

Heal the Bay

June 7, 2010

*Via electronic mail and U.S. mail*

Chair Lutz and Members of the Board  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
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**Re: *Comments on Tentative Order 10-XXXX, May 5, 2010, the Draft Ventura County MS4 Permit***

Dear Chair Lutz and Members of the Board:

On behalf of the Natural Resources Defense Council ("NRDC") and Heal the Bay (collectively "Environmental Groups"), we are writing with regard to Order No. 10-XXXX, NPDES No. CAS004002, Waste Discharge Requirements for Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and Incorporated Cities Therein ("Permit" or "Draft Permit"). The Permit represents a reconsideration of Order No. 09-0057, adopting the Municipal Separate Storm Sewer System Permit for Ventura County on May 7, 2009. We appreciate the opportunity to submit the following comments on the Tentative Order.

## **I. Introduction**

On May 7, 2009, the Los Angeles Regional Water Quality Control Board ("Regional Board" or "Board"), with the support of the Environmental Groups and the Ventura County Permittees, adopted Order No. 09-0057 ("Order"), the Ventura County Municipal Separate Storm Sewer Systems ("MS4") Permit, which established practical and enforceable Low Impact Development ("LID") provisions regarding new development and redevelopment in Ventura County. The Regional Board's decision to adopt the Order was well supported by evidence and the law, consistent with actions of other regulatory entities around the nation, and expressly endorsed by the U.S. Environmental Protection Agency ("U.S. EPA"). One year later, the Order, as a result of unfortunate, post-adoption, procedural errors, has been voluntarily remanded back to the Regional Board, which has determined to hold a limited hearing on specific provisions for reconsideration of the Permit. However, in the intervening year, nothing has occurred to call into

question the Board's substantive decision to adopt the Permit in the first instance; if anything, events now indicate that stronger permit terms than those included in the Draft Permit are warranted, and more pressingly demonstrate the need for the adoption of the Draft Permit and its LID provisions. Moreover, the Draft Permit's LID and other substantive pollution control provisions represent the result of an arduous, nearly year-long negotiation between the Environmental Groups and co-permittees, any changes to which would threaten to undo a fragile consensus on the Draft Permit's language. The Regional Board should, as it did in 2009, adopt the Permit as is, without further modification.

#### **A. Factual Background**

Notwithstanding past stormwater permit programs, including runoff volume control and erosion control measures, significant water quality problems persist in Ventura County. Indeed, Ventura County's own reports indicate that:

Elevated pollutant concentrations were observed at all monitoring sites during one or more monitored wet weather storm events, as well as at all Mass Emission sites during one or more dry weather events.<sup>1</sup>

Moreover, "[d]ischarges of pollutants from MS4s are one of the leading causes of water quality impairment in the region." (Tentative Fact Sheet, at 3.) "Yet, more than a decade after the first permit was issued, exceedances of water quality standards for storm water pollutants such as bacteria, and heavy metals continue." (Tentative Fact Sheet, at 5.) Urban runoff has also been found to cause significant impacts to aquatic life. (Tentative Fact Sheet, at 4.)

Traditional development – and its associated impervious surfaces in particular – plays a significant role in the creation of urban runoff and the degradation of waterways. "Development and urbanization increase pollutant loads, volume and discharge velocity." (Draft Permit, at Finding B.15.) As U.S. EPA has noted:

Most stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located.<sup>2</sup>

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<sup>1</sup> Ventura Countywide Stormwater Quality Management Program, 2007-2008 Annual Report: Annual Report for Permit Year 8, Reporting Year 14 (October 2008), at E-2.

<sup>2</sup> U.S. Environmental Protection Agency Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices (December 2007) ("EPA LID Study"), at 1.

It is therefore well established that development alters the natural flow of water, and natural, pre-development runoff from a site represents only a fraction of post-development runoff.<sup>3</sup> Moreover, “[s]tormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.”<sup>4</sup>

The Regional Board has fully acknowledged the problems posed by stormwater runoff, stating in the Draft Permit that “[s]tudies have demonstrated a direct relationship between the degree of imperviousness of area and waterbody degradation. . . . Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 3-10 percent conversion from natural to impervious surfaces in a subwatershed.” (Draft Permit, at Finding B.16.) Further, as the Regional Board explains, “studies conducted in California indicate that intermittent and ephemeral streams are even more susceptible to the effects of hydromodification than streams from other regions of the U.S. with stream degradation being recognized when . . . impervious cover is as little as 3-5%.” (*Id.*) Summing these points up succinctly, the Regional Board states: “The percentage of impervious cover is one indicator and predictor of potential water quality degradation expected from new development.” (*Id.*)

LID stormwater management practices are designed to capture and retain (*i.e.* not discharge) stormwater runoff through infiltrating water into the soil, vaporizing it to the atmosphere via evaporation and transpiration from vegetation, and harvesting stormwater to put it to a beneficial use such as irrigation or other non-potable use, or grey water supply.<sup>5</sup> By retaining water onsite, LID can help restore natural conditions and result in drastically less polluted runoff compared to conventional best management practices (“BMPs”);<sup>6</sup> in many

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<sup>3</sup> This fact is also demonstrated in analysis of Ventura County development by Dr. Rich Horner, which shows that the pre-development runoff from a given site constitutes only approximately 7% of the total annual precipitation falling on that site. Richard R. Horner, Investigation of Feasibility and Benefits of Low-Impact Site Design Practices (“LID”) for Ventura County (“Ventura Study”), at Table 5. Technical experts working with the Building Industry Association also acknowledge this, as Mr. Eric Strecker noted in testimony at the May 7, 2009 hearing adopting Order 09-0057 that, “when you look at predevelopment hydrology in southern California, 80 to 95 percent of the predevelopment average annual precipitation is evapotranspired. And then *typically runoff or deeper infiltration is somewhere in the two to ten percent range* depending on the conditions of site.” (Hearing Transcript, at 271:11-16 (emphasis added).)

<sup>4</sup> EPA LID Study, at 1.

<sup>5</sup> See Letter from Rich Horner to Regional Board (April 10, 2009) (“Horner April 10 Letter”), at Attachment A-1, Assessment of Evaporation Potential with Low-Impact Development Practices.

<sup>6</sup> Finding B.19 of the Draft Permit acknowledges that “properly implemented LID techniques can help mimic the pre-project runoff volume and time of concentration. . . .” However, we suggest

typical rainfall scenarios, LID can reduce site runoff volume and pollutant loading to zero if desired. Even treating stormwater with the best-performing conventional BMPs is far less effective than using LID practices to retain water onsite through use of a low numeric requirement for Effective Impervious Area (“EIA”). Further, the Regional Board has acknowledged the additional benefits LID provides with respect to enhanced property values, increased aquatic and terrestrial habitat, flood control and hydromodification, (*see* Draft Permit, at Finding B.19), enhanced water supply (*id.* at Finding B.21), and moderation of climate change. (*Id.* at Finding B.20.)

The Regional Board embraced LID concepts as a practical and enforceable means of addressing stormwater runoff in May 2009 by adopting a LID standard in Order 09-0057 with a 5% EIA limitation,<sup>7</sup> a provision that directly flowed from the basic scientific and technical data and studies summarized above. This standard, and accompanying LID provisions, is before the Regional Board again here. In ensuring LID may be practicably implemented, the standard allows for runoff from 5% of the site’s EIA to discharge from a site during all rain events and allows for all runoff exceeding the modest, 85<sup>th</sup> percentile 24-hour design storm to be discharged from the entire site. (*See* Draft Permit, at ¶ 4.E.III.1.(c).) Additionally, the LID provisions contain relief from the 5% EIA limitation where infeasibility may be demonstrated. (Draft Permit, at ¶ 4.E.III.2.) As a result, the Regional Board rightfully has found that LID “is sensitive to addressing local government’s unique environmental and regulatory needs in the most economical manner possible by reducing costs associated with stormwater infrastructure design, construction, maintenance and enforcement . . . and provides for local government’s need for economic vitality through reasonable and continued growth and redevelopment.” (Draft Permit, at Finding B.17.)

Additionally, the LID approach taken in the Draft Permit is unexceptional. The LID provisions are not as stringent as allowed by the evidence, as originally requested by the Environmental Groups, or as adopted in numerous other jurisdictions.<sup>8</sup> However, the LID provisions and permit terms overall serve as a collaborative compromise with the Permittees, and will be more protective of water quality than other, less stringent proposals that were previously before the Regional Board and would have allowed significant discharge of pollution and would not have resulted in effective, feasible mitigation of the various problems caused by stormwater runoff.<sup>9</sup> The Regional Board, as evidence in the record and the Draft Permit’s findings show, acted properly in adopting Order 09-0057, and should properly adopt the Draft Permit now.

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that the Regional Board replace the phrase “pre-project” with the phrase “pre-development,” so as to avoid confusion regarding the correct target for implementation of LID techniques.

<sup>7</sup> Order 09-0057, at ¶ 4.E.III.1.(a).

<sup>8</sup> *See* section IV.D., *infra*.

<sup>9</sup> *See, e.g.*, February 24, 2009 Draft Permit; Horner April 10 Letter, at 4.

## B. Procedural Background

The Regional Board, in Order 09-0057, adopted the same substantive provisions now before it in the Draft Permit. The LID provisions adopted by the Regional Board, as well as details of other Draft Permit terms including those related to Municipal Action Levels (“MALs”), beach water monitoring, and BMP performance standards were presented to the Regional Board in a letter dated April 10, 2009 by the Environmental Groups and Ventura County Permittees, and represented a consensus agreement gained after a laborious negotiation process. Subsequent to a petition on the Order submitted to the State Water Resources Control Board (“State Board”) by the Building Industry Legal Defense Foundation, Construction Industry Coalition on Water Quality, and the Building Industry Association of Southern California (“BIA Petition”),<sup>10</sup> the Regional Board has chosen, at the State Board’s request, to accept a voluntary remand of Order 09-0057 to address “perceived” procedural issues associated with the Order.<sup>11</sup>

Critically in this regard, the key issues identified by the State Board as grounds for requesting a voluntary remand of the Permit (which in reality represented breakdowns in the petition process), involved issues that arose only *after* the Permit’s adoption. These issues largely involved regrettable clerical errors related to Section E.III of the Order made in issuing the final version of the Order for public release, after the Regional Board had voted to adopt Order 09-0057, or omissions of material made in preparing the administrative record in the BIA Petition for transmittal to the State Board. Though the State Board made mention of other “alleged irregularities in the hearing” in its request that the Regional Board accept a voluntary remand,<sup>12</sup> the State Board fully acknowledged that this issue represented solely a claim that the BIA “Petitioners have argued.” Both Environmental Groups and the Regional Board itself provided substantial evidence and citation to the record to demonstrate that all parties and stakeholders were given both proper notice of the Permit’s provisions and adequate, or more accurately, ample opportunity for comment.<sup>13</sup> As a result, at no point did the State Board’s request for a voluntary remand call into question the Regional Board’s substantive decision to adopt the Draft Permit terms, or the appropriateness of the provisions in the Draft Permit under the Clean Water Act or other applicable law. The Regional Board was correct to adopt the Draft Permit terms before it in 2009, and would be remiss in failing to adopt the Draft Permit before it now.

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<sup>10</sup> The Petition was dismissed by the State Board on March 30, 2010.

<sup>11</sup> See Draft Permit, at Finding A.3; Letter from Michael Lauffer, State Water Resources Control Board, to Tracy Egoscue, Regional Board, et al, at 1 (March 10, 2010) (“State Board Letter”).

<sup>12</sup> See State Board Letter, at 2.

<sup>13</sup> See Environmental Groups’ Opposition to BIA Petition, at 7-12; *id.* at 12-16 (discussing provisions as a logical outgrowth of prior Permit terms); Regional Board Response to BIA Petition, at 1-2 (describing final Order 09-0057 as a logical outgrowth of prior draft versions of the Order and noting “the issues about . . . the level of [EIA] and other components of the [LID] provisions, have been debated vigorously by all stakeholders for the better part of two years.”).

## **II. Standards Governing the Adoption of the Tentative Order by the Regional Board**

In considering the Tentative Order, the Regional Board must not only ensure compliance with substantive legal standards, but it must also ensure that it complies with well-settled standards that govern its administrative decision-making. The Tentative Order must be supported by evidence that justifies the Regional Board's decision to include, or not to include, specific requirements. The Regional Board would be abusing its discretion if the Tentative Order ultimately fails to contain findings that explain the reasons why certain control measures and standards have been selected and others omitted. Abuse of discretion is established if "the respondent has not proceeded in the manner required by law, the order or decision is not supported by the findings, or the findings are not supported by the evidence." (Cal. Code Civ. Proc. § 1094.5(b); *see also Zuniga v. Los Angeles County Civil Serv. Comm'n* (2006) 137 Cal.App.4th 1255, 1258 (applying same statutory standard).) "Where it is claimed that the findings are not supported by the evidence, ... abuse of discretion is established if the court determines that the findings are not supported by the weight of the evidence." (*Phelps v. State Water Resources Control Bd.* (2007) 157 Cal.App.4th 89, 98-99.)

The administrative decision must be accompanied by findings that allow the court reviewing the order or decision to "bridge the analytic gap between the raw evidence and ultimate decision or order." (*Topanga Ass'n for a Scenic Cmty. v. County of Los Angeles* (1974) 11 Cal.3d 506, 515.) This requirement "serves to conduce the administrative body to draw legally relevant sub-conclusions supportive of its ultimate decision ... to facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions." (*Id.* at 516.) "Absent such roadsigns, a reviewing court would be forced into unguided and resource-consuming explorations; it would have to grope through the record to determine whether some combination of credible evidentiary items which supported some line of factual and legal conclusions supported the ultimate order or decision of the agency." (*Id.* at 516.)

## **III. The Draft Permit's LID Terms Were Properly Adopted in Order 09-0057, are Well Supported by Evidence Before the Regional Board, and are Legally Required Under the Clean Water Act**

### **A. The Low Impact Development Provisions and Other Permit Terms Represent a Fragile Consensus Agreement Between the Environmental Groups and Ventura County Permittees That Should be Supported by the Regional Board**

Since the Clean Water Act was extended to regulate stormwater, environmental groups and municipalities and other regulated parties seeking coverage under National Pollutant Discharge Elimination System ("NPDES") permits have often advocated and even litigated against one another. In a unique turn of events, the LID language and language of other Draft Permit terms, including use of MALs and requirements for beach water quality monitoring, is the result of a rare and fragile consensus that two environmental groups, ten cities, and the County of

Ventura formed over the course of almost a year.<sup>14</sup> The Regional Board should do everything in its power to see that this consensus is not derailed by needless alteration the terms of the Draft Permit, terms it has previously and appropriately adopted.

For a period of several months in 2008, the Regional Board halted work on the Ventura County Stormwater Permit due to proceedings in the Arcadia II lawsuit.<sup>15</sup> During this lull, the Ventura County Permittees and Environmental Groups initiated conversations in an attempt to find common ground on the permit requirements. At the same time, the Permittees and the Environmental Groups retained experts to gain a better understanding of the technical merits of the permit provisions. The two sides then worked together with their respective experts during numerous meetings and conversations through the spring of 2009. On April 10, 2009, the groups submitted the consensus language that was ultimately adopted by the Regional Board in the form of a comment letter on the February 2009 draft of the permit. (Draft Permit, at Finding B.26.)<sup>16</sup>

The collaboration among these stakeholders on the issue of stormwater regulation was unprecedented. The negotiations were protracted, often tenuous, and ultimately, highly productive. Ventura City Manager Rick Cole said at the time the consensus language was to be considered by the Regional Board: "we stand together with a unitary proposal that we sincerely hope will be given serious consideration by your board."<sup>17</sup> Mr. Cole later reflected that "[i]t took courage on the part of the environmental groups, public agencies, and the regional board to adopt the most stringent standards ever imposed on stormwater runoff . . . . But it also took a dose of common sense to find a fair and cost effective way of achieving clean water goals."<sup>18</sup>

This agreement and its included provisions represented just that, a commonsense and practical solution to stormwater control in Ventura County that the Regional Board has stated is "consistent with established LID doctrinal components articulated by USEPA and the State Water Board," and is "supported by substantial evidence."<sup>19</sup> If the Regional Board determines

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<sup>14</sup> See Hearing Transcript, at 304:9-18; Letter from NRDC, Heal the Bay, and Ventura County Stormwater Permittees to Regional Board, (April 10, 2009) at 1 ("April 10 Letter") ("We believe our dialogue has been successful and reflects a notably different tenor between stakeholders than has characterized MS4 permitting in the Los Angeles Region.").

<sup>15</sup> Regional Board, Notice of Cancellation of Workshop, July 10, 2008 (see Administrative Record – Los Angeles Regional Water Quality Control Board Order No. R4-09-0057 ("Administrative Record"), at Rec. D0206.)

<sup>16</sup> See also April 10 Letter, at 1.

<sup>17</sup> Hearing Transcript, at 133:14-16.

<sup>18</sup> Environment Now, 6th Annual Top Achievements of the Environmental Community in Southern California (2010) at 9.

<sup>19</sup> See Regional Board Response to BIA Petition for Review (August 3, 2009), at 3-4.

now to alter any of the provisions of the agreement, the delicate consensus would likely unravel. In the April 10 Letter, the Environmental Groups and Permittees warned that “if the Board were to eliminate or alter the approach we describe below, the consensus we have reached would lose its character and the signatories would no longer be in agreement. In that scenario, our individual positions on the matters described [in the letter] would thus remain intact as detailed in our respective comment letters.”<sup>20</sup>

At the May 7, 2009 adoption hearing for Order 09-0057, Simi Valley City Manager Mike Sidell voiced similar concerns: “Based upon this carefully and delicately crafted and constructed agreement, we mutually agreed that if any piece of the agreement needed to be modified, the give and take that transpired in our negotiations would be weighted differently and neither side would then support the outcome.”<sup>21</sup> To this end, Environmental Groups believe that should any of the substantive LID provisions be altered, that the Draft Permit’s onsite retention requirements would appropriately be rendered *more* stringent than those contained in the Draft Permit, not less. Further, provisions calling for: compliance with MALs; expanded beach water quality monitoring; and, strengthened BMP performance standards would be requisite for the Draft Permit to be lawfully adopted. (*See* Section IV.D.4., *infra.*) To avoid this outcome, and to avoid undoing the good that has arisen from the consensus, it is critical that the Draft Permit remain intact with respect to the provisions encompassed by the agreement.

**B. The LID and Onsite Retention Provisions in the Draft Permit were Previously Adopted in Order 09-0057 and All Stakeholders had Opportunity for Comment and Extensive Input to the Draft Permit’s LID and Related Provisions At That Time**

To the extent that the Regional Board has been motivated in ordering a reconsideration of Order 09-0057 by a concern that its previous adoption of the Draft Permit and its onsite retention requirements was procedurally improper, the Board’s well-intentioned concern is misplaced. In adopting the provisions and requirements of Order 09-0057, which are contained again in the Draft Permit, the Regional Board properly complied with all state and federal procedural requirements regarding the adoption of NPDES permits when it previously adopted these provisions, including the Draft Permit’s LID requirements and EIA standards. (*See* Cal. Water Code § 13377; 40 C.F.R. § 124.1 *et seq.* *See also In the Matter of National Steel and Shipbuilding Company* (1998) State Board Order No. WQ 98-07, at 6.) The Regional Board should feel comfortable with its earlier decision to adopt Order 09-0057, and in repeating this decision to adopt the Draft Permit here.

In Point of Fact, prior to the adoption of Order 09-0057 the Draft Permit had a long history and included a retention standard from the start. The first draft of the permit, for instance, was released in 2006 and would have mandated that Permittees adopt a program requiring all new development and redevelopment projects to: “[m]inimize pollutants emanating from

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<sup>20</sup> April 10 Letter, at 1.

<sup>21</sup> Hearing Transcript, at 126:18-24.



impervious surfaces by reducing the percentage of Effective Impervious Area to less than 5 percent of the total project area” and to “[m]inimize the percentage of impervious surfaces on development lands to support the percolation and infiltration of storm water into the ground” (Dec. 27, 2006 Draft Permit, at ¶¶ 4.E.1.(b)-(c).) All subsequent public drafts of the permit included infiltration and retention requirements stemming from this original requirement. (See, e.g., August 28, 2007 Draft Permit, at ¶ 5.E.III.; April 28, 2008 Draft Permit, at ¶ 5.E.III.)

Indeed, the onsite retention requirements formed the center point of discussion in public dialogue concerning the permit. In response to the first draft permit, for instance, NRDC submitted a comment letter in March 2007 that included a study that a national stormwater expert, Dr. Richard Horner, had conducted.<sup>22</sup> The study extensively discussed the viability of, and need for, a strict EIA standard to protect water quality in Ventura County.<sup>23</sup> Similarly, when the Regional Board held a hearing on the second Permit draft in September 2007, NRDC gave a PowerPoint presentation that hit on the importance of retention. The next month, NRDC and Heal the Bay submitted formal comments that again stressed the need for retention: “In order for surfaces to be rendered truly ‘ineffective,’ *all rainwater falling on them must be infiltrated or captured and reused.*”<sup>24</sup>

Further, discussion of the retention standards was occurring between the stakeholders. In addition to negotiations between the Environmental Groups and Permittees, discussed in section IV.A., *supra*, on March 24, 2009, the Permittees and Environmental Groups spoke with representatives of the BIA and Construction Industry Coalition on Water Quality – Andrew Henderson and Dr. Mark Grey – about the Ventura Permit consensus language. NRDC attorney Bart Lounsbury emailed that language to Mr. Henderson and Dr. Grey. The following week, on April 1, 2009, the Permittees and environmental NGOs again spoke with Petitioners’ representatives about the consensus language, and Petitioners responded specifically to the onsite retention requirement.<sup>25</sup>

Further, stakeholders BIA (of Southern California and of the Los Angeles and Ventura Chapter) and the Construction Industry Coalition on Water Quality had frequent, ongoing, and substantive communications with the Regional Board regarding the Permit. In fact, these stakeholder organizations had at least five official meetings with Regional Board staff between May 31, 2007 and May 22, 2008.<sup>26</sup> Board staff member Samuel Unger was invited to speak on

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<sup>22</sup> Letter from NRDC to Regional Board (March 6, 2007); Ventura Study.

<sup>23</sup> Ventura Study.

<sup>24</sup> Letter from Environmental Groups to Regional Board (October 15, 2007), at 7 (emphasis added).

<sup>25</sup> Petitioners have acknowledged they were briefed on the joint proposal well prior to the May 7, 2009 hearing. (See Hearing Transcript, at 319: 8-10).

<sup>26</sup> Administrative Record, at Rec. B1527; B1371; B1364; C0185; D976.

the permit at a meeting of the Building Industry of America's Ventura County chapter at a Westlake law firm in January 2009.<sup>27</sup>

In all, in the two and a half years that passed between the release of the first draft and the approval of the final draft, the Regional Board held 42 stakeholder meetings and two informational workshops on the permit. (Permit, at Finding G.3.)<sup>28</sup> In substantial part, these meetings were focused on the onsite retention standards to be included in the Permit, and in many cases, the need for a 5 percent EIA was a central topic of discussion. The Regional Board properly offered public notice and opportunity for comment on the LID provisions, its decision to adopt the Order in this regard was sound.

**C. The Adopted LID Provisions Were a Logical Outgrowth of Prior Drafts of the Permit**

Further, a "final [order] that varies from the proposal, even substantially, will be valid so long as it is 'in character with the original proposal and a logical outgrowth of the notice and comments.'" (*Environmental Defense Center, Inc. v. U.S. EPA* (9th Cir. 2003) 344 F.3d 832, 851.) Thus, in stating that "[a]gencies, are free – indeed, they are encouraged – to modify proposed rules as a result of the comments they receive," (*Northeast Maryland Waste Disposal Authority v. U.S. EPA* (D.C. Cir. 2004) 358 F.3d 936, 951), courts have held that an "[a]gency's change of heart . . . only demonstrates the value of the comments it received." (*Arizona Public Service Co. v. U.S. EPA* (D.C. Cir. 2000) 211 F.3d 1280, 1300.)

Courts determine the adequacy of notice through application of a "logical outgrowth" test. The test concerns "whether a new round of notice and comment would provide the *first* opportunity for interested parties to offer comments that could persuade the agency to modify its rule." (*Environmental Defense Center*, 344 F.3d at 851 (emphasis added).) This test was more than satisfied by the circumstances surrounding the adoption of Order 09-0057. First, previous versions of the Draft Permit included similar requirements and concepts to those the Regional Board ultimately adopted. Consider the subtle and evolutionary change from the February 2009 Draft Permit to the final Permit. The February 2009 Draft Permit stated:

- (b) The goal of the New Development and Redevelopment standards shall be to reduce the effective impervious area (EIA) to 5% or less. . .
- (c) All features structured constructed [sic] 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.3 [referring to "the 85th percentile 24-hour storm

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<sup>27</sup> Email from Holly Schroeder to Samuel Unger (December 15, 2008, 4:05 pm); email from Samuel Unger to Holly Schroeder (December 15, 2008, 4:31 pm); email from Holly Schroeder to Samuel Unger (December 23, 2008, 2:04 pm).

<sup>28</sup> See also Hearing Transcript, at 56:5-10, 18-20.

event” or “The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment. . . .”]

(February 2009 Draft Permit, at ¶ 5.E.III.1.(b)-(c).) The Regional Board ultimately adopted the following language:

- (b) Impervious surfaces may be rendered ‘ineffective’ and thus not count toward the 5 percent EIA limitation, if the stormwater runoff from those surfaces is fully retained onsite for the [85<sup>th</sup> percentile 24 hour runoff event]. . .
- (c) The permittees shall require all features constructed or otherwise utilized to render impervious surfaces ‘ineffective’ . . . to be properly sized to infiltrate, store for reuse, or evapotranspire, without any runoff at least the volume of water that results from:
  - (1) The 85<sup>th</sup> percentile 24 hour runoff event. . . ;
  - (2) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment. . .

(Order 09-0057, at ¶ 4.E.III.1.(c).) The onsite retention standards of the February 2009 Draft Permit and of the adopted Order both require the onsite retention of the design storm volume – through infiltration or storage and through infiltration, onsite storage, or evapotranspiration, respectively. The differences in language between the two versions reflect variations on a narrow theme. (*See Environmental Defense Center*, 344 F.3d at 852 (the adopted option “contains no elements that were not part of the original rule, even if they are configured differently in the final rule. Petitioners had, and took, their opportunity to object to the aspects of the Rule that they did not support in their comments . . .”).)

Second, stakeholder comment letters extensively discussed whether the Order should require the retention of a specific volume of water, as required in other MS4 permits. For example, comment letters from the BIA and the Construction Industry Coalition on Clean Water submitted on April 10, 2009 devoted a full five pages to discussion of the Draft Order’s onsite retention requirements, and specifically mentioned the “recently surfaced Ventura County City Manager-[Environmental Groups] proposal.”<sup>29</sup> The comment letters state explicitly that “[m]andating the complete on-site retention of any sizeable storm volume . . . is not a reasonable approach.”<sup>30</sup> These letters may function as an indicator of the adequacy of the Regional Board’s notice: “although they may not provide the only basis upon which an agency claims to have satisfied the notice requirement, comments may be adduced as evidence of the adequacy of notice.” (*Miami-Dade County v. E.P.A.* (11<sup>th</sup> Cir. 2008) 529 F.3d 1049, 1059.)

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<sup>29</sup> See Construction Industry Coalition on Water Quality Letter to Regional Board (April 10, 2009) at 3-5 (“CICWQ April 10 Letter”); Building Industry Association Letter to Regional Board (April 10, 2009) at 7-10 (“BIA April 10 Letter”).

<sup>30</sup> CICWQ April 10 Letter, at 4.

The final language of Order 09-0057 merely reflected the debate over LID requirements that occurred from the release of the first draft of the Order through its ultimate adoption. This type of alteration is precisely of the type found consistently by courts to represent a logical outgrowth of the original proposal. (See *Environmental Defense Center*, 344 F.3d at 852 (the adopted option “contains no elements that were not part of the original rule, even if they were configured differently in the final rule”).)

**D. The EIA and Onsite Retention Standards are Consistent With and Required by the Clean Water Act’s Maximum Extent Practicable Standard.**

Under section 402(p) of the Clean Water Act, the fundamental requirement for permits issued to owners of municipal separate storm sewer systems (“MS4s”) is that they “shall require controls to reduce the discharge of pollutants to the maximum extent practicable.” (33 U.S.C. § 1342(p)(3)(B)(iii).) The MEP standard creates federally mandated minimum controls for stormwater discharges from MS4s, and permitting agencies such as the Regional Board “must, in every instance . . . ensure that each such program reduces the discharge of pollutants to the maximum extent practicable.” (*Environmental Defense Center, Inc.* 344 F.3d at 856.)<sup>31</sup> “[T]he phrase ‘to the maximum extent practicable’ does not permit an agency unbridled discretion. It imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible.” (*Defenders of Wildlife v. Babbitt* (D.D.C. 2001) 130 F.Supp.2d 121, 131; *Friends of Boundary Waters Wilderness v. Thomas* (8th Cir. 1995) 53 F.3d 881, 885 (“feasible” means “physically possible”).) Through its requirement that controls must be implemented to the “maximum extent practicable,” the Clean Water Act creates a federally mandated minimum effort, or “floor,” below which a permit may not be approved by EPA or by the responsible state agency.

Within this framework, the EIA and onsite retention standards in the Draft Permit are consistent with other efforts to reduce stormwater pollution around the country and are supported by extensive evidence in the record. This evidence, much of which was before the Board previously and which amply supported the decision to adopt Order 09-0057, serves again to support the adoption of the Draft Permit here. It includes an overwhelming number of reports, studies, permits, and comments that actually, as discussed *infra*, support the adoption of an EIA limitation and onsite retention standard *more* stringent than the one included in the Draft Permit.

**1. The Standard of Practice in the U.S. Requires the Imposition of Low Impact Development Techniques Implemented with Clear Metrics for New Development and Redevelopment Activities**

Regulatory bodies in California and elsewhere have recognized the importance of, and successfully implemented, LID stormwater management practices as a means of addressing stormwater pollution. Nearly identical, if not more stringent, practicable provisions have been

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<sup>31</sup> See also *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1379 (MS4 systems are subject to regulation by NPDES permits and must meet the requirements of the Clean Water Act).

implanted by other jurisdictions throughout the U.S. (*See* Tentative Fact Sheet, at 27-33; discussion, *infra*.) In particular, regulatory bodies in California and elsewhere in the country have recognized the importance of, and successfully implemented, requirements to retain a specified volume of stormwater onsite because such requirements prevent *all* pollution in that volume of rainfall from being discharged to receiving waters.

For Example, the California Ocean Protection Council has strongly endorsed LID by “resolv[ing] to promote the policy that new developments and redevelopments should be designed consistent with LID principles” because “LID is a practicable and superior approach . . . to minimize and mitigate increases in runoff and runoff pollutants and the resulting impacts on downstream uses, coastal resources and communities.”<sup>32</sup> The Washington Pollution Control Hearings Board has found that LID techniques are technologically and economically feasible and must, therefore, be required in MS4 permits.<sup>33</sup> And the National Academy of Sciences in 2008 issued a comprehensive report with the same recommendation for stormwater management programs: “Municipal permittees would be required under general state regulations to make [LID] techniques top priorities for implementation in approving new developments and redevelopments, to be used unless they are formally and convincingly demonstrated to be infeasible.”<sup>34</sup>

a. Other Stormwater Permits and Regulatory Documents Around the Country Have Adopted Stronger, Practicable Requirements for the Implementation of Post-Construction Stormwater BMPs

The Draft Permit’s retention standards, then, merely follow the best practices that varied authorities have either recommended or outright required already. These standards are not unusually restrictive, demanding, or unfeasible. Rather, they are similar to the standards other jurisdictions across the county have developed. Consider the following examples:

**Central Coast, California (RWQCB, Phase II):** Limit EIA at development projects to no more than 5% of total project area (interim criteria); establish an EIA limitation between 3% and 10% in local stormwater management plans (permanent criteria);<sup>35</sup>

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<sup>32</sup> California Ocean Protection Council Resolution of the California Ocean Protection Council Regarding Low Impact Development (May 15, 2008) at 27.

<sup>33</sup> *Puget Soundkeeper Alliance et al. v. State of Washington, Dept. of Ecology et al.* (2008) Pollution Control Hearings Board, State of Washington, No. 07-021, 07-026, 07-027, 07-028, 07-029, 07-030, 07-037, at 6, 46, 57-58.

<sup>34</sup> National Academy of Sciences, Committee on Reducing Stormwater Discharge Contributions to Water Pollution, National Research Council Urban Stormwater Management in the United States (2008), at 500.

<sup>35</sup> Letter from Roger Briggs, Central Coast Regional Water Quality Control Board, to Regulated Small MS4s (February 15, 2008) (“Central Coast Phase II Letter”).

**Federal Buildings over 5,000 square feet** (under EPA's draft guidance for implementation of the Energy Independence and Security Act of 2007): Manage onsite (*i.e.*, prevent the offsite discharge of) the 95<sup>th</sup> percentile storm through infiltration, harvesting, and/or evapotranspiration;<sup>36</sup>

**Pennsylvania:** Capture at least the first two inches of rainfall from all impervious surfaces and retain onsite at least the first one inch of runoff (through reuse, evaporation, transpiration, and/or infiltration); at least 0.5 inch must be infiltrated;<sup>37</sup>

**Philadelphia, PA:** Infiltrate the first one inch of rainfall from all impervious surfaces; if onsite infiltration is infeasible, the same performance must be achieved offsite; and<sup>38</sup>

**Washington, D.C.:** Retain onsite the first 1.2 inches of rainfall from a 24-hour storm with a 72 hour antecedent dry period through evapotranspiration, infiltration, and/or stormwater harvesting.<sup>39</sup>

**West Virginia:** Retain onsite the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation.<sup>40</sup> Allow alternative compliance in cases of infeasibility "for up to 0.6 inches of the original obligation at a 1:1.5 ratio,"<sup>41</sup> effectively allowing for demonstrated infeasibility to reduce retention requirements, with proper alternative compliance, by 60 percent.

The widespread implementation of such onsite retention standards demonstrates the practicability of onsite retention as a practice for reducing the discharge of pollutants in

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<sup>36</sup> 42 U.S.C. 17094; U.S. EPA, Tech. Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under § 438 of the Energy Independence and Security Act (December 2009), at 12 ("Federal Projects Guidance").

<sup>37</sup> Pennsylvania Department of Environmental Protection Pennsylvania Stormwater Best Management Practices Manual, Chapter 3 (December 30, 2006), at 7.

<sup>38</sup> City of Philadelphia, Philadelphia Stormwater Regulations § 600.5; City of Philadelphia Philadelphia Stormwater Management Guidance Manual: Version 2.0 (2006), at 1-1, Appendix F.4.1.

<sup>39</sup> Draft NPDES Permit No. DC0000221, Authorization to Discharge under the National Pollutant Discharge Elimination System Municipal Separate Stormwater System Permit, at § 4.1.1.a. The Permit also requires a retrofit program for existing discharges. (*Id.* at § 4.1.2.)

<sup>40</sup> State of West Virginia Department of Environmental Protection, Division of Water and Waste Management, General National Pollution Discharge Elimination System Water Pollution Control Permit, NPDES Permit No. WV0116025 (June 22, 2009), at ¶II.C.b.5.a.ii.A.1 ("West Virginia Permit").

<sup>41</sup> *Id.*, at ¶ II.C.b.5.a.ii.A.4.

stormwater. Indeed, when recently-issued MS4 permits have been challenged elsewhere, they have been found deficient for *omitting* such requirements. For example, a North Carolina administrative hearings board found that an MS4 permit violated the MEP standard because it omitted pollution control measures, "such as infiltration measures, which would reduce discharges more than the measures contained in the permits." *North Carolina Wildlife Fed. Central Piedmont Group of the NC Sierra Club v. N.C. Division of Water Quality*, 2006 WL 3890348 at 19 (N.C.O.A.H. October 13, 2006). In addition, the West Virginia Environmental Quality Board recently upheld that State's MS4 Permit, and noted specifically that the "Permit implements the 'maximum extent practicable' requirement *by requiring* that new development and redevelopment sites retain on site the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation."<sup>42</sup>

b. LID is a Cost Effective Means of Addressing Stormwater Pollution

Evidence cited by the Regional Board in the Fact Sheet also highlights the economic benefits and cost-effectiveness of implementing the Draft Permit's LID requirements. "In the vast majority of cases," U.S. EPA has found, "implementing well-chosen LID practices saves money for developers, property owners, and communities while protecting and restoring water quality."<sup>43</sup> Specifically U.S. EPA found that "significant savings were realized due to reduced costs for site grading and preparation, stormwater infrastructure, site paving, and landscaping. Total capital cost savings ranged from 15 to 80 percent when LID methods were used" instead of conventional stormwater management techniques.<sup>44</sup> The savings identified in these documented studies are noteworthy considering they do not reflect the additional economically beneficial externalities LID provides, including reduced costs of municipal infrastructure, reduced costs of municipal stormwater management, and increased value of real estate.

**2. The Specific EIA and Onsite Retention Standards Required in the Draft Permit are Well Supported**

Similarly, evidence submitted to the Regional Board amply demonstrates that the specific EIA and onsite retention standard contained in the Draft Permit represent a technologically feasible approach in Ventura County and would reduce stormwater discharges and pollution far better than practices that allow for the discharge of the design storm volume. A study by Dr. Richard Horner extensively discusses the viability of and need for a strict EIA standard to protect

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<sup>42</sup> West Virginia Environmental Quality Board, Order Granting Motions for Summary Judgment and Denying Motions for Additional Discovery as Moot in Appeal No. 09-16-EQB (March 26, 2010), at 9.

<sup>43</sup> U.S. EPA, Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices (December 2007), at iii ("U.S. EPA Cost Study"); See Draft Fact Sheet, at 32.

<sup>44</sup> U.S. EPA Cost Study, at. iv.

Ventura County water quality.<sup>45</sup> Notably, that study found that achieving 5% EIA is feasible for a wide range of sites in Ventura County, but that “Effective Impervious Area (EIA) can practicably be capped at three percent, a standard more protective than that proposed in the draft permit.”<sup>46</sup> Dr. Horner concluded that a 3% standard would in fact be warranted, “[i]n order to protect the biological habitat, physical integrity, and other beneficial uses of the water bodies in Ventura County, effective impervious area should be capped at no more than three percent.”<sup>47</sup> This comports with the findings of a study completed for the Ocean Protection Council, which specifically recommended that: “Regulated development projects shall reduce the percentage of effective impervious area to less than five percent of total project area by draining stormwater into landscaped, pervious areas.”<sup>48</sup>

The Ventura Study and other documents and studies contained in the record also detail the substantial benefits that LID and the imposition of an EIA standard provide in comparison to conventional BMPs. As noted in the Ventura Study:

[B]y retaining water from the site to meet a 3% EIA standard, LID practices result in drastically less polluted runoff compared to conventional BMPs (reducing site runoff volume and pollutant loading to zero in many typical rainfall scenarios). Even treating stormwater with the best-performing conventional BMPs is much less effective than using LID practices to retain water with a strong numeric requirement like 3% EIA.<sup>49</sup>

Thus, Dr. Horner concluded, the Permit’s approach is “feasible and practicable ... [for] maintaining the natural hydrology of land being developed,” and “a lower EIA [limitation] is a feasible and practicable way to eliminate the discharge of pollutants that could cause or contribute to violations of water quality standards.”<sup>50</sup> Importantly, this conclusion is based on a site’s ability to retain its *total* annual rainfall volume, as opposed to merely retaining the 85th percentile storm, as the Permit requires.

Additionally, the Draft Permit’s LID provisions contain relief from the 5% EIA limitation where infeasibility is demonstrated. (Permit, at ¶ 4.E.III.2.) Alternative compliance provisions allow a site to include up to 30 percent EIA for cases of demonstrated infeasibility. Under the

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<sup>45</sup> Ventura Study.

<sup>46</sup> *Id.*, at 1.

<sup>47</sup> *Id.*, A-4.

<sup>48</sup> Ocean Protection Council of California (January 2008) State and Local Policies Encouraging or Requiring Low Impact Development in California, at 27.

<sup>49</sup> Horner April 10 Letter, at 1 (summarizing the conclusions of the Ventura Study).

<sup>50</sup> Ventura Study, at 15.



Permit, development and redevelopment sites within Ventura County will be required to retain 80 percent of the annual rainfall at a site (based on the 80% annual volume capture calculation method in ¶ 4.E.III. of the Permit). In cases of demonstrated infeasibility, a site will be allowed to discharge 30% of this volume, or 24% of the total annual rainfall volume (30% of the 80% volume). Subtracting this 24% volume of water from the volume required under the retention standard, a site demonstrating infeasibility would therefore be required to retain only 56% of the total annual onsite rainfall. This correlates with the findings of the Horner study. The Horner study found that for the vast majority of sites, 100% of the total annual rainfall could be retained onsite, and thus no discharge whatsoever would be required. However, even in the most challenging of circumstances, the Horner study determined a site would be able to retain approximately 60% of the total annual rainfall volume.<sup>51</sup> Thus, the 30% EIA standard merely reflects the lower limit of the achievable retention volume in Ventura County.

Monitoring of runoff from streets retrofitted using LID techniques in other jurisdictions demonstrates the feasibility of compliance with the 30% EIA standard. For example, in Seattle, WA, under the 2<sup>nd</sup> Avenue Northwest Street Edge Alternatives project a portion of 2<sup>nd</sup> Avenue was redesigned to reduce impervious cover. Monitoring showed that runoff generated at the site dropped from 1361 ft<sup>3</sup> of runoff per inch of rain to just 25.3 ft<sup>3</sup> of runoff per inch of rain after incorporation of LID practices.<sup>52</sup> This yield represents just 1.9 percent of the volume of runoff generated before the retrofit occurred. Monitoring of a second project on a sloped street on which rainfall previously generated openly flowing water showed that after retrofit using LID practices, no discharge occurred in 79 percent of rainfall events, and that 48 to 74 percent of the total water volume entering the system was retained through infiltration and evaporation.<sup>53</sup>

Further, this approach to infeasibility has been applied in other stormwater permits. The NPDES permit regulating small MS4s in West Virginia, for instance, allows alternative compliance in cases of infeasibility “for up to 0.6 inches of the original obligation at a 1:1.5 ratio,” effectively allowing for demonstrated infeasibility to reduce retention requirements, with proper alternative compliance, by 60 percent.<sup>54</sup> The approach taken in the Ventura Permit is thus neither unwarranted nor novel.

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<sup>51</sup> See Ventura Study, at Tables 5 and 9.

<sup>52</sup> Cameron Chapman, and Richard R. Horner, NW 110<sup>th</sup> Street Natural Drainage System Performance Monitoring, Prepared for Seattle Public Utilities (September 2007), at 3.

<sup>53</sup> Cameron Chapman and Richard R. Horner, Performance Assessment of a Street-Drainage Bioretention System, *Water Environment Research* Vol. 82 No. 2 (February 2010), at 1.

<sup>54</sup> West Virginia Permit, ¶ II.C.b.5.a.ii.A.4.

### 3. EPA Endorsed the Adopted Language

U.S. EPA has long interpreted the MEP standard as a continually evolving floor for performance, which requires “expanded or better-tailored BMPs” over time.<sup>55</sup> This interpretation is borne out by U.S. EPA comments and testimony on this and other permits in California. Notably, U.S. EPA has called upon Regional Boards across California to prioritize the implementation of LID, recently threatening to “consider objecting to the [San Francisco Bay region’s] permit” if it does not include “additional, prescriptive requirements” for LID.<sup>56</sup> This comports with the findings of the State Board, which commissioned a report which concluded that “[t]he important concept across all of [the] approaches [described in the report] is that the regulations established a *performance requirement* to limit the volume of stormwater discharges.”<sup>57</sup>

Along with the prioritization of LID implementation, EPA stated that its “primary objective for incorporating LID into renewed MS4 permits, especially for those that represent the third or fourth generation of permits regulating these discharges, is that the permit must include clear, measurable, enforceable provisions for implementation of LID.”<sup>58</sup> U.S. EPA noted specifically that “LID requirements . . . should be revised to clarify that regulated projects must utilize LID design elements to ensure onsite management of stormwater.”<sup>59</sup>

This is particularly relevant given that, as mentioned previously, U.S. EPA commented approvingly on the Ventura Permit at the May 7 hearing. Stating that U.S. EPA had determined that “it’s really important for improvements to be made to include clear and quantifiable performance criteria,”<sup>60</sup> U.S. EPA endorsed the *specific* language ultimately inserted into the Permit: “with those changes made . . . the permit would deserve to be adopted.”<sup>61</sup> Given U.S. EPA’s approval of the adopted provisions and its express statements that, in order for a permit to be approved, it must include quantifiable limits such as those in the Permit, any changes to

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<sup>55</sup> Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, 61 Fed. Reg. 43,761 (August 26, 1996).

<sup>56</sup> Letter from Douglas E. Eberhardt, U.S. EPA, to Dale Bowyer, San Francisco Bay Regional Water Quality Control Board (April 3, 2009), at 1 (“Eberhardt Letter”).

<sup>57</sup> State Water Resources Control Board, A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption (December 2007), at 23 (emphasis added) (“SWRCB LID Report”).

<sup>58</sup> Eberhardt Letter, at 1-2.

<sup>59</sup> *Id.* at 2.

<sup>60</sup> Hearing Transcript, at 119: 6-8.

<sup>61</sup> *Id.* at 121: 7-10; *see generally id.* at 120:21 – 121:10.

weaken the Draft Permit in this regard would no longer meet U.S. EPA approval, as required under the Clean Water Act. (33 U.S.C. §§ 1342(b)(4), (d); 40 C.F.R. § 123.29.)

**4. Many of the Permit's Terms are Not Stringent Enough: If the Agreement is Voided Then the Regional Board Must Strengthen the Draft Permit's Onsite Retention, MAL, Beach Water Monitoring, and BMP Performance Standards**

a. The Regional Board Should Strengthen Onsite Retention Requirements

While we urge the Regional Board to adopt the Draft Permit now before it, should any part of the agreement be altered we note that the evidence before the Regional Board demonstrates that standards more stringent than those to be adopted are warranted. As detailed above, when the Board first adopted the LID provisions that are now up for reconsideration in May 2009, the federal government already required buildings over 5,000 square feet to retain the 95<sup>th</sup> percentile storm, rather than to retain only the 85<sup>th</sup> percentile storm as required by Order 09-0057.<sup>62</sup> And Dr. Richard Horner found in his study of Ventura County that, given soil conditions there, the EIA could be "practicably capped at three percent, a standard more protective than that proposed in the draft permit."<sup>63</sup> Still, the five percent EIA was reasonably supportable under the MEP standard at that time.

In the intervening period, the U.S. EPA has assessed the federal building standard and found that LID provisions based on retention of the 95<sup>th</sup> percentile storm are practicable and in many instances more cost effective than traditional BMPs. The U.S. EPA produced guidance comparing the costs of using green infrastructure control measures against the costs of using traditional stormwater controls in a variety of contexts. In Denver, a 4.5 acre site with 55% impervious cover was able to meet the 95th percentile rainfall event standard at a cost of 17.3% less than a traditional approach. In Atlanta, a 21 acre site with 70% impervious cover was able to meet the standard at a cost of only 9.9% more than traditional stormwater controls.<sup>64</sup>

Similarly, West Virginia has adopted a permit requiring onsite retention for the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation. Further, the District of Columbia is now considering an MS4 permit that would require new development and redevelopment "to achieve onsite retention of 1.2" volume of stormwater from a 24-hour storm with a 72-hour antecedent dry period through evapotranspiration, infiltration and/or stormwater harvesting." Additionally, that permit includes a requirement that the Permittee establish performance metrics for retrofit projects under a program to control existing discharges.

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<sup>62</sup> 42 U.S.C. 17094; Federal Projects Guidance, at 12.

<sup>63</sup> Ventura Study, at 1.

<sup>64</sup> *Id.*

In the past year, then, between the adoption of Order 09-0057 and the Board's reconsideration of the Draft Permit, the LID provisions have remained the same but the MEP standard has moved forward. Now, the LID provisions in the Draft Permit fall short of the MEP. Thus, while we believe that the Board should adopt the Permit in its current form, if the Board wants to amend the LID provisions, all that it is legally allowed to do is to make the provisions more protective to ensure they keep up with the MEP.

b. Municipal Action Levels Must Be Required if the Agreement is Altered by the Regional Board

In adopting the language of the agreement reached between the Environmental Groups and Ventura County Permittees at the May 7, 2009 hearing on Order 09-0057, the Regional Board opted to remove the entire municipal action levels ("MALs") section of the then Tentative Permit. As we did at the May 2009 hearing, we support the action to remove the MALs requirements from the Draft Permit only as they relate to the larger agreement; absent the adoption of the agreement in its entirety, we hold that the MALs section and its substantive requirements should remain in the Draft Permit, and in fact, that it should be strengthened as outlined below and stated in our April 10, 2009 comment letter.<sup>65</sup>

The April 30, 2009 Draft Permit included a section on MALs that were calculated using the 80<sup>th</sup> percentile concentrations of selected pollutants in the nationwide Phase I MS4 monitoring data. (April 30, 2009 Draft Permit ¶ II.1.) Specifically, the April 30, 2009 Draft included five pollutants with associated MALs. The April 30, 2009 Draft called for an Action Plan to address exceedances of MALs if monitoring data show that there is a "running average of twenty percent or greater exceedances of the MALs." (*Id.* at ¶ II.3.)

Although MALs are not intended as equivalent to attainment of water quality standards, the comparison to California Toxics Rule ("CTR") criteria brings to light flaws with the values proposed in the April 30, 2009 Draft. As shown in the following table, the proposed copper, lead, and zinc MALs are significantly less stringent than CTR criteria. For instance, the lead MAL is *twenty-eight times* less stringent than the CTR chronic criterion. Discrepancies of this magnitude are not substantiated.

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<sup>65</sup> Letter from Heal the Bay to Tracy Egoscue, Regional Board Executive Officer, at 2-3 (April 10, 2009).

Parameter	Proposed MAL (ug/L)	CTR Acute Criterion(ug/L)	CTR Chronic Criterion(ug/L)
Total Cu	87	13.5	9.38
Total Pb	122	82.17-110	3.16-4.24
Total Zn	660	122.7	121.7

Table 1: Comparison of proposed MAL values and CTR criteria

More importantly, a comparison of the MALs to actual BMP performance data shows that the MALs are flawed. The attached tables were taken from an analysis by Geosyntec Consultants of the ASCE/EPA BMP database.<sup>66</sup> The comparison of the proposed MALs from the April 30, 2009 Draft to demonstrated BMP effluent water quality clearly indicates that the MALs are set to reflect relatively poor BMP performance. For instance, the proposed MAL for total copper is 87 ug/L, while over 95% of the hydrodynamic devices in the database achieve at least 38.55 ug/L total copper. The median performance is 15.41 ug/L. As another example, the MAL for zinc is 660 ug/L, while even the worst 5% of biofilter BMPs achieve 181.28 ug/L. The median performance is 30.26 ug/L.

In other words, almost all of the BMPs that were monitored achieved better effluent water quality than the proposed MAL in these cases, and the median performance was vastly superior to the MAL value. This discrepancy between the MALs that were proposed in the April 30, 2009 Draft and demonstrated BMP performances cannot be justified given that MALs are used to trigger further action such as modifying BMPs.

The MAL concept has great potential as a means of identifying problem pollution areas and inducing required follow-up actions until the MALs are achieved. Should the Regional Board choose to alter any of the provisions detailed in the agreement reached between the Environmental Groups and Ventura County Permittees, MALs should be reinstated in the Draft Permit. However, a MAL should be established for more pollutants, and the previously proposed MAL values must be strengthened to reflect good science and existing technical achievement in this region and the rest of the country. The Board could use as its reference point the water quality achieved by the top 10% of MS4 programs in the U.S. Clearly, these programs have systematically implemented BMPs in an effective manner that achieves water quality improvement. Alternatively, the Board could utilize the Geosyntec analysis of BMP performance to develop appropriate MALs (see Attached Exhibit).

Municipal stormwater permits have required BMP implementation to the maximum extent practicable ("MEP") for nearly two decades, and the MAL provision proposed in the April

<sup>66</sup> The Geosyntec study was an internally funded document on BMP performance. Our use of this information does not imply any agreement or disagreement by Geosyntec with the conclusions advanced here by the Environmental Groups.

30, 2009 Draft gives the impression that implementation of the worst performing BMPs represents an appropriate Municipal Action Level. The MALs in the April 30, 2009 Draft in no shape or form represent MEP as demonstrated in the comparisons to BMP performance data above. In general the MAL approach is a step forward; however, the proposed values will never allow water quality standards attainment in receiving waters impacted by municipal stormwater discharges. Thus if the agreement does not hold, we ask the Regional Board to maintain the MAL concept and go a step further to strengthen the previously proposed MALs.

c. Beach Water Quality Monitoring Provisions Must be Strengthened

The April 30, 2009 Draft Permit and the Draft Permit currently under consideration by the Regional Board both include beach water quality monitoring. These provisions were also part of the larger agreement between the Environmental Groups and Ventura County Permittees. We strongly support the Regional Board maintaining beach water quality monitoring requirements at ten Ventura County beach locations in the proposed monitoring program. As discussed in Section I.A., *supra*, stormwater runoff is a major source of beach pollution, including bacteria pollution. As this is a significant public health issue, it is critical that, should the Health Department discontinue this weekly monitoring, the Permittees be on hand to undertake beach water quality monitoring at stormwater impacted sites. The scope of the monitoring program must include weekly, year-round monitoring at these beach locations, similar to what the Regional Board has required for the Los Angeles County MS4 permit for over a decade. Stormwater and non-stormwater runoff occur on a year-round basis and are a known source of bacteria pollution to beaches. However, if revisions are made to the agreement or any of its provisions, the Draft Permit should be revised to specify that monitoring take place at the wave-wash directly in front of stormdrain and stream sources (point zero). This is necessary to ensure that the waters closest to the discharge are evaluated.

d. BMP Performance Standards Must Be Required

Although not discussed in the Public Notice for the Draft Permit, the inclusion of BMP performance standards was also part of the agreement between the Environmental Groups and Permittees. As a result of these negotiations, and support from Regional Board staff, the April 30, 2009 Draft Permit included specified "treatment BMP performance standards" for storm water pollutants likely to be discharged for an 85<sup>th</sup> percentile 24-hour runoff event. Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database. We strongly support maintaining this provision.

One of the most effective ways to ensure the success of stormwater programs and the attainment of water quality standards is to require performance-based criteria. Flow-based design criteria are simply not adequate to ensure that water quality standards are consistently met because flow, and corresponding BMP size, is but one factor in determining BMP effectiveness. The Board must include scientifically supported, performance-based design criteria in the Draft Permit to move the Region more quickly toward attaining water quality standards for receiving waters.

Chair Lutz and Members of the Board

June 7, 2010

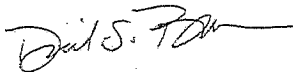
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An analysis of the ASCE/EPA stormwater BMP database provides a basis for the development of scientifically sound water quality performance criteria.<sup>67</sup> As part of the agreement, the Environmental Groups conceded to use of the median performance from the ASCE/EPA stormwater BMP database. No discharger can reasonably refute that it should have to meet median performance criteria. However if the agreement is altered by the Regional Board, we believe that the Board should revise the Draft Permit to require that BMPs installed at new development and redevelopment projects perform as well or better than 75 percent of the BMPs in the ASCE/EPA database. For BMPs in sub-watersheds that have no demonstrated water quality impairments (i.e., those not identified on the 303(d) list as impaired) or for development sites that are not on the list of specified SUSMP development categories, the Draft Permit should require that *at least* the 50th percentile performance (median) should be met for the term of this permit.

#### V. Conclusion

For the aforementioned reasons, we urge the Regional Board to adopt the Draft Permit without further substantive change. Please do not hesitate to contact us if you have any questions,

Sincerely,



David S. Beckman  
Noah Garrison  
Jeremy Brown  
Natural Resources Defense Council



Mark Gold  
Kirsten James  
Heal the Bay

<sup>67</sup> Geosyntec analysis of the ASCE/EPA stormwater BMP database (see Attached Exhibit)

Effluent Statistics		Effluent Percentiles									
BMPID	Parameter	Count	NDCount	%ND	5th	10th	25th	50th	75th	90th	95th
Detention Basins	Cadmium, Dissolved (ug/L as Cd)	75	43	57%	0.012	0.020	0.050	0.144	0.566	1.830	2.167
Detention Basins	Cadmium, Total (ug/L as Cd)	97	29	30%	0.083	0.110	0.248	0.568	1.313	2.359	3.145
Detention Basins	Copper, Dissolved (ug/L as Cu)	152	0	0%	1.947	2.526	4.864	8.117	13.727	24.263	28.125
Detention Basins	Copper, Total (ug/L as Cu)	184	14	8%	2.870	3.697	7.180	13.016	21.922	32.357	42.223
Detention Basins	Lead, Dissolved (ug/L as Pb)	111	52	47%	0.061	0.093	0.185	1.031	3.353	5.731	7.519
Detention Basins	Lead, Total (ug/L as Pb)	146	18	12%	0.837	1.639	4.902	12.725	28.191	52.553	97.903
Detention Basins	Nitrate + Nitrite, Total (mg/L as N)	27	18	67%	0.002	0.003	0.010	0.048	0.142	0.575	1.020
Detention Basins	Nitrate Nitrogen, Total (mg/L as N)	103	10	10%	0.133	0.174	0.270	0.578	0.918	1.684	2.150
Detention Basins	Nitrogen, Ammonia Total (mg/L as N)	13	3	23%	0.016	0.019	0.029	0.048	0.098	0.208	0.289
Detention Basins	Nitrogen, Kjeldahl, Total (mg/L as N)	97	14	14%	0.436	0.542	0.781	1.242	1.951	3.162	3.918
Detention Basins	Nitrogen, Total (mg/L as N)	12	0	0%	0.528	0.575	0.775	1.272	2.431	3.856	4.495
Detention Basins	Phosphorous, Dissolved (mg/L as P)	49	12	24%	0.028	0.035	0.049	0.085	0.143	0.251	0.329
Detention Basins	Phosphorous, Total (mg/L as P)	174	20	11%	0.014	0.019	0.037	0.108	0.283	0.460	0.670
Detention Basins	Solids, Total Dissolved (mg/L)	81	1	1%	9.083	19.536	45.677	73.510	111.402	233.722	379.539
Detention Basins	Solids, Total Suspended (mg/L)	177	8	5%	2.114	3.043	9.192	21.958	43.145	76.742	117.692
Detention Basins	Zinc, Dissolved (ug/L as Zn)	153	1	1%	3.585	7.232	20.610	34.267	60.530	101.297	146.808
Detention Basins	Zinc, Total (ug/L as Zn)	207	2	1%	12.097	17.843	34.930	60.976	105.574	197.697	263.675
Biofilters	Cadmium, Dissolved (ug/L as Cd)	342	66	19%	0.079	0.096	0.199	0.200	0.200	0.303	0.464
Biofilters	Cadmium, Total (ug/L as Cd)	361	49	14%	0.081	0.149	0.200	0.206	0.424	0.840	1.258
Biofilters	Copper, Dissolved (ug/L as Cu)	399	4	1%	1.046	1.530	2.939	5.868	11.064	17.656	22.703
Biofilters	Copper, Total (ug/L as Cu)	468	9	2%	1.787	2.656	4.273	7.984	17.241	32.435	44.607
Biofilters	Lead, Dissolved (ug/L as Pb)	368	26	7%	0.293	0.471	1.000	1.000	2.959	6.677	11.700
Biofilters	Lead, Total (ug/L as Pb)	483	50	10%	0.824	1.000	1.345	4.157	14.028	43.513	66.517
Biofilters	Nitrate + Nitrite, Total (mg/L as N)	27	0	0%	0.138	0.174	0.311	0.611	0.955	1.641	2.215
Biofilters	Nitrate Nitrogen, Total (mg/L as N)	476	12	3%	0.052	0.095	0.165	0.375	0.748	1.601	2.486
Biofilters	Nitrogen, Ammonia Total (mg/L as N)	14	4	29%	0.007	0.009	0.017	0.031	0.066	0.142	0.173
Biofilters	Nitrogen, Total (mg/L as N)	395	4	1%	0.469	0.633	0.894	1.342	2.138	3.600	6.378
Biofilters	Nitrogen, Kjeldahl, Total (mg/L as N)	96	0	0%	0.128	0.205	0.396	0.643	1.560	2.329	2.855
Biofilters	Phosphorous, Dissolved (mg/L as P)	38	0	0%	0.136	0.151	0.197	0.283	0.483	1.039	1.417
Biofilters	Phosphorous, Total (mg/L as P)	539	8	1%	0.042	0.056	0.114	0.240	0.451	0.815	1.167
Biofilters	Solids, Total Dissolved (mg/L)	357	1	0%	11.444	23.210	46.397	76.845	114.831	164.080	201.933
Biofilters	Solids, Total Suspended (mg/L)	467	7	1%	1.255	3.043	8.371	20.027	49.854	115.978	233.464
Biofilters	Zinc, Dissolved (ug/L as Zn)	399	4	1%	5.000	5.000	8.732	19.485	35.696	52.821	71.794
Biofilters	Zinc, Total (ug/L as Zn)	533	51	10%	4.479	6.395	14.164	30.256	67.208	119.646	181.275



Effluent Statistics		Parameter	Count	NDCCount	%ND	Effluent Percentiles								
BMPID	Parameter					5th	10th	25th	50th	75th	90th	95th		
	Hydrodynamic Devices	Cadmium, Dissolved (ug/L as Cd)	79	32	41%	0.011	0.017	0.042	0.199	0.785	1.793	2.239		
	Hydrodynamic Devices	Cadmium, Total (ug/L as Cd)	88	25	28%	0.024	0.038	0.102	0.382	1.261	3.035	5.047		
	Hydrodynamic Devices	Copper, Dissolved (ug/L as Cu)	89	15	17%	1.074	1.409	2.961	9.580	16.630	31.985	41.695		
	Hydrodynamic Devices	Copper, Total (ug/L as Cu)	89	0	0%	2.791	3.340	7.462	15.409	21.659	32.301	38.550		
	Hydrodynamic Devices	Lead, Dissolved (ug/L as Pb)	89	35	39%	0.123	0.201	0.434	1.184	3.769	7.376	8.733		
	Hydrodynamic Devices	Lead, Total (ug/L as Pb)	95	8	8%	0.887	1.351	2.691	6.297	13.428	23.845	42.576		
	Hydrodynamic Devices	Nitrate + Nitrite, Total (mg/L as N)	42	13	31%	0.062	0.078	0.117	0.226	0.359	0.506	0.707		
	Hydrodynamic Devices	Nitrate Nitrogen, Total (mg/L as N)	59	2	3%	0.073	0.098	0.152	0.306	0.680	1.299	2.120		
	Hydrodynamic Devices	Nitrogen, Ammonia Total (mg/L as N)	69	19	28%	0.009	0.014	0.041	0.090	0.313	0.814	1.103		
	Hydrodynamic Devices	Nitrogen, Kjeldahl, Total (mg/L as N)	77	4	5%	0.224	0.351	0.566	1.086	1.830	3.576	5.984		
	Hydrodynamic Devices	Nitrogen, Total (mg/L as N)	13	0	0%	0.902	0.988	1.335	2.101	3.633	5.233	5.939		
	Hydrodynamic Devices	Phosphorous, Dissolved (mg/L as P)	58	19	33%	0.000	0.001	0.002	0.019	0.088	0.172	0.253		
	Hydrodynamic Devices	Phosphorous, Total (mg/L as P)	170	5	3%	0.011	0.023	0.067	0.148	0.270	0.926	2.612		
	Hydrodynamic Devices	Solids, Total Dissolved (mg/L)	198	6	3%	3.905	6.206	19.175	60.768	422.937	7951.478	22415.772		
	Hydrodynamic Devices	Solids, Total Suspended (mg/L)	199	14	7%	2.977	5.543	17.995	43.173	99.360	190.249	303.150		
	Hydrodynamic Devices	Zinc, Dissolved (ug/L as Zn)	99	18	18%	3.357	5.113	12.784	34.762	76.530	156.734	334.604		
	Hydrodynamic Devices	Zinc, Total (ug/L as Zn)	174	13	7%	11.341	17.793	37.092	69.089	124.178	201.430	291.030		
	Media Filters	Cadmium, Dissolved (ug/L as Cd)	111	74	67%	0.009	0.014	0.033	0.097	0.290	0.680	1.261		
	Media Filters	Cadmium, Total (ug/L as Cd)	139	80	58%	0.035	0.053	0.109	0.257	0.764	1.401	1.778		
	Media Filters	Copper, Dissolved (ug/L as Cu)	258	7	3%	1.344	1.971	4.050	7.064	13.178	23.449	29.351		
	Media Filters	Copper, Total (ug/L as Cu)	294	19	6%	1.881	2.692	5.569	9.795	19.043	35.176	54.304		
	Media Filters	Lead, Dissolved (ug/L as Pb)	227	117	52%	0.055	0.088	0.195	0.550	1.641	3.681	5.916		
	Media Filters	Lead, Total (ug/L as Pb)	251	44	18%	0.426	0.609	1.397	4.376	13.378	23.679	39.362		
	Media Filters	Nitrate + Nitrite, Total (mg/L as N)	35	11	31%	0.170	0.213	0.301	0.951	1.763	2.859	3.926		
	Media Filters	Nitrate Nitrogen, Total (mg/L as N)	232	16	7%	0.181	0.253	0.424	0.690	1.151	2.029	2.643		
	Media Filters	Nitrogen, Ammonia Total (mg/L as N)	38	19	50%	0.003	0.006	0.022	0.102	0.728	1.919	2.931		
	Media Filters	Nitrogen, Kjeldahl, Total (mg/L as N)	229	12	5%	0.352	0.464	0.855	1.491	2.303	3.779	6.796		
	Media Filters	Nitrogen, Total (mg/L as N)	20	0	0%	1.921	2.077	2.530	3.472	4.695	6.024	6.682		
	Media Filters	Phosphorous, Dissolved (mg/L as P)	90	21	23%	0.019	0.025	0.038	0.085	0.142	0.238	0.407		
	Media Filters	Phosphorous, Total (mg/L as P)	280	25	9%	0.018	0.040	0.075	0.129	0.230	0.394	0.566		
	Media Filters	Solids, Total Dissolved (mg/L)	114	0	0%	12.216	24.105	41.104	56.574	85.506	137.169	230.416		
	Media Filters	Solids, Total Suspended (mg/L)	358	15	4%	1.317	2.762	6.321	14.784	37.784	87.741	148.957		
	Media Filters	Zinc, Dissolved (ug/L as Zn)	254	15	6%	3.212	5.915	14.843	30.677	76.394	143.497	266.374		
	Media Filters	Zinc, Total (ug/L as Zn)	383	19	5%	2.596	4.680	14.669	35.580	103.083	281.505	436.429		



Effluent Statistics		Parameter	Count	NDCount	%ND	Effluent Percentiles								
BMPID						5th	10th	25th	50th	75th	90th	95th		
	Wetland Channel	Lead, Dissolved (ug/L as Pb)	11	0	0%	1.425	1.674	2.751	5.129	15.298	41.726	61.601		
	Wetland Channel	Lead, Total (ug/L as Pb)	41	0	0%	1.008	1.079	2.308	5.387	13.481	41.883	112.900		
	Wetland Channel	Nitrate Nitrogen, Total (mg/L as N)	41	0	0%	0.056	0.081	0.122	0.235	0.458	0.841	1.544		
	Wetland Channel	Nitrogen, Ammonia Total (mg/L as N)	10	0	0%	0.030	0.036	0.062	0.132	0.338	0.810	1.087		
	Wetland Channel	Nitrogen, Kjeldahl, Total (mg/L as N)	33	0	0%	0.657	0.717	0.868	1.285	1.576	1.926	2.198		
	Wetland Channel	Nitrogen, Total (mg/L as N)	42	0	0%	0.729	0.851	1.033	1.491	1.949	3.650	9.669		
	Wetland Channel	Phosphorous, Dissolved (mg/L as P)	41	0	0%	0.039	0.045	0.059	0.080	0.136	0.188	0.226		
	Wetland Channel	Phosphorous, Total (mg/L as P)	43	0	0%	0.073	0.083	0.118	0.190	0.315	0.502	0.997		
	Wetland Channel	Solids, Total Dissolved (mg/L)	9	0	0%	80.579	89.337	116.846	250.169	890.815	1588.032	1806.235		
	Wetland Channel	Solids, Total Suspended (mg/L)	41	0	0%	3.126	4.359	8.931	19.119	75.927	322.275	992.616		
	Wetland Channel	Zinc, Dissolved (ug/L as Zn)	9	0	0%	6.392	7.679	10.642	22.766	105.009	236.595	291.699		
	Wetland Channel	Zinc, Total (ug/L as Zn)	9	0	0%	20.242	22.827	30.856	54.025	207.935	545.748	713.850		

