. Because 3% EIA is a feasible and scientifically supported standard for a wide variety of development typologies in Ventura County, the Permit should adopt this more stringent limitation to ensure that pollution is reduced to the Clean Water Act’s maximum extent practicable standard.

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<sup>1</sup> Los Angeles Regional Water Quality Control Board, *Draft Ventura County Municipal Separate Storm Sewer System Permit*, NPDES No. CAS004002 (Dec. 27, 2006), Part 4.E.I.1 (hereinafter “First Draft Permit”).

<sup>2</sup> See R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (“LID”) for Ventura County* (February 2007) at A-1 to A-2 (hereinafter “Horner Report”).

**III. The Permit must include a numeric sizing criterion to assure that impervious surfaces are truly disconnected from storm sewer systems so that the Permit's EIA limitation will meet the MEP standard.**

The Permit contains a requirement that New Development and Redevelopment projects must reduce the percentage of Effective Impervious Area to less than 5% of the total project area. (§ 5.E.III.1(a).) The Permit also describes acceptable methods for rendering surfaces “ineffective” by directing stormwater to various infiltration or storage areas. (§ 5.E.III.1(b).) While the designs described could conceivably convert impervious area to effective pervious area, the permit fails to specify clearly that these designs must be properly sized to infiltrate or store all runoff from the impervious areas drained. We have consistently noted in our past submissions that this lack of clarity is both scientifically and legally unsound because it undermines the technical value of the EIA concept and prevents the EIA limitation from meeting the MEP standard. The Permit still does not adequately address these concerns.

As currently written, a developer may assert that the permit's EIA limitation is satisfied by installing an inadequately sized LID feature that would overflow to the storm sewer system with minimal infiltration or capture. Although the Permit does require that any such overflow be “mitigated in accordance with subpart 5.E.III.4” (Draft Tentative Order § 5.E.III.1(c)), this subverts the purpose of establishing an EIA standard because subpart 5.E.III.4 allows for any volumetric or flow-based treatment control BMPs and does not prioritize the implementation of LID. Dr. Horner comments in his letter (attached) that if developers divert a large portion of site runoff to conventional facilities, considerably less pollution reduction will occur and hydromodification benefits will not be realized. Thus, from a technical perspective, the provisions providing direction on how to render impervious surface “ineffective” could create disagreement about interpretation, could be abused, and could undercut the water quality benefits that the Permit could otherwise create.

Failing to insert a sizing criterion addressing how a developer effectively disconnects impervious surface to meet the EIA limitation would also prevent the Permit from meeting the MEP standard because the installation of conventional stormwater treatment controls, as the EIA provisions could currently allow, cannot generate the same pollution reduction and hydromodification benefits as LID practices. Dr. Horner has demonstrated the superior effectiveness of LID stormwater treatment controls, but, as explained above and in Dr. Horner's letter, the Permit's current language could create room for disagreement about whether the installation of conventional controls could be used on a site to treat the vast majority of stormwater runoff. This would necessarily result in less effective pollution reduction and less effective mitigation of the adverse impacts of hydromodification. Such outcomes are contradictory to meeting the MEP standard, and for this reason the EIA provisions currently fail to uphold the Clean Water Act's mandate.

Furthermore, allowing any room for developers to meet the Permit's EIA limitation through the installation of conventional proprietary devices is inconsistent with the entire EIA concept. The purpose of imposing an “effective” impervious area limitation is to ensure that the

vast majority of stormwater receives treatment through LID and never even enters the storm sewer system. The lack of a sizing criterion, however, could permit some to argue that huge quantities of stormwater can be permissibly discharged into the storm sewer system after only receiving conventional treatment, which necessarily implies that very little impervious surface would have been rendered “ineffective.” The Regional Board does not have the discretion to adopt insufficiently clear and potentially self-contradictory definitions, or fail to give words their natural meanings. Doing so would be inconsistent with standards applicable to quasi-adjudicative action, such as permit issuance.

For the foregoing technical and legal reasons, the EIA provisions must be revised to include a numeric sizing criterion. In Attachment A, below, we have suggested alternative language to remedy the EIA provisions’ current inadequacy.

**IV. The Permit’s alternative compliance provisions are unlawfully vague and confusingly worded and would not ensure pollution reduction to the maximum extent practicable.**

The Permit includes a section detailing “Alternative Post Construction Storm Water Mitigation Programs” that allow permittees or coalitions of permittees to circumvent the post-construction requirements of the Permit by implementing larger-scale runoff management plans. Although there are merits to this approach (it theoretically enables multi-site strategies for severely constrained, ultra-urban areas, for instance), it could become a vehicle for ill-conceived mitigation efforts that would accomplish much less than the site-specific strategies otherwise required by the Permit. For this reason, the alternative programs section of the Permit must be clearly drawn and impose standards equivalent to the standards imposed on individual projects. Unfortunately, the Permit remains legally inadequate in this regard.

**1. The Permit does not clearly identify whether section 5.E.IV.4 creates one or two alternative stormwater mitigation programs.**

Provisions 5.E.IV.4(a)-(b) allow for approval of a “regional or sub-regional storm water mitigation program to substitute in part or wholly for on-site post-construction requirements.” Provisions 5.E.IV.4(c)-(f) establish the option of submitting a Redevelopment Project Area Master Plan (“RPAMP”) to the Regional Board. It is not evident from the Permit’s language and structure, however, whether the “regional or sub-regional storm water mitigation programs” are the same as “RPAMPs” (provision (d) in the RPAMP portion, for instance, references balancing the interests of provision (b) in the regional and sub-regional portion). We understand from Regional Board staff that these are intended to be separate programs, so we will address their legal inadequacies in turn.

2. The “regional or sub-regional storm water mitigation program” (“regional program”) is not clearly articulated, does not include public review opportunities, and generally fails to meet federal requirements.
  - a. **The vagueness of the regional program’s provisions and lack of enforceable standards constitute a failure to impose the stormwater treatment controls required by law to meet the MEP standard.**

The provisions that create the regional program alternative compliance option are unlawfully vague, especially considering that this program would substitute in part or wholly for the Permit’s post-construction stormwater control requirements. Of particular concern, the Permit fails to describe in adequate detail the pollution reduction and hydromodification criteria that regional programs must meet. Rather, the alternative compliance section would impose such imprecise requirements as: “Protect stream habitat;” “Promote cooperative problem solving by diverse interests;” etc. As drafted, these are no more than broad objectives unconnected to specific performance standards.

Substituting vagaries for the Permit’s otherwise applicable requirements runs directly against the regulatory obligation that the Regional Board must actually set forth “permit conditions to reduce pollutants in discharges to the maximum extent practicable.” (40 C.F.R. § 122.26(d)(2)(iv).) Indeed, these conditions must satisfy the statutory obligation that every permit issued to a municipal discharger “shall require *controls* to reduce the discharge of pollutants to the maximum extent practicable. . . .” (33 U.S.C. § 1342(p)(3)(B)(iii) (emphasis added).) The amorphous guidance described above, however, does not constitute the imposition of “controls” at all. It is merely aspirational language that contains nothing approximating a control measure or numerical requirement that would ensure achievement of the MEP standard.

EPA guidance unambiguously reinforces the conclusion that BMP design under the NPDES permit program requires the inclusion of measurable goals “that quantify the progress of program implementation and the performance of [Permittees’] BMPs.”<sup>3</sup> Generally, “considerable deference” must be extended “to an administrative agency’s interpretation of its own regulations,” and thus EPA’s guidance interpreting the requirements of NPDES permits “is entitled to great weight unless unauthorized or clearly erroneous.” (*Communities for a Better Environment v. State Water Resources Control Board*, 109 Cal.App.4th 1089, 1107 (2003).) EPA “strongly recommends” that, among other components, measurable goals include “a quantifiable target to measure progress toward achieving the activity or BMP.”<sup>4</sup> This requirement for quantifiable BMP targets is further clarified in EPA’s examples of BMPs and

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<sup>3</sup> EPA, *Measurable Goals Guidance for Phase II Small MS4s: Part 2. Process for Developing Measurable Goals Under a General Permit*, available at <http://cfpub.epa.gov/npdes/stormwater/measurablegoals/part2.cfm>.

<sup>4</sup> *Id.*

associated measurable goals. These examples clearly demonstrate that the considerations outlined in the regional program provisions are impermissibly vague:

**BMP:** Reduce directly connected impervious surfaces in new developments and redevelopment projects by requiring that grassed swales or filter strips be installed along roadsides in lieu of curbs and gutters.

**Measurable Goal:** Directly connected impervious road surfaces in new developments and redevelopment areas will be reduced by 30 percent (relative to the traditional scenario in which curbs and gutters are used) over the course of the first permit term.

**BMP:** Incorporate the use of road salt alternatives for roadway deicing.

**Measurable Goal:** During the 1st year, reduce the amount of road salt applied to roadways by 50% through the use of less-toxic alternatives, such as liquid calcium magnesium acetate (CMA).<sup>5</sup>

In each of these cases, to constitute an adequately described BMP, EPA requires that a clear performance standard be linked with an activity.

Moreover, the State Water Board has agreed that such specific requirements are advisable, stating that, “[t]he addition of measurable standards for designing the BMPs provides additional guidance to developers and establishes a clear target for the development of the BMPs.” (SWRCB, Water Quality Order No. 2000-11, at 17.) By contrast, in the case of the Permit’s regional program provisions, there is no recommended or required activity, no measurable goal, no means of assessing BMP performance or progress, and no means of determining whether the alternative program has achieved its purpose. As a result, the vaguely worded provisions in section 5.E.IV.4 fail to satisfy EPA regulations and guidance and are invalid under the Clean Water Act.

Further, the Permit’s regional program section has taken an approach mimicking approaches that have previously proven ineffective. This approach—including vague goals and no enforceable criteria—grants to individual permittees discretion to determine the extent of their implementation of stormwater management BMPs. Consequently, the Permit itself does not include a set of controls that will reduce pollutants to the *maximum extent practicable* as far as regional programs are concerned. (See *Defenders of Wildlife v. Babbitt*, 130 F.Supp.2d 121, 131 (D.D.C. 2001) (phrase “maximum extent practicable” “imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible”). By including greater specificity and creating enforceable performance standards (as recommended below), the

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<sup>5</sup> EPA, *Phase II BMP & Measurable Goal Examples*, available at <http://cfpub.epa.gov/npdes/stormwater/measurablegoals/ex5.cfm>; <http://cfpub.epa.gov/npdes/stormwater/measurablegoals/ex6.cfm>.

Regional Board can bring this section of the Permit into compliance with Clean Water Act mandates.

**b. The regional program’s failure to include specific pollution reduction and hydromodification goals prevents the Permit from meeting applicable water quality requirements.**

Pursuant to federal regulations, “no permit may be issued” when “the imposition of conditions cannot *ensure* compliance with the applicable water quality requirements of all affected States.” (40 C.F.R. § 122.4(d) (italics added).) The word “ensure” is defined as “to make certain or sure of.”<sup>6</sup> “Certain” is further defined as “definite”; “sure to happen”; and “established beyond question or doubt.”<sup>7</sup> In other words, permit conditions must make sure, or establish beyond question, that applicable water quality standards will be met. This requirement applies to the issuance of MS4 permits. In a precedential order, the State Water Resources Control Board elaborated on this requirement and determined that municipal stormwater permits must prohibit discharges of pollution that cause or contribute to the violation of water quality standards. (See State Water Resources Control Board WQ Order 2000-11.)

The regional program provisions discussed above, which include no performance criteria, fail to “establish beyond question or doubt” that water quality standards will be met. This deficiency independently violates the Clean Water Act. (See *In Re Government of the District of Columbia Municipal Separate Storm Sewer System*, 10 E.A.D. 323, 341-342 (BMPs that are “reasonably capable” of attaining water quality standards do not “appear to be entirely comparable to the concept of *ensuring* compliance”).)

**c. By not including opportunities for public comment, and by failing to establish enforceable criteria through which permittee compliance can be assessed, the regional program provisions in effect unlawfully preclude both public review of the Permit’s terms and public or Regional Board enforcement of the Permit.**

The failure to include an objective performance standard or clear and detailed requirements for LID in the regional program provisions, which could entirely waive the Permit’s post-construction requirements, violates the Clean Water Act by precluding required agency and public review of permit conditions. Deferring the creation of stormwater mitigation programs to the process of approving regional programs would prevent the Regional Board and the public from reviewing permittees’ substantive implementation of the Clean Water Act until after the MS4 permit has been issued. This is unlawful. (See, e.g., *Environmental Defense Center v. EPA*, 344 F.3d 832, 857-58 (9th Cir. 2003) (“*EDC*”); see also *Waterkeeper Alliance v. U.S. EPA*, 399 F.3d 486, 500 (2d Cir. 2005).) Meaningful review means *ensuring* that the MS4

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<sup>6</sup> Webster’s II New College Dictionary (Houghton Mifflin Co. 1995).

<sup>7</sup> *Id.*

permits are in fact designed to reduce pollutants in stormwater to the MEP standard. (33 U.S.C. § 1342(b) (States are allowed to issue NPDES permits only where, *inter alia*, the state permitting programs “*apply, and insure compliance with, any applicable [effluent limitations and standards].*”) (emphasis added).)

If the Regional Board allows the waiver of all normally applicable post-construction requirements, the Permit must at least contain provisions that ensure the achievement of the MEP standard with respect to the alternative compliance program. But, as discussed above, the current draft of the Permit fails to do so. The combination of vague goals that do not meet the MEP standard, compounded by the failure to describe in any detail what requirements regional programs must contain, amounts to the *de facto* creation of an impermissible self-regulatory program. There is little to stop a permittee from “misunderstanding or misrepresenting its own stormwater situation and proposing a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable.” (*EDC*, 344 F.3d at 855.) It is precisely to prevent this type of problem that *EDC* and *Waterkeeper Alliance* require the Regional Board itself to ensure that the Permit contains objective performance standards and the level of detail necessary to reduce pollutants in actuality to the maximum extent practicable. As currently written, it would be impossible for the Board to conclude that a regional program approved under section 5.E.IV.4 would necessarily meet the MEP standard.

3. The RPAMP alternative compliance option suffers from the same problems as the regional program option and deviates even further from the mandates of the Clean Water Act.

The only requirement with any arguable substance in the RPAMP provisions is a reference to balancing the interests identified in provision 5.E.IV.4(b). Provision 5.E.IV.4(b), however, is far from passing muster under the Clean Water Act, as described above. Thus, the RPAMP option is unlawful for all of the reasons previously discussed.

But the RPAMP option is, unfortunately, even less strict and more ambiguous than the regional program option, which places it further from compliance with the MEP standard. Specifically, it allows a “balancing of interests . . ., including water quality,” and would appear to enable water quality to be traded away for other benefits. (§ 5.E.IV.4(c)-(d).) This is not only unnecessary—Regional Board staff have not demonstrated that redevelopment areas are inherently incapable of meeting the same standards as other areas subject to the Permit’s requirements—it is illegal. The Clean Water Act mandates that the Regional Board ensure the implementation of BMPs that will reduce pollution *to the maximum extent practicable*. The Permit requires compliance with water quality standards. The Regional Board does not have the authority to relax water quality requirements in favor of promoting non-water-related urban planning interests; the Board is acting in a quasi-adjudicative role; it is not the Legislature or Congress, drafting law on a blank slate. “Balancing” already occurred when legislative bodies deliberated, revised, and then adopted state and federal water quality laws. Indeed, here, there is no evidence in the record to show that achieving water quality goals is antithetical to the other benefits sought. Finally, because the Board is obligated to issue permits that contain specific



controls that are susceptible to review by the public and Boardmembers, any lawful “balancing” must occur in the creation of a control, not afterward. A BMP that purports to allow permit holders to “balance” factors to develop the control constitutes a self-regulatory scheme that is further illegal for this reason.

4. Instead of listing vague goals in 5.E.IV.4(b), the Permit should subject regional and sub-regional programs and RPAMPs to the same standards as individual projects.

The result of implementing alternative programs should be to achieve the same pollution reduction, hydromodification, and other goals as individual regulated projects, and the specific, numeric targets imposed on individual regulated projects should be imposed on alternative programs, too. The principal difference between alternative programs and the requirements for individual developments should be that alternative programs allow for the achievement of water quality goals on an area-wide basis, rather than on a site-by-site or project-by-project basis. This promotes the Board’s interest in providing reasonable flexibility to permit holders while meeting the Clean Water Act’s substantive mandates. We would support such an approach.

For the reasons discussed above, we recommend that the Regional Board rewrite section 5.E.IV.4 to require that the areas covered by alternative programs meet the Permit’s EIA and hydromodification standards. This would address developers’ concerns that particular sites may be unable to achieve these standards, and it would allow developers and municipalities flexibility in crafting stormwater mitigation programs that encompass multiple sites. At the same time, this would ensure that the alternative compliance options do not enable areas covered by an alternative stormwater mitigation program to discharge greater quantities of pollution and higher volumes/peak flows than other regulated projects. Even with our suggested changes, the alternative programs would still represent a significant departure from the rest of the Permit’s Planning and Land Development Program, and thus the Regional Board must require that all alternative compliance program applications be approved by the Board itself and not simply by the Board’s Executive Officer.

## **V. Recommended changes.**

In Attachment A, we have redlined two of the problematic sections of the Permit’s Planning and Land Development Program: the Integrated Water Quality/Flow Reduction/Resources Management Criterion and the Alternative Post Construction Storm Water Mitigation Programs section. With regard to the first, we have inserted a numeric sizing criterion, as suggested by Dr. Horner in his attached letter. With regard to the second, our recommendation is to eliminate the “regional or sub-regional” option because it is extremely open-ended and not grounded in any identifiable concerns about the feasibility of implementing the Permit’s project-specific requirements. However, if the Regional Board wishes to retain this option, it should be subjected to the same performance criteria as the RPAMP option, as suggested below.

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Our recommendations are oriented toward eliminating ambiguities in the current Permit language, increasing the clarity and enforceability of performance requirements, and ensuring that the Planning and Land Development Program will meet the Clean Water Act's MEP standard, which it currently fails to do.

**VI. Conclusion.**

We appreciate the effort that Regional Board staff has invested in establishing LID requirements for the Planning and Land Development Program. At this stage in the permitting process, however, we hope that our remaining concerns, described in previous comments and reiterated in this letter, will be quickly addressed so that the Permit meets the MEP standard and stands up to Clean Water Act scrutiny when it is ultimately issued. This will require implementing revisions to the problematic sections of the Planning and Land Development Program, as detailed above. Please contact us if you have any questions about our suggested changes or if you would like to discuss modifications to our recommended Permit language.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Beckman', with a long horizontal flourish extending to the right.

David Beckman

Bart Lounsbury

Natural Resources Defense Council

# **Attachment A**

ATTACHMENT A

**IV. Implementation**

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**4. Alternative Post Construction Storm Water Mitigation Programs**

(a) A permittee or a coalition of permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) for redevelopment projects within Redevelopment Project Areas, in consideration of exceptional site constraints that inhibit site-by-site or project-by-project implementation of post-construction requirements

Deleted: regional or sub-regional storm water mitigation program to substitute in part or wholly for on-site post-construction requirements.

(b) Upon review and a determination by the Regional Water Board Executive Officer that the proposal is technically valid and appropriate, the Regional Water Board may consider for approval such a program if its implementation will:

(1) Result in equivalent or superior reduction of storm water pollutant loads in comparison to individual projects regulated by this permit;

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(2) Satisfy, on a Redevelopment Project Area-wide basis, the hydromodification criteria of Section 5.E.III.3;

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(3) Reduce the percentage of Effective Impervious Area (EIA) to less than 5 percent of the Redevelopment Project Area, using properly sized storm water treatment/collection features, as described in Section 5.E.III.1;

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(4) Be fiscally sustainable and have secure funding; and

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(5) Be completed in four years or less, including the construction and start-up of treatment facilities.

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(c) The RPAMP should prioritize the implementation of LID storm water mitigation measures, as described in and required by Section 5.E.III.2,

Deleted: A permittee or a coalition of permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) for redevelopment projects within Redevelopment Project Areas, in consideration of balancing water quality protection with the needs for adequate housing, population growth, public transportation and management, land recycling, and urban revitalization.

(d) For the RPAMP to be considered, a technical panel of the Local Government Commission or an equivalent state or regional planning agency must have reviewed and approved the proposed RPAMP, prior to its submittal to the Regional Water Board, for conformity with the requirements of (b), above, The Regional Water Board Executive Officer may then consider the RPAMP for approval, and submit it to the Regional Water Board for consideration if it meets the criteria outlined above. The Regional Board must subject every RPAMP proposal to public

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review, including at least a 30-day notice-and-comment period, before the Regional Board approves an RPAMP.

(e) An RPAMP may substitute in part or wholly for site-specific post-construction requirements, provided that the applicant makes the necessary showings,

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(f) *Redevelopment Project Areas include the following:*

- (1) *City Center areas*
- (2) *Historic District areas*
- (3) *Brownfield areas*
- (4) *Infill Development areas*
- (5) *Urban Transit Villages*
- (6) *Any other redevelopment area so designated by the Regional Water Board*

(g) Nothing in these provisions shall be construed to allow a Permittee or a coalition of Permittees to delay the implementation of post-construction control requirements, as approved in this Order. Permittees shall implement the post-construction control requirements detailed in this Order until the Regional Water Board has formally approved, and Permittees have begun active implementation of, an alternative stormwater mitigation program under this section.

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### **III. New Development/Redevelopment Performance Criteria**

#### **1. Integrated Water Quality/Flow Reduction/Resources Management Criterion**

- (a) *Permittees shall require that all New Development and Redevelopment projects identified in subpart 5.E.II control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through percolation, infiltration, storage, or evapo-transpiration, by reducing the percentage of Effective Impervious Area (EIA) to less than 5 percent of total project area*
- (b) *Impervious surfaces may be rendered “ineffective” if the storm water runoff is:*
  - (1) *Drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, having soil characteristics either as native material or amended medium using approved soil engineering techniques; or*

(2) Collected and stored for beneficial use such as irrigation, or other reuse purpose; or

(3) Discharged into an infiltration trench

(c) All features constructed to render impervious surfaces “ineffective,” as described in provision (b), above, shall be properly sized to infiltrate or store for beneficial reuse at least the volume of water that meets the criteria in subpart 5.E.III.4.

(d) Any excess surface discharge of the storm water runoff shall be mitigated in accordance with subpart 5.E.III.4

(e) Alternatively, where a permittee or a coalition of permittees has a Redevelopment Project Area Master Plan (RPAMP) approved in accordance with subpart 5.E.IV, the provisions of the RPAMP will substitute for the site-specific EIA requirements identified above.

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# **Attachment B**

**RICHARD R. HORNER, PH.D.**

230 NW 55<sup>TH</sup> STREET  
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May 28, 2008

Chair Francine Diamond and Members of the Board  
California Regional Water Quality Control Board, Los Angeles Region  
Attention: Xavier Swamikannu, Storm Water Permitting  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Dear Chair Diamond and Members of the Board:

I am writing with reference to subpart 5.E.III.1 of the Draft Ventura County Municipal Separate Storm Sewer System Permit (NPDES Permit No. CASOO4002), which concerns New Development/Redevelopment Performance Criteria. The section now requires that new development and redevelopment projects have less than 5 percent of total project area as Effective Impervious Area (EIA). It proceeds to state that impervious surfaces can be rendered "ineffective" if the storm water runoff is: (a) drained into one of several types of vegetated management areas, (b) collected for a beneficial use, or (c) discharged into an infiltration trench. Further, any excess runoff existing after exercising one of those options is to be managed as specified in subpart 5.E.III.4, which sets criteria for application of conventional stormwater practices.

As I documented in my report Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County, provided to you when the Draft Permit was first issued in 2007, applying a 3% EIA limitation in conjunction with LID practices of the type anticipated by subpart 5.E.III.1 would reduce site runoff volume and pollutant loading to zero in typical rainfall scenarios in five out of six case studies considered. The EIA provision furnishes a numerical, enforceable standard for LID implementation. However, I am concerned that the permit does not include any sizing criterion for site designs that render surfaces "ineffective" for the purposes of the 3% standard recommended by NRDC or the 5 percent EIA standard now in the draft permit. I believe that this omission could severely undermine the standard.

The ability of the permit stipulations to achieve water quality and hydromodification benefits depends on the proper sizing of LID practices used to manage the quantity and quality of stormwater runoff. If developers construct inadequately sized LID features (as the current permit language might allow), a large proportion of the site runoff would be directed to conventional facilities, which are substantially less effective than LID options. The permit continues to allow "Prefabricated/Proprietary Treatment Control BMPs" [best management practices], which often reduce only the gross solids, treat other pollutants very little, and offer no hydromodification benefits. Therefore, the lack of a sizing



criterion to accompany the EIA standard could turn a site capable of emitting no pollutants and unquestionably meeting hydromodification requirements into one that discharges most of the potential runoff and pollutants. This situation would make the EIA standard meaningless.

Failing to clearly define actions needed to render impervious area "ineffective" allows for abuse by and creates inconsistency and confusion in those to whom it applies. It is out of step with prevalent practice in the stormwater management field, and even with how conventional practices are handled in the Draft Permit. As it stands, a developer could contend that the existing language allows LID practices to be sized to the designer's liking, whereas conventional BMPs are held to the specific criteria in subpart 5.E.III.4. It is essential for the standard to have usefulness and meet the intended hydromodification prevention and water quality protection objectives that it be coupled with a sizing criterion that truly renders all but no more than 3 percent of the site area "ineffective" as impervious runoff contributing area.

To remedy this shortcoming I recommend that subpart 5.E.III.1 be redrafted as follows (new text in *italics*):

### III. New Development/ Redevelopment Performance Criteria

#### 1. Integrated Water Quality/ Flow Reduction/ Resources Management Criterion

[...]

(b) Impervious surfaces may be rendered "ineffective" if the storm water runoff is:

- (1) Drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, having soil characteristics either as native material or amended medium using approved soil engineering techniques; or
- (2) Collected and stored for beneficial use such as irrigation, or other reuse purpose; or
- (3) Discharged into an infiltration trench.

*(c) All features constructed to render impervious surfaces "ineffective," as described in provision (b), above, shall be properly sized to infiltrate or store for beneficial reuse at least that volume of water meeting the criteria in subpart 5.E.III.4.*

*(d) Any excess surface discharge of the storm water runoff shall be mitigated with quantity control practices as necessary to meet the hydromodification requirements in subpart 5.E.II and conventional treatment practices designed in accordance with subpart 5.E.III.4.*

Chair Francine Diamond and Members of the Board

May 28, 2008

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I would be pleased to discuss my assessment and recommendations with you and invite you to contact me if you wish to do so.

Sincerely,

A handwritten signature in cursive script that reads "Richard R. Horner". The signature is written in black ink and has a fluid, connected style.

Richard R. Horner