

Comment Letters Received from Building Industry

- BIASC and CICWQ
- Building Industry Legal Defense (BILD) Foundation
- Leighton Group



Southern California
Los Angeles and Ventura
Counties Chapter

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July 23, 2012

Submitted via email to:

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iridgeway@waterboards.ca.gov

LAMS42012@waterboards.ca.gov

Original sent via U.S. Mail

Attn: Mr. Ivar Ridgeway, Chief
Stormwater Permitting
Los Angeles Regional Water Quality Control Board
320 W. Fourth Street, Suite 200
Los Angeles, CA 90013

RE: Comments from Building and Construction Industry Representatives Concerning the Tentative Draft Permit for the Greater Los Angeles County MS4 Permit

Dear Mr. Ridgeway:

On behalf of the Building Industry Association of Southern California, Inc. (BIASC), including its Los Angeles-Ventura Chapter (BIASC/LAV) and the Construction Industry Coalition on Water Quality (CICWQ) and the members thereof, we appreciate the opportunity to provide comments on the Tentative Draft of the Greater Los Angeles County MS4 Permit (Permit) that was released for public review on June 6, 2012.

BIA/SC is a nonprofit trade association representing more than 1,000 member companies, which together have nearly 100,000 employees. BIA/SC's members have, for decades, built the majority of the homes in the region that it serves, and the LAV Chapter works with members building in Los Angeles and Ventura Counties. CICWQ is a water quality coalition comprised of representatives from five industry trade associations (in addition to BIA/SC) involved in the development of public and private building, infrastructure and roads throughout California (Associated General Contractors, Engineering Contractors Association, Southern California

Contractors Association, Engineering and General Contractors Association, and United Contractors). All of the above trade associations are affected by the post-construction runoff control requirements proposed in the tentative draft Permit, and this letter and supporting attachments are intended to provide the LA Regional Board with constructive suggestions for improvement.

The building industry recognizes that the Planning and Land Development requirements in MS4 permits are a major policy issue for water boards statewide. The LARWQCB established precedents on numerous Planning and Land Development issues in the Ventura County MS4 Permit (Order No. R4-2010-0108) and related Ventura County Technical Guidance Manual (TGM). We are concerned, therefore, that this permit departs from and is inconsistent with the precedent set by this Region in the Ventura County MS4 Permit and TGM with respect to many Planning and Land Development requirements. Further, this draft permit incorporates many detailed technical standards for low impact development (LID) and treatment control that other permits, including the Ventura County MS4 Permit, address in technical guidance. This approach creates great disparity between the LID and treatment control technical standards adopted in the Ventura County MS4 Permit and TGM and those imposed by this draft permit, and eliminates flexibility during the next term of this permit to implement LID and treatment control innovations as they are developed.

LARWQCB Staff held a workshop on July 9, 2012 which served to clarify the intent of many of the requirements in the proposed Tentative Draft. Through their responses to questions, staff made it clear that in most cases, the intent was not to deviate significantly from the precedent in the Ventura County MS4 Permit and TGM. Nonetheless, the workshop revealed that the draft permit requirements, as currently drafted, are not fully aligned with either staff intention or the Ventura County precedent. **Therefore, we respectfully request that a revised draft of the permit be prepared and circulated for comment before the Board takes any final action to adopt a permit.** This revised tentative draft of the Permit should reflect greater consistency with the policies and technical standards (e.g., for onsite treatment and retention, offsite retention, and treatment control), and other planning and land development requirements reflected in the adopted Ventura County MS4 Permit and TGM.

The tentative draft Permit should retain, however, one set of provisions that deviate somewhat from the Ventura County MS4 Permit. Specifically, the draft permit introduces a significant move towards permitting off-site volume reduction solutions that augment water supply by creating the opportunity for a project applicant to participate in Regional Groundwater Replenishment. While this concept has been included in previous permits, including the Ventura County MS4 Permit, the tentative draft establishes a clearer pathway for such solutions, and eliminates hurdles that would prevent their implementation, based on what staff described at the July 9, 2012 workshop as their desire to make offsite retention and infiltration for purposes of water supply augmentation an equal goal with onsite retention. Unfortunately, the language, as drafted, does not fully achieve the staff intention of co-equal goals that was outlined in previous

staff drafts and as described in the staff workshop. The draft permit provisions create confusion between procedures and requirements applicable to implementation of Regional Groundwater Replenishment and those applicable to other offsite Alternative Compliance methods. Further, under the best possible interpretation of the Regional Groundwater Replenishment provisions as they are currently written, it appears that offsite infiltration for purposes of water supply augmentation is at best a co-equal goal not with onsite retention, but instead with onsite biofiltration, based on the requirements that must be satisfied before Regional Groundwater Replenishment solutions can be implemented.

In light of these concerns, we offer more detailed comments and supporting information regarding modifications to the draft permit language to increase consistency with the Ventura County MS4 Permit and TGM, and to improve the draft permit's planning and land development approach for regional ground water replenishment projects. We have attached a comment matrix titled *LA MS4 Comments_BIALAV_CICWQ* and supporting Attachments 1-4.

1. As drafted, the tentative draft permit creates fewer hurdles and requirements for onsite retention than for Regional Groundwater Replenishment, and potentially makes offsite capture as difficult to implement as other types of alternative compliance solutions.

During the July 9, 2012 staff workshop, staff indicated that the intent of the permit was to create co-equal goals for onsite, micro-replenishment projects and offsite, macro-replenishment projects. As written, however, the draft permit appears to require onsite retention to be maximized, and other additional requirements to be met before off-site groundwater replenishment can be considered as an alternative. This impression is created by inclusion of the Regional Groundwater Replenishment pathway in the multiple sections of the draft permit that require maximization of onsite retention, evidence of the infeasibility of further onsite retention, and satisfaction of multiple additional requirements prior to implementation of alternative compliance solutions. (See Sections D.6.c.ii through D.6.c.iv). If the intent is to allow macro groundwater replenishment projects, then, at a minimum, the language that requires the project applicant to demonstrate why it is not advantageous to replenish onsite (in D.6.c.ii.(3) and D.6.c.iii.(4)(c)) should be removed.

If this language is not removed, project applicants will be required to spend unnecessary amounts of time and money disproving that it is more advantageous to replenish onsite than off-site. It is highly unlikely that these small projects will be as effective at groundwater replenishment as macro-scale regional recharge solutions because onsite retention facilities will be located depending on where new development and redevelopment happens to occur, rather than being located in those places that make the most sense for purposes of enhancing water supply and accessibility to the captured groundwater. Conversely, macro recharge solutions can

be located in more optimal places. Macro solutions are also more likely to have long lasting success because they will be appropriately maintained, whereas small, dispersed retention projects are unlikely to have reliable operation and maintenance.

In order to encourage capture and use of stormwater for groundwater replenishment, we suggest that the section be reorganized and revised as necessary (including deletion of Sections D.6.c.ii.(3) and D.6.c.iii.(4)(c)) to clearly distinguish the Regional Groundwater Recharge pathway from other offsite alternative compliance solutions, rather than intermingling the requirements for Regional Groundwater Recharge and Alternative Compliance for Technical Infeasibility. We also suggest that staff prepare a flowchart that outlines the BMP selection process for new development and redevelopment projects.

The draft permit language also fails to consider the secondary consequences on water supply associated with its insistence on small, onsite micro-replenishment, and in its limited definition of offsite water supply augmentation solutions that can be prioritized above other offsite solutions. For example, the draft permit requires onsite retention even if it would preclude better solutions, such as the use of recycled water onsite. Protection of the marketability of recycled water is imperative to assure continued capital and operational investments in its production. When micro-harvesting is prioritized and alternative compliance is precluded despite its potential impacts on demand for recycled water, the unintended consequence is a reduction in investment in recycled water production and associated adverse impacts on water conservation and reuse.

In addition, the draft permit language currently requires that green roofs must be maximized, including by adoption of new local regulations to encourage green roof implementation, before alternative compliance pathways may be pursued. This requirement ignores studies that have demonstrated that green roofs often increase overall water demand, adversely affecting water supply and conservation programs. Furthermore, this requirement does not provide the flexibility needed for some jurisdictions with fire and safety concerns associated with green roofs to limit their use to where it is appropriate from a fire and safety perspective.

Finally, we suggest that by limiting offsite capture for purposes of supply augmentation to capture for Regional Groundwater Replenishment projects, the current draft permit unnecessarily limits the types of water supply augmentation projects that runoff can be directed toward, and thereby fails to maximize use of runoff for water supply augmentation. We recommend that the permit language should be expanded to allow the direction of runoff to all types of beneficial Water Supply Replenishment projects so that projects that augment surface water storage facilities, water agency conveyance facilities that deliver water to water agencies for treatment and use, surface water beneficial use restoration projects, and other supply and conservation projects can be implemented.

Revising the language of the draft permit as necessary to assure that offsite water supply augmentation is a coequal goal with onsite, micro-retention is of particular importance now, at

the time when the County of Los Angeles has decided to pursue a stormwater assessment to implement an integrated stormwater program requiring an investment of millions of dollars to study and identify stormwater capture opportunities in its water conservation and flood control system.

2. The onsite LID implementation requirements and standards unnecessarily deviate from the Board's precedent in Ventura County.

LARWQCB Staff have indicated that the permit is intended to be consistent with the requirements in the Ventura County MS4 Permit and TGM. The tentative draft permit's LID requirements, however, deviate in significant ways from those adopted in the Ventura County permit and TGM, and no evidence or rationale has been presented to explain or justify the changes that were made. Further, the changes in these LID requirements and standards made in the draft permit should have been subjected to analysis pursuant to the factors that must be evaluated and balanced to assure that the new standards represent requirements that are appropriate to implement LID technologies to the Maximum Extent Practicable, including the technical feasibility, cost, and public acceptance of the new standard. Yet no analysis has been done about whether the proposed changes are practicable. For example:

- The tentative draft establishes significantly more restrictive infeasibility thresholds (i.e., maximum application of green roof and rainwater harvesting and 0.15 inches per hour infiltration rate) that must be met to allow treated runoff to leave a site, without regard for its consequences on geotechnical stability, public health and safety, or use of recycled water.
- The tentative draft characterizes biofiltration as an alternative compliance practice rather than recognizing that technically it is a viable, very effective LID treatment solution.
- The tentative draft includes detailed LID design standards rather than establishing a requirement for the Permittee's to develop technical guidance to implement the standards. Those standards depart significantly from the standards of the Ventura County MS4 Permit and TGM, requiring LID BMPs that must be significantly larger than those required under the adopted Ventura permit, and much more frequent implementation of substantially more expensive BMPs (green roofs and large cisterns/onsite use) regardless of regulatory impediments.
- The tentative draft permit seeks to force implementation of certain BMP technologies (e.g., green roofs, harvest and use), to the point of requiring local ordinance changes that are inconsistent with other current state building and public health regulations, rather than allowing a project to select BMPs to meet a performance-based standard established by the permit.

Collectively, these changes have significant impact on the size and design of LID BMPs and will negatively affect other sustainable development and environmental goals such as compact design and development, smart growth, water conservation, and use of recycled water. We strongly encourage revision of the draft permit as necessary to incorporate LID implementation requirements and standards that are the same as those established by the Ventura County MS4 Permit and TGM.

3. The Tentative Draft Permit BMP implementation requirements are overly prescriptive and will constrain future improvements in BMPs.

While this draft permit adopts a general framework for implementation of LID BMPs that is similar to the Ventura County MS4, it does not provide for the development of technical guidance to address the specific requirements for implementation of LID BMPs. Instead, the draft permit itself contains detailed technical LID design and implementation standards and requirements, and those standards and requirements are very different than, and inconsistent with, those adopted by the Ventura County MS4 Permit and TGM.

At the July 9, 2012 workshop, staff indicated concern that some Permittees, particularly smaller cities, might not have the resources or expertise to develop their own technical guidance, and therefore staff has included detailed technical standards in the permit itself. We point out that if some permittees lack technical expertise to develop guidance, these cities will struggle with successful implementation of the permit's very detailed technical standards, which throws the effectiveness of the entire permit into question. In addition, Permittees could utilize guidance that has been prepared by other jurisdictions, including the Ventura County TGM, as a template. Detailed BMP design specifications and technical standards should not be included in the regulatory permit document in order to facilitate the selection and engineering design of BMPs, as these aspects are most responsive to site-specific conditions and pollutants of concern. . Inclusion of these technical specifications in the permit will not only encumber implementation but will restrict the progress of future BMP improvements.

Therefore, the detailed standards incorporated into the Planning and Land Development section and those in Attachment H should be eliminated, and the permit instead should set performance-based standards and defer the development of technical specifications to technical guidance to be developed and/or adopted by Permittees.

4. The proposed grandfathering language will force costly redesign of projects that developers and Cities have spent time and money preparing. Language from the Ventura County MS4 Permit should be used.

Contrary to the grandfathering provisions of the Ventura MS4, the draft permit grandfathering provision does not recognize the point in the development process when project design is both practically and legally final, such that redesign is not feasible or within the legal purview of Permittees to demand. The draft language will unnecessarily force redesign of projects that are nearing construction. Also unlike the Ventura County MS4 Permit, the grandfathering clause fails to recognize that there are legal limitations on project final approvals that preclude Permittees from forcing redesign.

5. The water quality mitigation criteria appear to create unnecessary legal liability for development projects.

During the July 9, 2012 staff workshop, staff clarified that the purpose of water quality mitigation criteria (Section 4.D.6.c.iv, including Table 11) is to guide the selection of onsite treatment BMPs for projects that have been approved for offsite runoff volume mitigation or groundwater replenishment to address the pollutants of concern for the project site. As written, however, this section appears to create unnecessary legal liability in the treatment BMP selection process, as it requires that treatment BMPs be selected to achieve receiving water limitations and WQBELS when measured at downstream MS4 outfalls.

Developers, as a practical matter, cannot develop treatment systems to assure end-of-pipe compliance with every single water quality standard specified in the Basin Plan so that there is no potential violation of the permit actionable not only by the LARWQCB, but also subject to third-party citizen suits. We concur with the concerns raised by Permittees in the workshop (and discussed further in the Building Industry Legal Defense Foundation letter) that requiring compliance with receiving water limitations and TMDL waste load allocations at the outfall improperly transforms water quality standards and waste load allocations into permit effluent limitations that are not established pursuant to proper regulatory procedures and requirements, the exceedance of which creates the basis for potential permit compliance actions against developers implementing treatment systems upstream of the outfall under Section 4.D.6.c.iv,

In addition to these liability issues, even if used only for their intended purpose to guide selection of BMPs, Table 11 contains benchmark values for pollutants based on the “median effluent quality of the three highest performing BMPs, per pollutant, in the stormwater BMP database.” Technically, treatment systems cannot be developed that comply with the Table 11 benchmarks, as it is not technically feasible to comply with a benchmark based on a median value all the time. The median is inherently a value that is exceeded 50 percent of the time. Consequently, effluent from any treatment system developed, even if it incorporates BMPs performing as well as the

three highest performing BMPs for each pollutant of concern, may exceed the benchmarks 50 percent of the time. Also, because the values were taken from different BMPs depending on the pollutant identified, it is not possible to select one single BMP that meets all of the benchmarks for all identified pollutants. Taking a pollutant-by-pollutant approach to rating BMPs implicitly requires a highly inefficient, “Frankenstein” approach to the selection of treatment systems, incorporating pollutant specific BMPs for every pollutant, rather than allowing for an integrated approach to runoff treatment that efficiently provides effective treatment of all project pollutants of concern.

Given the context that under the draft permit, treatment BMPs would only be used onsite in combination with offsite retention of the full water quality design volume, this section would be much improved by replacing the current language with two simple requirements:

- Select those treatment BMPs necessary to address all project pollutants of concern, including pollutants that may be associated with a project and are causing an impairment in receiving waters; and
- Select BMPs that that have demonstrated treatment efficiency equivalent to sand filters for the project pollutants of concern.

6. The Permit should allow for the creation of Regional Stormwater Mitigation Plans.

The current LA County MS4 permit allows for the preparation and approval of regional stormwater mitigation programs. It is not clear whether the tentative draft Permit is continuing to permit such programs. Is Section VI.D.6.c.vi (p. 78) of the draft permit intended to allow preparation and approval of regional stormwater mitigation programs, similar to those allowed under Section 4.D.9 of the current MS4 Permit? In the proper circumstances, regional stormwater mitigation plans can provide for equivalent or better pollutant and volume reduction far more cost efficiently. Therefore, the draft permit should be revised to expressly allow regional stormwater mitigation plans that employ a combination of LID retention, LID bio-filtration, and onsite treatment/regional retention BMPs for retention and treatment of stormwater, so long as pollutant and volume reduction provided prior to discharge to receiving waters is equivalent to that which would be provided on a site-by-site basis under Section VI.D.6.c.1.

7. There is no need for Interim Hydromodification Control Criteria in this Permit, as Permittees have adopted criteria.

The draft permit should be revised to allow permittees to use currently adopted hydromodification control standards as an alternative to the Interim Hydromodification Control

Criteria proposed in the Tentative Order. For example, Los Angeles County adopted hydromodification control criteria in its Low Impact Development Manual in January 2009. These established criteria are sufficient to address hydromodification control until such time as the State or Regional Water Board adopts a final Hydromodification Policy or criteria.

* * * * *

BIA/SC and CICWQ have been active participants and contributors to the creation of new and improved MS4 permits across the region. We continue to believe that rational, *implementable* permit requirements are critical to achieving great progress concerning water quality and our environment. We hope that these comments are received in the manner in which they are intended – to continue the discussion of how we can create a workable permit that improves water quality to the maximum extent practicable. We remain committed to a positive dialog with the Board and its staff – one that will result in an informed, balanced and effective permit.

Sincerely,



Holly Schroeder
Executive Officer
BIASC Los Angeles & Ventura Chapter



Mark Grey, Ph.D.
Technical Director
Construction Industry Coalition on
Water Quality

Comments on the Tentative Order, Greater Los Angeles County Municipal Separate Storm Sewer System Permit Submitted by The Building Industry Association of Southern California, Los Angeles-Ventura Chapter; Building Industry Legal Defense Foundation; and Construction Industry Coalition on Water Quality; July 23, 2012

Tentative Order Narrative Requirement	BIA/LAV-BILD-CICWQ Comment	Rationale for Change in Staff Working Proposal Minimum Control Measures	BIA/LAV-BILD-CICWQ Suggested Permit Language/Requirement
<p>General Comment:</p> <p>Economic considerations in evaluating and selecting LID BMPs for control of the stormwater quality design volume are absent.</p>	<p>We continue to emphasize including economic feasibility in selecting onsite or offsite LID BMPs, and include economic feasibility as part of the LID BMP feasibility determination process along with technical feasibility. The maximum extent practicable (MEP) standard expressly includes the recognition of economic considerations when evaluating stormwater management options.</p>	<p>Santa Ana Regional Board Permit R8—2009-0030, Section XII.C.6: “The LID BMPs shall be designed to mimic pre-development hydrology through technically and economically feasible preventative and mitigative site design techniques. LID combines hydrologically functional site design, with pollution prevention methods to compensate for land development impact on hydrology and water quality.”</p> <p>San Diego Regional Board Permit R9—2009-0002, Section F.(7)(b): “For each PDP participating, a technical feasibility analysis must be included demonstrating that it is technically infeasible to implement LID BMPs that comply with the requirements of Section F.1.(d)(4). The Copermittee(s) must develop criteria for the technical feasibility analysis including a cost benefit analysis, examination of LID BMPs considered and alternatives chosen. Each PDP participating must demonstrate that LID BMPs were implemented as much as feasible given the site’s unique conditions.</p>	<p>Within the current tentative order there are several instances where, in addition to a demonstration of technical feasibility, economic feasibility must be included when evaluating and selecting LID BMPs. In the Tentative Order, these instances are found in:</p> <ol style="list-style-type: none"> 1. D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, i. Integrated Water Quality/Flow Reduction Resources Management Criteria <u>(2)</u>. 2. D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, ii, Alternative Compliance for Technical Infeasibility or Opportunity for Groundwater Replenishment <u>(1) and (2)</u> 3. D. Storm Water Management Program Minimum Control

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			<p>Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, iii. Alternative Compliance Measures, <u>introductory paragraph and in (4)(e).</u></p> <p>We suggest inserting “<u>and economically</u>” to read “technically and economically infeasible” in the instances noted above.</p>
<p>Attachment A; Definitions:</p> <p>Definition edits needed for:</p> <ul style="list-style-type: none"> ii. Biofiltration iii. Bioretention viii. Infiltration xi. Planter boxes and other flow-through treatment BMPs <p>Definitions needed for:</p> <ul style="list-style-type: none"> 1) Bioinfiltration 2) Project 3) Total Project Area 	<p>Some definitions provided are inconsistent with established knowledge and practice in infiltration and biotreatment system designs. In addition, we recommend including definitions for “bioinfiltration”, “project” and “total project area.”</p>	<p>There are established definitions in the Ventura County MS4 Permit Technical Guidance Manual that clearly and succinctly define essential permit terms and conditions, in addition to those in the staff proposed MCM.</p>	<p>Revisions or additions are shown in <u>strikeout</u> or <u>underline</u>:</p> <p>Biofiltration: A LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through evapotranspiration, incidental infiltration <u>if feasible</u>, and filtration. As described in the Ventura County Technical Guidance Manual, studies have demonstrated that <u>biofiltration</u> of 1.5 times the stormwater quality design volume (SWQDv) provides approximately equivalent or greater reductions in pollutant loading when compared to bioretention or infiltration of the SWQDv. Incidental infiltration <u>volume reduction</u> is an important factor in achieving the</p>

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			<p>required pollutant load reduction. Therefore, the term “biofiltration” as used in this Order is defined to include only systems designed to facilitate incidental infiltration <u>volume reduction through the use of vegetated media to promote ET and by allowing for incidental infiltration where feasible.</u> Biofiltration BMPs include bioretention systems with an underdrain, bioswales, <u>and other systems providing biofiltration mechanisms to address pollutants of concern.</u></p> <p>Bioretention: A LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by an optional gravel-filled temporary storage pit dug into the in-situ soil. As defined in this Order, a bioretention BMP <u>should</u> may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated in this</p>

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			<p>Order as <u>bioinfiltration (if the underdrain discharge point is elevated) or biofiltration (if the underdrain is at the bottom or the system must be lined).</u></p> <p>Infiltration: A LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, <u>bioretention areas</u>, dry wells, and pervious pavement.</p> <p>Planter boxes and other flow-through treatment BMPs: modular vault type planter boxes or “high flow biotreatment” devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain. Planter boxes do not allow for incidental infiltration and therefore do not meet the requirements of biofiltration as defined in this Order. However, planter boxes may be used to meet Water Quality Mitigation Criteria as specified in Part [TBD] of this Order.</p> <p>Bioinfiltration: A LID BMP that is <u>designed for partial infiltration of</u></p>

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			<p><u>runoff and partial biofiltration. These facilities are similar to bioretention devices with underdrains, but the discharge elevation from the underdrain is raised above the gravel sump (via upturned elbow or elevated underdrain) to facilitate infiltration. These facilities can be used in areas where there are no hazards associated with infiltration, but infiltration of the full SWQDv may not be feasible due to low infiltration rates or high depths of fill. These facilities may not result in retention of the SWQDv but they can be used to meet the requirement to retain stormwater onsite to the maximum extent practicable (MEP). Swales and other biofiltration systems can be designed as bioinfiltration systems by including an infiltration sump below the lowest surface discharge elevation.</u></p> <p><u>Green roof</u> A LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a planter box flow-through</p>

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			<p>treatment BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain.</p> <p><i>Rationale for revision: contemporary green roof designs include a drainage layer; if a drainage layer is not provided, water flows over the surface of the soil and can lead to erosion.</i></p> <p>Project: <u>development, redevelopment, and land disturbing activities. The term is not limited to “project” as defined under CEQA (Reference: California Public Resources Code § 21065).</u></p> <p>Total Project Area: <u>Total project area (or “gross project area”) for new development and redevelopment projects is the disturbed, developed, and un-disturbed portions within the project’s property (or properties) boundary, at the project scale submitted for first approval. Areas proposed to be permanently</u></p>

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			<u>dedicated for open space purposes as part of the project are explicitly included in the "total project area."</u>
Attachment H Bioretention/Biofiltration Design Criteria	We recommend moving this detailed design criteria to technical guidance specific to Los Angeles County.	All other existing MS4 permits in southern California provide permittees and project applicants with detailed design criteria support in technical guidance documents. Including this level of detail in the permit significantly reduces flexibility of design standards to evolve with evolving science and innovation.	Delete Attachment H; See <i>bioretention</i> , <i>bioinfiltration</i> , and <i>biofiltration definitions</i> on page 2 of this comment matrix.
Attachment J Determination of Erosion Potential	We provide comments on Permit Attachment J in a separate document file entitled BIASC_CICWQ Comments on Attachment J (Attachment 1).	The equation given in Appendix J is one work index, but there are other indices which can be used in Ep analysis as well. For instance, bed sediment transport equations can be used for applicable bed material. Revisions are intended to provide this clarification.	See Attachment 1
Attachment L TMDL Provisions for Santa Clara River Watershed Management Area	Page 7 of the Santa Clara River (SCR) Bacteria TMDL Basin Plan Amendment states that "compliance can alternatively be based on an allowable load," however this language is missing from page L-2 of the Draft Permit's TMDL provisions. By omitting this compliance option in the Permit, the draft Permit is inconsistent with the Basin Plan Amendment.	The Permit should be consistent with the TMDL Basin Plan Amendment. The MS4 Permit should not modify the Basin Plan Amendment without a reopener.	We request that the statement "compliance can alternatively be based on an allowable load," be inserted as an alternative for the final effluent limits for the SCR Bacteria TMDL; this would be an alternative for BOTH the single sample and geometric mean objective based WQBELs.
D. Storm Water Management Program Minimum Control	We recommend that the term "pre-development water balance" be	Phase I MS4 permits in California including North and South Orange	Remove the reference to "pre-development water balance" and

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Measures, 6. Planning and Land Development Program, a. Purpose, i.(3) and (7)	<p>eliminated or exceptions to this goal be explicitly recognized. This may be a reasonable goal in some cases, but may be more restrictive than is required to protect surface water and groundwater quality. For example, if recharge is needed, then why is it necessary to require water balance matching when it is actually desirable to increase recharge compared to natural conditions? Additionally it may be cost prohibitive to attempt to manage the entire water balance.</p> <p>We recommend combining (7) (a) and (b) into a single statement indicating LID BMP selection preference and deleting the reference to “bioretention.”</p>	County, Western and Southern Riverside County, and San Bernardino County recognize the use of LID BMPs as a means to potentially mimic “pre-development hydrology”.	<p>replace with “pre-development hydrology” and include “biofiltration”. Section (3) would then read: “...and employing <u>Low Impact Development (LID) design principles to mimic pre-development hydrology through infiltration, evapotranspiration, harvest and use, and biofiltration.</u>”</p> <p>The statement should combine (7)(a)(b) into (7)(a) and read: “...managing water resources in the following order of preference: (a) <u>Infiltration, rainfall harvest and use, and biofiltration.</u>”</p>
D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, b. Applicability, i. New Development Projects (1)(g)	<p>We recommend providing clarifying language that implementing the green streets manual to the MEP fulfills and supersedes all other development / redevelopment requirements (i.e., LID and/or hydromodification control).</p> <p>We recommend providing clarifying language that the green streets provision applies to standalone streets, roads, highways, and freeway projects, and also applies to streets within larger projects.</p>	This roadway requirement is consistent with the approved Ventura County MS4 Permit Technical Guidance Manual.	Add footnote to b. Applicability, i. New Development Projects, (1)(g) that reads: “ <u>implementing the USEPA Green Streets Manual in a manner consistent with the MEP standard fulfills and supersedes all other development/redevelopment requirements, including Low Impact Development and Hydromodification Control criteria</u> ”.

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<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, i. Integrated Water Quality/Flow Reduction Resources Management Criteria (1).</p>	<p>Biofiltration is an established LID BMP for use in attempting to mimic pre-development hydrology.</p>	<p>The Ventura County MS4 Permit as well as other Phase I MS4 permits in California including SF Bay Area, North and South Orange County, Western and Southern Riverside County, and San Bernardino County recognize the use of biofiltration in meeting water quality volume and flow control performance standards.</p>	<p>Modify permit language to read: (1) Each Permittee shall require all New Development and Redevelopment projects identified in Part VI.D.6.b to control pollutants, pollutant loads, and runoff volume emanating from the project site by: (1) minimizing impervious surface area and (2) controlling runoff from impervious surfaces through infiltration, bioretention, rainfall harvest and use, <u>and biofiltration.”</u></p>
<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, i. Integrated Water Quality/Flow Reduction Resources Management Criteria (2).</p>	<p>The Staff working proposal MCM released in March 2012 provided an option for a project proponent to use an offsite location to manage an equivalent volume of stormwater if co-equal water quality and water supply objectives are established. In the Tentative Order the opportunity for regional groundwater replenishment has been relegated to an Alternative Compliance option.</p> <p>We request that this option be restored as co-equal to onsite management of the SWQDv.</p>	<p>Allow projects that are within the contributing watershed area of an “Opportunity for Regional Groundwater Replenishment” to “opt in” to the Regional Groundwater Replenishment Project as a compliance option that is co-equal to onsite management of the SWQDv per VI.D.6.c.i.(2)</p>	<p>Modify permit language to read:</p> <p>(2) Except as provided in Part VI.D.6.c.ii (Technical Infeasibility) or Opportunity for Regional Ground Water Replenishment, Part VI.D.6.d.i (Local Ordinance Equivalence), or Part VI.D.6.c.v (Hydromodification), below, each Permittee shall require the project to either retain on site the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:</p> <p>(a) The 0.75-inch, 24-hour rain event or (b) the 85th percentile, 24-hour rain event, as determined from the Los Angeles County 85th percentile isohyetal map, whichever is greater,</p>

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			<p style="text-align: center;"><u>or</u></p> <p><u>Where a project has been determined to provide an opportunity to replenish regional groundwater supplies at an offsite location, each permittee may allow projects to comply with this Order through offsite groundwater replenishment projects as described in Part VI.D.6.iii (4)</u></p>
<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, i. Integrated Water Quality/Flow Reduction Resources Management Criteria (3)(4).</p>	<p>The Tentative Order does not support the established hierarchy of LID BMP selection found in similar Phase I MS4 permits adopted in California since 2007, and as most recently as 2010. The Tentative Order establishes a zero discharge threshold for compliance with the Integrated Water Quality/Flow Reduction criteria in subpart (2) that is inconsistent with the application of LID technologies for stormwater management. The exclusion of LID biofiltration technologies in meeting the onsite capture standard is without merit or technical support.</p> <p>Design criteria for bioretention and biofiltration found in (3) should be deleted, and instead moved to</p>	<p>Design criteria for bioretention, biofiltration, harvest and use, and using evapotranspiration/green roofs as hydrologic source controls should be moved to separate technical guidance specific to the LA County MS4 permit. While each of these elements may be applicable to projects, technical guidance is needed to identify the considerations associated with implementing these system based on project types. For example, it is not technically or economically appropriate to utilize green roofs in some project types because of construction methods (i.e., steeply sloped roofs), specialized maintenance requirements, water consumption impacts, and potential</p>	<p>Strike sections (3) and (4)</p>

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	<p>technical guidance.</p> <p>In addition, delete (4) “consider the maximum potential for evapotranspiration from green roofs and rainfall harvest and use”, and instead address these options for application in technical guidance specific to LA County.</p>	<p>increases in fire risks. As another example, it is not technically or economically appropriate to utilize harvest and use where reliable demand is not adequate to a yield meaningful stormwater retention benefit that justifies capital and O&M costs.</p>	
<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, ii. Alternative Compliance for Technical Infeasibility or Opportunity for Regional Groundwater Replenishment (1)</p>	<p>The Opportunity for Regional Ground Water Replenishment should be a stand-alone, co-equal option with that of onsite management of the SWQDv.</p>	<p>Allow projects that are within the contributing watershed area of an “Opportunity for Regional Groundwater Replenishment” to “opt in” to the Regional Groundwater Replenishment Project as a compliance option that is co-equal to onsite management of the SWQDv per VI.D.6.c.i.(2)</p>	<p>Strike “Opportunity for Regional Ground Water Replenishment” from c. New Development / Redevelopment Project Performance Criteria, ii. Alternative Compliance for Technical Infeasibility or Opportunity for Regional Groundwater Replenishment</p> <p>Revise part (1) to read: In instances of technical infeasibility or where a project has been determined to provide an opportunity to replenish regional ground water supplies at an offsite location, each Permittee may allow projects to comply with this Order through the alternative compliance measures as described in Part VI.D.6.c.iii</p>
<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New</p>	<p>A statement such as “the project applicant must demonstrate that the project cannot reliably retain 100 percent of the SWQDv onsite, even</p>	<p>We recommend modification of the permit language to incorporate elements of conducting a reasonable engineering analysis of the feasibility</p>	<p>Revise to read: To demonstrate technical infeasibility, the project applicant</p>

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Development/Redevelopment Project Performance Criteria, ii. Alternative Compliance for Technical Infeasibility or Opportunity for Regional Groundwater Replenishment (2)	with the maximum application of green roofs and rainwater harvest and use....” is unclear given existing permit language, and is inconsistent with precedential language established in the Ventura County MS4 permit.	for harvest and use systems and estimation of reliable water demand. See the Ventura County TGM for suggested language, and incorporate into a LA County MS4 permit specific technical guidance. Green roofs are considered a hydrologic source control and not required in California Phase I MS4 permits because of numerous concerns regarding cost and performance relative to performance of other onsite LID BMPs. Green roofs are not applicable to all project types based on the discussion provided earlier in this matrix.	must demonstrate that the project cannot reliably retain 100 percent of the SWQDv onsite, even with the maximum application of green roofs and rainwater harvest and use, and that compliance with the applicable post-construction requirements would be technically <u>or economically</u> infeasible by submitting site specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect.
Attachment H Bioretention/Biofiltration Design Criteria, Section 4.a.	(1) The 24-hour criterion for infiltration as described in Attachment H is arbitrary and is an unnecessarily short drawdown time for achieving acceptable performance in back to back storms. Additionally, this limitation is unnecessary to protect against vector concerns. If this criterion stands, then BMPs designed to drain in 48 -72 hours (standard design practice) would only be able to count 1/3 to 1/2 of volume as infiltrated. There is no technical basis for this limitation. (2)The 0.15 in/hr criterion is extremely	For infiltration system design criteria support, see i) Attachment 2 , which presents a review of Minimum Infiltration Rates in LID and Stormwater Management Manuals and Ordinances; ii) Attachment 3 , which presents a case study analysis of the effect of infiltration rate feasibility on BMP sizing requirements; iii) Attachment 4 , which presents comments on geotechnical considerations when using soil infiltration systems. In order to encourage infiltration in marginal soil conditions, researchers	While we suggest, that design criteria be moved to technical guidance instead of being included in the Permit, we are providing the following suggestions to improve on the criteria that have been included in the draft Permit: Adjust infiltration drawdown criterion to “48 to 72 hours”. Include an option to demonstrate 80% average annual retention using continuous modeling analysis. (This is consistent with Ventura County MS4

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	<p>low and unprotective compared to what other LID BMP design guidance documents have contained. Additionally, it is not clear if this criterion is before or after a factor of safety is applied.</p>	<p>and design professionals commonly use a <i>bioinfiltration</i> design (elevated underdrain) to so that infiltration is achieved to the extent practicable while providing a secondary treated outlet if soil infiltration rates decline or are misestimated in initial design. For rainfall harvest and use system design criteria support (including calculation of reliable onsite demand), see the Ventura County TGM, pages 6-94 to 6-101</p>	<p>Permit and technical guidance). Make the onsite infiltration criterion more consistent with other MS4 permits (0.3 or 0.5 inches per hour, after applying a prudent factor of safety) adopted in California.</p> <p>We recommend adopting a three-tiered infiltration prioritization model:</p> <p>Tier 1 - $K_{sat} > 0.5$ in/hr after factor of safety – designer should attempt to design system without underdrain unless infiltration is infeasible for other reasons.</p> <p>Tier 2 - $K_{sat} < 0.5$ in/hr after factor of safety but K_{sat} is non-negligible – designer should utilize an elevated underdrain (bioinfiltration) design unless a shallow footprint is practicable given space constraints (in which case, can design without underdrain) or infiltration is infeasible for other reasons (in which case, should utilize a bottom underdrain).</p> <p>Tier 3 - K_{sat} is negligible or infiltration is infeasible for other reason(s) (i.e., would cause a hazard</p>

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			<p>or adverse impact) – utilize an underdrain and protect against incidental infiltration, as needed.</p> <p>Include a table in technical guidance indicating specific percent of site area that would be dedicated to infiltration or biofiltration based on a project type and density.</p>
<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, ii. Alternative Compliance for Technical Infeasibility or Opportunity for Regional Groundwater Replenishment (3)</p>	<p>Part (3) does not support Staff’s statements that Opportunity for Regional Ground Water Replenishment is co-equal with that of 100% management of the SWQDv onsite. We suggest striking this section.</p>	<p>Staff clarified on July 9, 2012 that Opportunity for Regional Ground Water Replenishment is co-equal with that of 100% management of the SWQDv onsite.</p>	<p>Strike (3) To utilize alternative compliance measures to replenish ground water at an offsite location, the project applicant shall demonstrate why it is not advantageous to replenish ground water at the project site, and that the alternative measures shall also provide equal or greater water quality benefits to the receiving surface water than the Water Quality/Flow Reduction/Resource Management Criteria in Part VI.6.D.c.i.</p>
<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, iii. Alternative Compliance Measures</p>	<p>We suggest explicitly removing “to replenish regional ground water supplies” from the introductory statement” and from part (2) because this language does not support Staff’s statements that Opportunity for Regional Ground Water Replenishment is co-equal with that of</p>	<p>Staff clarified on July 9, 2012 that Opportunity for Regional Ground Water Replenishment is co-equal with that of 100% management of the SWQDv onsite.</p>	<p>Revise to read:</p> <p>When a Permittee determines a project applicant has demonstrated that it is technically or economically infeasible to retain 100% of the SWQDv on site, or is proposing an alternative offsite project to</p>

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Introductory Statement on page 71 and part (2) on page 72	100% management of the SWQDv onsite. Conditions for Regional Ground Water Replenishment are appropriately established in iii.(4) with some language modifications (see below)		<p>replenish regional ground water supplies, the Permittee shall require one of the following mitigation options:</p> <p>(2) Offsite Infiltration/Ground Water Replenishment/Bioretention Projects</p>
D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, iii. Alternative Compliance Measures (1)(b) Conditions for Biofiltration (i)	Bioretention and biofiltration design criteria should not be included in permit language. Design criteria evolve and adapt to changing conditions and available information. Inclusion of these specifications in Attachment G will not only encumber implementation, but will also restrict the progress of future LID BMP implementation.	Prescriptive design criteria are best established in engineering guidance documents, and should be included in LA County specific technical guidance.	Strike: Alternative Compliance Measures (1)(b) Conditions for Biofiltration (i) Biofiltration systems shall meet the design specifications provided in Attachment H to this Order unless otherwise approved by the Regional Water Board Executive Officer.
D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, iii. Alternative Compliance Measures (4) Conditions for Offsite Projects	<p>Section (4) is the appropriate location for any conditions governing the use of Regional Ground Water Replenishment projects</p> <p>Project applicants who have a regional ground water replenishment project available to them should not have to demonstrate equal benefit of onsite recharge, as these two types of projects are considered co-equal. A regional project (and its proponents) would demonstrate the water quality and supply benefits in the approval process described in Section iii.(4) and</p>	Staff clarified on July 9, 2012 that Opportunity for Regional Ground Water Replenishment is co-equal with that of 100% management of the SWQDv onsite.	<p>Revise (4) read:</p> <p>(4) Conditions for Offsite Projects <u>and Ground Water Replenishment</u></p> <p>Strike:</p> <p>(c) Project applicant must demonstrate that equal benefits to ground water recharge cannot be met on the project site.</p>

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<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, iv. Water Quality Mitigation Criteria (1-3)</p>	<p>receive approval per (4)(g).</p> <p>This is an extremely onerous requirement and questionably legal; we recommend striking much of this requirement and providing an alternative method of demonstrating that treatment control BMPs have been selected to adequately address pollutants of concern.</p> <p>During the July 9, 2012 staff workshop, staff clarified that the purpose of water quality mitigation criteria (Section 4.D.6.c.iv) is to guide the selection of treatment BMPs for projects that have been approved for offsite mitigation or groundwater replenishment to address the pollutants of concern for the project site. As written, however, this section appears create unnecessary legal liability in the treatment BMP selection process, as it requires that treatment BMPs be selected to achieve receiving water limitations and WQBELS at downstream MS4 outfalls.</p>	<p>Support is needed for the development of Table 11. The studies that were queried to develop this table should be reported to allow a transparent assessment of the validity of the methods used.</p> <p>It is not technically appropriate to establish a benchmark that must be met all the time by taking the median of studies. The median is inherently a value that is exceeded 50 percent of the time. Therefore it is not appropriate to use a median for setting a benchmark unless the benchmark only needs to be met 50 percent of the time. If this is the intent, it should be explicitly clarified.</p> <p>It is not technically appropriate to utilize the 3 best performing BMPs, by pollutant, to establish benchmarks. The BMP database includes more than 500 studies spanning many types of BMPs, including BMPs ranging from sand filters to constructed wetlands to green roofs and others. The unit processes that exist in one BMP to address one pollutant may not be as</p>	<p>Revise to read:</p> <p>(1) Each Permittee shall require all New Development and Redevelopment projects that have been approved for offsite mitigation or ground water replenishment projects as defined in Part VI.D.6.c.ii-iii. to also provide treatment of storm water runoff from the project site, unless the groundwater replenishment project is located downstream of the project and prior to discharge to waters of the United States.. Each Permittee shall require these projects to design and implement post-construction storm water BMPs and control measures to reduce pollutant loadings as necessary to:</p> <p>(a) meet the pollutant specific benchmarks listed in Table 11 at the treatment systems outlet or prior to the discharge to the MS4 and (b) ensure that the discharge does not cause or contribute to an exceedance of water quality standards at the Permittee's downstream MS4 outfall.</p> <p>(3) In addition to the requirements for controlling pollutant discharges</p>

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		<p>effective for another pollutant. Taking the pollutant by pollutant approach to rating BMPs is implicitly requiring the use of a “Frankenstein” of treatment processes that do not exist within a single BMP.</p> <p>It is not technically appropriate to rank BMP studies based solely on their effluent concentration. Within the 500+ studies in the BMP DB, a wide range of BMP study sites exist with a wide range of tributary runoff quality. It is possible, and perhaps likely, that the top three BMPs (ranked only by cleanest effluent) may in fact be cleanest because they had anomalously clean influent. If BMPs must be ranked, they should be ranked as a function of their effluent quality, their ability to achieve statistically significant removal (i.e., out less than in), and back-check that their influent quality is within the range typically observed in urban stormwater runoff. BMPs such as green roofs that address only rainfall directly on a roof (i.e., typically lower pollutant loading than average for an entire site) should be removed.</p>	<p>as described in Part IV.D.6.iv. and the treatment requirements described above, each Permittee shall ensure that the new development or redevelopment will not cause or contribute to an exceedance of applicable water quality based effluent limitations established in Part VI.E pursuant to Total Maximum Daily Loads (TMDLs).</p> <p>Delete: Table 11 and its content</p> <p>Include language so that sand filter equivalency is an acceptable pathway when selecting treatment control BMPs.</p> <p>Include a table that list which BMPs are equal to or better than sand filters for each pollutant of concern. Base the table on the latest studies in the US EPA-ASCE International Stormwater BMP Database.</p> <p>Include an option to demonstrate 80% average annual capture using continuous modeling analysis for sizing of treatment control BMPs.</p>

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<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria v. Hydromodification (Flow/Volume/Duration) Control Criteria (1)(b)(iii) and (1)(c)(i)1.</p>	<p>We recommend providing a definition for pre-project condition.</p> <p>We recommend striking (1)(c)(i)1 and allowing projects less than 50 acres to install LID BMPs to the MEP per process described in Part VI.D.6.c.i, to meet interim hydromodification control standards. In addition, allow projects an additional option of complying with existing LA County Hydromodification Control Requirements found on pages 19 and 20 in the County of Los Angeles Low Impact Development Standards Manual, January 2009.</p>	<p>Ventura County MS4 Permit and Technical Guidance Manual</p> <p>County of Los Angeles Low Impact Development Standards Manual, January 2009.</p>	<p>Provide definition for pre-project condition:</p> <p><u>Pre-project conditions:</u> <u>“The existing land use condition prior to the proposed activity.”</u></p> <p>Delete section v. Hydromodification (Flow/Volume/Duration) Control Criteria ((1)(c)(i)1., and replace with the following:</p> <p><u>1. The combined effects of LID and the treatment BMPs are considered adequate for Hydromodification control for projects that disturb less than 50 acres.</u></p> <p>Include a 4th option for meeting interim hydromodification control standards by referencing the existing LA County hydromodification control requirements found on pages 19 and 20 in the County of Los Angeles Low Impact Development Standards Manual, January 2009.</p>
<p>D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program, c. New Development/Redevelopment Project Performance Criteria, vi.</p>	<p>We recommend moving this paragraph/clause to the section addressing alternative compliance measures when using LID BMPs.</p>	<p>There is a similar statement in Ventura County MS4 permit (July 2010), which appears on page 59 within Section III. New Development/Redevelopment Performance Criteria. 2.(d)</p>	<p>We support this provision.</p>

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Watershed Equivalence			
D. Storm Water Management Program Minimum Control Measures, 6. Planning and Land Development Program. d. Implementation, i. Local Ordinance Equivalence	We recommend recognizing regional mitigation programs in addition to local ordinances that provide program equivalence	Local ordinances and regional mitigation programs provide greater program flexibility, allow jurisdictional specific water quality issues to be directly addressed at a local level, and allow regional projects to incorporate and achieve multiple benefits while meeting water quality standards.	<p>Revise to read:</p> <p>i. <u>Local Ordinance or Regional Mitigation Program</u> Equivalence</p> <p>A local LID ordinance <u>and technical manual or a regional or sub-regional storm water mitigation program</u> that does not fully incorporate the applicable requirements of this Order, shall <u>may</u> be submitted to the Executive Officer of the Regional Water Board for approval <u>as equivalent</u> within X months after the Order effective date. The Executive Officer shall <u>will</u> assess whether the Permittee has provided reasonable assurance that the alternative requirements in the local ordinance <u>or regional or sub-regional storm water mitigation program</u> will provide equal or greater reduction in storm water discharge pollutant loading and volume as would have been obtained through strict conformance with VI.D.6.c.i and ii. Integrated Water Quality/Flow Reduction Resources Management Criteria or Alternative Compliance Measures for Technical Infeasibility</p>

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			<p>of this Order and, if applicable, VI.D.6.c.v. Hydromodification (Flow/Volume Duration) Control Criteria. Local ordinances <u>or regional or sub-regional storm water mitigation programs</u> that do not strictly conform to the provisions of this Order must be approved by the Executive Officer of the Regional Water Board as being “equivalent” in effect to the applicable provisions of this Order.</p>

BIA/SC_CICWQ COMMENTS ON ATTACHMENT J DETERMINATION OF EROSION POTENTIAL

Ep is determined as follows - The *total effective work* done on the channel boundary is derived and used as a metric to predict the likelihood of channel adjustment given watershed and stream hydrologic and geomorphic variables. The index under urbanized conditions is compared to the index under preurban conditions expressed as a ratio (Ep). The effective work index (W) is can be computed in a number of different ways including simplistic work equations, material specific sediment transport equations, or more complex functions based on site calibrated sediment rating curves. One such work equation, which represents the total work done on the channel boundary, includes the following:

~~computed as the excess shear stress that exceeds a critical value for streambed mobility or bank material erosion integrated over time and represents the total work done on the channel boundary:~~

$$W = \sum_{i=1}^n (\tau_i - \tau_c)^{1.5} \cdot V \cdot \Delta t_i \quad (1)$$

Where: W = effective work, τ_i = applied hydraulic shear stress, τ_c = critical shear stress that initiates bed mobility or erodes the weakest bank layer, V = mid-channel flow velocity, Δt_i = applied hydraulic shear stress, t = duration of flows (typically in hours), and n = length of flow record. The effective work index for presumed stable stream channels under pre-urban conditions is compared to stable and unstable channels under current urbanized conditions. The comparison, expressed as a ratio, is defined as the Erosion Potential (Ep)¹ (McRae 1992, 1996).

$$Ep = \frac{W_{post}}{W_{pre}} \quad (2)$$

where:

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

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

Attachment 2 – Minimum Infiltration Rates in LID Manuals and Ordinances

Review of Minimum Infiltration Rates in LID and Stormwater Management Manuals and Ordinances

Updated: April 11, 2012

Manual/Jurisdiction	Minimum Infiltration Rate for Infiltration BMPs
<p>Ventura Technical Guidance Manual (approved by the Executive Officer of the Los Angeles Regional Board on July 13, 2011)</p>	<p>Infiltration is considered infeasible if infiltration is less than 0.3 inches per hour.</p> <p>Infiltration is considered partially feasible from 0.3 inches to 0.5 inches per hour; bioinfiltration system with elevated underdrain should be used, but infiltration systems without an underdrain are not considered feasible.</p> <p>Infiltration is considered feasible without an underdrain if rates are greater than 0.5 inches per hour</p>
<p>Orange County Technical Guidance Document (approved by the Executive Officer of the Santa Ana Regional Board on May 19, 2011)</p>	<p>Infiltration of the full design capture volume is considered infeasible if the infiltration rate is less than 0.3 inches per hour. A minimum factor of safety of 2.0 must be applied to testing observations before comparing to this criterion. Testing results must indicate 0.6 inches per hour or greater.</p> <p>If infiltration rate is less than 0.3 inches per hour but other infiltration feasibility constraints do not apply, then biotreatment systems must be designed with a sump below the lowest surface discharge point.</p> <p>Infiltration rate must be tested at a horizon 2 feet below the anticipated bottom of the infiltration facility to ensure that the potential benefits of soil amendments are accounted for.</p>
<p>City of Los Angeles SUSMP Infiltration Requirements and Guidance (not dated)</p>	<p>Infiltration BMPs</p> <p>Minimum site soil percolation rate shall be 0.5 inches per hour. Soils with a percolation rate of less than 0.5 in/hr may utilize a biofiltration system that includes an under drain system to prevent extended ponding.</p>

Attachment 2 – Minimum Infiltration Rates in LID Manuals and Ordinances

Manual/Jurisdiction	Minimum Infiltration Rate for Infiltration BMPs
<p>City of Los Angeles Development Best Management Practices Handbook - Part B: Planning Activities (4th edition) (adopted by City of Los Angeles' Board of Public Works, July 2011)</p>	<p>Infiltration is considered infeasible if infiltration is less than 0.3 inches per hour and connectivity to soils with higher infiltration rate is not feasible.</p> <p>Infiltration is considered potentially feasible from 0.3 inches to 0.5 inches per hour; additional design considerations may be needed such as an elevated underdrain to provide redundancy in design.</p> <p>Infiltration is considered feasible without additional features such as an underdrain if rates are greater than 0.5 inches per hour.</p>
<p>LA County SUSMP Manual (September 2002)</p>	<p>Bioretention: "The soil should have infiltration rates greater than 0.5 inches per hour, otherwise an underdrain system should be included."</p> <p>Infiltration Basin: "Soils with an infiltration rate of less than 0.3 inches per hour, are not suitable sites for infiltration basins."</p> <p>Infiltration Trench: "Soil should have infiltration rate greater than 0.3 inches per hour and clay content less than 30 percent."</p>
<p>LA County LID Manual (January 2009)</p>	<p>Infiltration is infeasible in locations with native undisturbed infiltration rate less than 0.5 inches per hour.</p>

Attachment 2 – Minimum Infiltration Rates in LID Manuals and Ordinances

Manual/Jurisdiction	Minimum Infiltration Rate for Infiltration BMPs
CASQA BMP Handbook (2004 revision)	<p>Bioretention: “In areas where the native soil permeability is less than 0.5 in/hr an underdrain should be provided.”</p> <p>Infiltration Trench: “The minimum acceptable hydraulic conductivity as measured in any of the three required test holes is 13 mm/hr (0.5 in/hr). If any test hole shows less than the minimum value, the site should be disqualified from further consideration.”</p> <p>Infiltration Basins: “Infiltration basins require a minimum soil infiltration rate of 0.5 inches/hour, not appropriate at sites with Hydrologic Soil Types C and D.”</p>
Caltrans BMP Technology Report (April 2006)	<p>Infiltration Basins: “Siting Constraints: Infiltration basins can only be placed in areas where soil type is RCS type “A”, “B”, or “C”. Soil shall not have more than 30 percent clay or more than 40 percent clay and silt combined. Minimum infiltration rate of 12 mm/hr [=0.47 in/hr] is preferred.</p> <p>Infiltration Trenches: “An infiltration rate of at least 14 mm/hr [=0.55 in/hr] is desired. This infiltration rate would be found in soils with low silt and clay content.</p>
Eastern Washington Manual/ WA DOE Manuals (2004)	<p>Soil Type (p 5-11): “The permeability of the soil underlying a treatment facility has a profound influence on its effectiveness. This is particularly true for infiltration treatment facilities that are best sited in sandy to loamy sand soils. They are not generally appropriate for sites that have final infiltration rates of less than 0.5 inches per hour.”</p>
City of Seattle Public Utilities Department of Planning and Development Stormwater Manual (released November 2009)	Infiltration is infeasible if the infiltration rate (after factor of safety correction) is less than 0.25 inches per hour. Factors of safety range from 2 to 10. Therefore tested infiltration rate must be at least 0.5 to 2.5 inches per hour for infiltration to be feasible.
State of Michigan (Not Dated)	0.52 inches per hour

Attachment 2 – Minimum Infiltration Rates in LID Manuals and Ordinances

Manual/Jurisdiction	Minimum Infiltration Rate for Infiltration BMPs
Georgia Stormwater Management Manual http://www.georgiastormwater.com/ (August 2001)	Bioretention: "The soil must have an infiltration rate of at least 0.5 inches per hour " Infiltration Trench: "Soil infiltration rate of 0.5 in/hr or greater required"

Attachment 3 --Infiltration Rate Sizing Case Study

Case Study: Sensitivity of Infiltration Rate Feasibility Threshold on BMP Sizing Requirements and Associated Costs

Case Study Assumptions		Rationale
85th Percentile Storm Depth, inches	1.0	For illustration purposes, 85th pctl depth ranges from less than 0.75 to more than 1.5 across Los Angeles County
Site Imperviousness	90%	For illustration purposes
Runoff Coefficient	0.82	Based on Los Angeles County Hydrology Manual and LID Manual
Drainage Area, acres	1.0	For illustration purposes
Target Drawdown Time, hours	48	Consistent with Ventura TGM

Case Study System Design Calculations

Assumed Design Infiltration Rate ¹ , inches per hour	System Maximum Effective Depth to Drain in 48 hours, inches	Selected System Effective Depth based on Bioretention Design Criteria ² , inches	BMP Effective Footprint, sq-ft	Approximate BMP Capital Cost ³ , \$	Ranges of Capital Cost from Other Reference Material ⁴ , \$
0.075	3.6	3.6	9,920	170,000	99,000 - 397,000
0.15	7.2	7.2	4,960	84,000	50,000 - 198,000
0.3	14.4	14.4	2,480	42,000	25,000 - 99,000
0.5	24	18	1,980	27,000	20,000 - 79,000
1	48	18	1,980	27,000	20,000 - 79,000

1 - Design rate should be based on applying an appropriate factor of safety to tested value to account for site variability, uncertainty in testing methods, long term clogging, and other factors.

2 - Selected system depth based on the lesser of the depth that will drain in 48 hours and the depth provided using a common bioretention design profile that consists of 12 inch ponding and 2 feet amended soil (0.25 in/in available porosity assumed).

3 - Source: WERF, 2009. Whole Life Cycle Cost Worksheets, Curb Contained Bioretention. Economy of scale may exist that is not reflected here.

4 - Range of estimates from Bannerman et al. (2003), USEPA (2005), and and UFC (2004). Note, range of costs include retrofit and new development applications.

References

- Bannerman, Roger, G. Fries, J. Horwath. 2003. *Source Area and Regional Storm Water Treatment Practices: Options for Phase II Retrofit Requirements in Wisconsin (Document No. EPA-625-R-03-003)*. National Conference on Urban Storm Water: Enhancing Programs at the Local Level. Chicago, IL.
- LACDPW, 2009. Los Angeles County Low Impact Development Manual. January 2009.
- EPA Low Impact Development. 2005. *Quality Assurance for Nonpoint Source Best Management Practices*. http://www.lowimpactdevelopment.org/qapp/bio_costs.htm
- Unified Facilities Criteria (2004). *Low Impact Development*. UFC Publication No 3-210-10. Retrieved September 2008, from: http://www.wbdg.org/ccb/DOD/UFC/ufc_3_210_10.pdf
- Water Environment Research Foundation, 2009. SW2R08, LID and BMP Whole Life Cost Models: Version 2.0. Principal investigator: Christine A. Pomeroy, P.E..



Leighton and Associates, Inc.

A LEIGHTON GROUP COMPANY

July 19, 2012

Los Angeles Regional Water Quality Control Board
320 W. 4th Street
Los Angeles, CA 90013

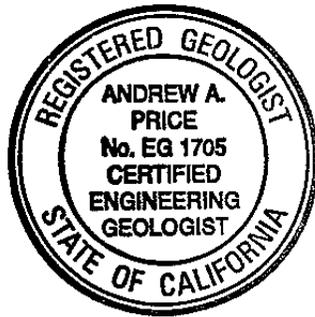
Attention: Mr. Ivar Ridgeway

**Subject: Comments on Tentative Order No. R4-2012-XXX
Waste Discharge Requirements for
Municipal Separate Storm Sewer Systems (MS4)
Discharges Within The Los Angeles County Flood Control District
Including The County of Los Angeles and Incorporated Cities Therein
Except City of Long Beach**

Leighton and Associates, Inc. (Leighton) appreciates this opportunity to provide comments to the Los Angeles Regional Water Quality Control Board on this subject matter. Leighton is a geotechnical, environmental, and materials testing and inspection consulting firm that has been serving the Southern California region for over 50 years.

The tentative MS4 permit for the Los Angeles region defines soil suitable for infiltration Best Management Practice (BMP) facilities such as basins or trenches, as having infiltration rates as low as 0.15 inches per hour. Many other agencies require suitable soils for infiltration purposes to have minimum infiltration rates of 0.3 inches per hour to 0.6 inches per hour. As compared to soils with infiltration rates of 0.3 inches per hour or higher, our experience suggests that soils with infiltration rates less-than (<) 0.3 inches per hour have limited pore space and often contain significant amounts of silt and/or clay. These soils may provide adequate infiltration upon initial exposure for use in an infiltration facility. However, they may become clogged in a relatively short time due to deposition of additional silt contained in the storm water runoff; thus reducing the limited pore space that provides for these soils to have some initial infiltration capability. Additionally, silts and clays, preexisting or deposited in stormwater runoff, may also have expansive soil characteristics, and when exposed to moisture, swelling of these soils may close the limited pore space of basin or trench soils and reduce infiltration rates to less than desired levels.

We understand that criteria for Technical Infeasibility are provided for in the permit if infiltration might exacerbate potential geotechnical hazards and that is a very important consideration. However, the focus of this letter centers on infiltration BMPs that are prone to develop reduced to no infiltration capacity in a short period of use, may create additional geotechnical hazards due to the presence of saturated soils and/or standing water over a prolonged period of time. The Fact Sheet (Attachment F of the Tentative Order No. R4-2012-XXX) makes several references to the Ventura County MS-4 permit (last corrected version dated January 28, 2010). Based upon our review of the Ventura County MS4 Permit, the minimum infiltration rate is 0.5 inches per hour for direct infiltration BMPs by referenced inclusion of the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures. Similarly, our review of the County of Los Angeles Low Impact Development Standards Manual dated January 2009 indicates a minimum infiltration rate of 0.5 inches per hour for infiltration BMPs as well. For these reasons stated above, we would suggest that similar criteria for minimum infiltration rates be considered for the Los Angeles MS4 Permit.



Respectfully submitted,

LEIGHTON & ASSOCIATES

A handwritten signature in black ink, appearing to read "A. Price".

Andrew A. Price, PG, CEG 1705
President

AAP/lr

Attachment: References



REFERENCES

County of Los Angeles, 2009, Low Impact Development Standards Manual, dated January 2009.

Geosyntec Consultants and Larry Walker Associates, 2011, Ventura County Technical Guidance Manual for Stormwater Quality Control Measures, Manual Update 2011, dated July 13, 2011.

State of California Regional Water Quality Control Board, Los Angeles Region, 2009, Waste Discharge Requirements for Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein, Order 09-0057, NPDES Permit No. CAS004002, dated May 7, 2009, Final Corrected January 13, 2010.

State of California Regional Water Quality Control Board, Los Angeles Region, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Los Angeles County Flood Control District, Including the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach, Order No. R4-2012-XXX, NPDES Permit No. CAS004001.





Building Industry Legal Defense Foundation

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Pardee Homes

July 23, 2012

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RE: Order No. R4-2012-XXXX (NPDES Permit No. CAS004001) Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Los Angeles County Flood Control District, Including the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach.

William Devine
Allen Mathkins, et al. LLP

Michael Freeman
KB Home

Dear Mr. Ridgeway:

W. Wes Keusder
Keusder Homes

Steven LaMar
LegiSight, LLC

Thank you for this opportunity to respond to the draft tentative Los Angeles County Municipal Separate Storm Sewer System ("MS4") Permit (the "Draft Permit"), which was provided by public notice dated June 6, 2012. The comments herein are those of Building Industry Legal Defense Foundation ("BILD"), which represents the homebuilding and community development industries within a six-county Southern California region that includes Los Angeles County. Our comments in this letter express our concerns specifically about the questionable legality of some of the Draft Permit's proposed requirements and the Board's proposed departure from sound legal policy.

Joseph M. Manisco
*Ross Wersching & Manisco
LLP*

David C. Smith
DMB Associates, Inc.

John Young
Young Homes

Steven D. Zimmer
Arrorney at Law

BILD is a separate non-profit mutual benefit corporation and affiliate of Building Industry Association of Southern California, Inc. ("BIA/SC"). BILD's constituents are BIASC, which is its sole corporate member, and BIASC's more than 900 member companies involved in homebuilding and community development. BILD's purposes are to monitor legal and regulatory conditions for the construction industry in Southern California and intervene as appropriate. BILD focuses on litigation and regulatory matters with a regional or statewide significance to its mission. Separate from this letter, BIASC and others are commenting concerning many technical and policy issues raised by the proposed permit conditions.

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Andrew R. Henderson, Esq.

BILD is concerned that the Draft Permit, as it now reads and will be interpreted if it is finalized as it, cannot pass legal muster. Most of our legal concerns relate to the fact that the Board is exercising its discretion to impose heavy-handed requirements on the

MS4 permittees; yet the Board has not undertaken the types of analyses that are required by statutes and regulations that circumscribe how the Board must exercise its discretion.

BILD recognizes that the Board wields broad discretion concerning MS4 requirements. Even so, state and federal statutes and regulations ultimately limit and guides the Board's discretion. Under both California and federal law, the Board is required to exercise its discretion only after gathering of information and the proper consideration of certain prescribed factors, the types and details of which are set forth in both statutes and EPA regulations. Many of the requirements in the Draft Permit were proposed even though they would violate the constraints on the Board's discretion.

Our comments about the legality of the Draft Permit provisions fall into five main categories:

- 1) In the Draft Permit, the Board states that the permit requirements do no more than fulfill federal mandates concerning the National Pollution Discharge Elimination System ("NPDES") set forth in the federal Clean Water Act and implementing EPA regulations. Specifically, the Board's legal position is expressed in the Draft Permit as Finding R on pp. 24-25 ("The ... Board finds that the requirements in this permit are not more stringent than the minimum federal requirements."). Contrary to the Board's statement, many of the Draft Permit's requirements result from the Board's exercise – or rather its abuse – of its own discretion, where the Board proposes permit requirements that are, at best, uncritically established, and, at worst, squarely at odds with what the federal NPDES requirements allow.

Most problematically, unless corrected, the permit would effectively establish numeric effluent limitations ("NEL") at various monitoring sites (e.g., at MS4 outfalls and in ambient receiving waters) for comparison against (a) receiving water quality standards, (b) waste load allocations based on total maximum daily loads ("TMDLs"), or (c) other numeric standards that the Board has newly fashioned. Unquestionably, monitoring requirements of this type are readily susceptible to a judicial ruling to the effect that any and all detected exceedances constitute *ipso facto* enforceable permit violations. See *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d 880, 898, *certiorari granted*, U.S., June 25, 2012 ("[T]he Permit's provisions plainly specify that the mass-emissions monitoring is intended to measure compliance and that '[a]ny violation of this Order' is a Clean Water Act violation.").

To the extent that the Board intends that exceedances measured pursuant to required monitoring shall be *ipso facto* or presumptive permit violations, the Board is acting in violation of NPDES regulations that specify how enforceable

water quality based effluent limitations (“WQBELs”) must be established. Specifically, 40 C.F.R. section 122.44(d)(1)(ii) and (iii) sets forth a specific process for establishing enforceable WQBELs. Therefore, especially given the Board’s stated intention to limit its role to fulfilling the federally-imposed NPDES mandates, the final permit should state that any detectable exceedance based on comparisons between samples and the relevant waste load allocations, water quality standards, and the like, which are measured at required monitoring points, shall not in and of themselves constitute an *ipso facto* or presumptive violation of the permit.

- 2) The Board needs to clarify whether the permit requirements set forth in the final permit will be imposed because they are (i) themselves precisely mandated by federal law, or (ii) instead as an exercise of the Board’s discretion. We believe that, consistent with the principles of federalism which are inherent in the Clean Water Act and reflected in *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal.4th 613 (“*Burbank*”), the Board must either (i) conform its actions to the Porter-Cologne Act’s requirements (i.e., demonstrably consider the Section 13241 factors), or (ii) identify clearly the specific federal requirements that operate to prevent the Board from exercising its discretion consistent with the Porter-Cologne Act.

This issue is particularly important because the Draft Permit’s proposed requirements, as proposed, include WQBELs. Clearly, the imposition of WQBELs in MS4 permits is elective and extends regulation gratuitously beyond the “maximum extent practicable” congressional mandate, as was recognized by the court in *San Diego Building Industry Assn. v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866 (4th Dist. 2004) (“*BIASD*”). *See also* *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166-67 (“Under 33 U.S.C. § 1342(p)(3)(B)(iii), the ... choice to include either management practices or numeric limitations in the permits was within [EPA Administrator’s or the State’s] discretion.”) Therefore, the Board’s election to promulgate such WQBELs would necessarily be subject to the consideration of Section 13241 factors.

- 3) Moreover, the *BIASD* court explained that the water quality based requirements at issue there was “particularly” permissible because they were for use in an iterative compliance process:

The legislative purpose underlying the Water Quality Act of 1987, and section 1342(p) in particular, supports that Congress intended to provide the EPA (or the regulatory agency of an approved state)

the discretion to require compliance with water quality standards in a municipal storm sewer NPDES permit, particularly where, as here, that compliance will be achieved primarily through an iterative process.

BIASD, 124 Cal.App.4th at 883 (emphasis added).

If here, to the contrary, the Board were to impose permit requirements that are *not* expressly part of an iterative process, then their adoption would not only exceed the basic federal MEP mandate, it would also be arbitrary and capricious given the record evidence and what is widely known about storm water and our region's MS4s. Unless the proposed permit requirements are qualified or softened, many of them are legally indefensible because the "maximum extent practical" standard requires consideration of factors such as affordability and technical feasibility.

In particular, we are concerned about the many numerical requirements in the Draft Permit (e.g., the remote parcel-boundary numerical limitations shown in Table 11, entitled "Benchmarks Applicable to New Development BMPs" (the "Benchmarks")). As the technical/policy comments that BIASC is providing herewith explain, the Benchmarks are uncritically established in light of practical technical and economic realities.

During the July 9th public workshop, the Board's staff stated that the Benchmarks were intended only to guide selection of BMPs at the pre-development stage; and therefore they are not intended to indicate *ipso facto* permit violations at a post-development stage. BILD concurs that the Benchmarks cannot serve as NELs because they have not been derived in accordance with applicable procedures for determination of technology based effluent limits established consistent with any accepted definition of "maximum extent practicable." In order to be consistent with legal constraints and in order to ensure that the courts do not become confused, the final permit should state plainly that any measured exceedances (post-construction) will not constitute permit violations.

- 4) If the Board were to adopt the various numeric benchmarks as strict or presumptive permit requirements (rather than as triggers for improvement through iteration), the Board would be ignoring the basic legal principle of *causation*, which is an element the presence of which is necessary in order to find liability even in "strict liability" situations. MS4 operators cannot possibly prevent much of the problematic influent from entering and ultimately exiting the MS4s – especially when larger storm events occur. Indeed, much of the problematic MS4 influent and through-put consist of "natural loads" coming from natural

landscapes, which cannot be contained or controlled in larger storms (no matter the heroic amount of effort and treasure expended).

Therefore, if the Board intends that any numeric limitations should operate as thresholds for *ipso facto* or presumptive enforceable permit violations, then the Board would need to devise a way to incorporate a principle similar to the one that led to 40 C.F.R. § 122.45(g) – the federal “gross-net” regulations for industrial facilities. Doing so (if it were even possible to do so) or otherwise forgoing strict NELs is necessary because – given the variable nature of storm water – no amount of heroics could ever allow MS4 operators and their constituents to comply constantly with NELs (such as WQBELs) derived from current water quality standards irrespective of the MS4 influent.

- 5) The Draft Permit contains a hierarchy of low impact development (LID) provisions which relegates to a relatively inferior status the use bio-filtration employed as a means to mimic the natural flow of diffuse storm water while benefitting water quality. If the Board were to formalize the final permit with such a hierarchy, it would run afoul of thousands of years of legal policy that favors the maintenance or mimicking of natural water flows.

Each of these five concerns is discussed more thoroughly below.

1. **Especially given the Board’s view that it is only effectuating federal NPDES mandates, the Board needs to rule out any potential that required monitoring will result in exceedances being deemed *ipso facto* or presumptive permit violations. To the extent that the Board intends to use numerical water quality based effluent limitations (WQBELs) as grounds for *ipso facto* or presumptive permit violations, the Board does so in violation of federal NPDES regulations concerning the proper establishment of WQBELs.**

As is noted above, the Board tentatively takes the position that it need not comply with Section 13241 because “the requirements in this permit are not more stringent than the minimum federal requirements.” Draft Permit, Finding R, at p. 25. The Board’s position is incorrect. The Draft Permit, when compared to the existing Los Angeles County MS4 permit, contains numerous new and onerous monitoring and testing requirements that were not present before and are proposed on a discretionary basis. Among them are the following:

- Part V.E of the Draft Permit contains new provisions that require monitoring and purport to “assure compliance” with numerical ***total maximum daily load***

(“TMDL”) waste load allocations (“WLAs”). *See* Draft Permit at p. 111-123 (“Part VI.E of this Order includes provisions that are designed to assure that Permittees achieve WLAs and meet other requirements of TMDLs covering receiving waters impacted by the Permittees’ MS4 discharges.”); Draft Permit Att. E (e.g., Sec. V and Sec. VI.D.1.a.ii.); Att. K-R.

- Part VI.B (page 45) and Attachment E, Sections VII and VIII impose arduous *outfall* monitoring and reporting; while Att. E, Sec. VI sets forth *receiving water* monitoring and reporting requirements.

As proposed, the Draft Permit would clearly invite the courts to rule that any exceedances measured by Permittees (or by others) against these numerical benchmarks will constitute *ipso facto* or presumptive permit violations. Specifically, Draft Permit Sec. VI.C.1.d reads:

The goal of the Watershed Management Programs is to *ensure* that discharges from the Los Angeles County MS4: (i) achieve applicable water quality-based effluent limitations in Part VI.E and Attachments L through R, (ii) *do not cause or contribute to exceedances of receiving water limitations* in Parts V.A and VI.E and Attachments L through R, and (iii) *do not cause exceedances* of nonstorm water action levels in Attachment G.

Last year, the federal Ninth Circuit Court of Appeals ruled in *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d 880, *certiorari granted* (2012 WL 2368688, U.S., June 25, 2012), that similar permit language “plainly” translates monitoring benchmarks into *ipso facto* permit violations. *See id.* at 898 (“[T]he Permit’s provisions *plainly* specify that the mass-emissions monitoring is intended to measure compliance and that ‘[a]ny violation of this Order’ is a Clean Water Act violation.” (emphasis added)). In addition, at the July 9th workshop, the Board’s staff stated that it may choose to deem any monitoring exceedance to be a permit violation, which – if recognized by the courts – would add an extraordinarily high degree of subjectivity to permit enforcement based on the monitoring requirements.

Therefore, as the Draft Permit now reads, any and all exceedances of water-quality based NELs will apparently be deemed *ipso facto* or presumptive permit violations. Accordingly, the Board or private litigants may enforce the WQBELs and seek the assessment of massive penalties. *See* Draft Permit Sec. VI.D.14 (“Violation of any of the provisions of this Order may subject the violator to any of the penalties described herein or in Attachment D of this Order, or any combination thereof, at the

discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.”).

We respectfully urge the Board to clarify the final permit to state plainly that exceedances found through monitoring shall not constitute *ipso facto* or even presumptive permit violations. Instead, the final permit should state that exceedances should be used to trigger iteration concerning the selection and deployment of BMPs where reasonably practicable. See Draft Permit Sec. C.1.f.iv (“Each watershed management program shall ... [r]evise *strategies*, control measures, and BMPs as necessary to maintain progress *towards achieving applicable limitations* and/or action levels in Attachment G.”).

If, however, the Board were to finalize the permit such that exceedances detected through permit-required monitoring constitute *ipso facto* or presumptive permit violations, then the permit requirements would not only exceed minimum federal requirements, they would plainly violate federal NPDES regulations. Specifically, 40 CFR section 122.44(d)(1)(ii) and (iii) set forth the procedures that EPA or a state agency that is authorized to implement NPDES *must follow* whenever establishing WQBELs. The Board has pursued none of the Section 122.44(d)(1) procedures concerning the translation of water quality standards into WQBELs.¹

The Section 122.44(d)(1) procedures exist because great care and analysis must be taken when a regulator attempts to translate receiving water quality standards into site-specific WQBELs. Indeed, given the extreme variability of storm water, it is most probable that compliance with the Section 122.44(d)(1) procedures would result in adherence to an iterative BMP process approach.² Respectfully, the Board must not establish any WQBELs without first pursuing the undertaking the 122.44(d)(1) procedures. See, e.g., *NPDES Permit Writers' Manual*, United States Environmental Protection Agency (September 2010).

¹ The Board’s proposal to invoke WLAs as WQBELs is also improper. WLAs serve an entirely different purpose than do WQBELs; and WLAs are not crafted pursuant to the Section 122.44(d)(1) procedures.

² See In the Matter of the Petitions of Building Industry Assn. of San Diego County and Western States Petroleum Assn., Order WQ 2001-15 (Nov. 15, 2001). The order explains that site-specific, monitored exceedances of TMDL WQBELs and receiving water limitations would not constitute permit violations so long as permittees are implementing the required “iterative process.”

Given the Board's failure to pursue the Section 122.44(d)(1) procedures, the Board should expressly state in the final permit that monitoring exceedances will not constitute permit violations. To do otherwise would constitute a clear breach of federal NPDES regulations. Among other implications, the breach would result in the Board's inability to maintain that its chosen permit requirements are not more stringent than what the federal law requires.

2. **Unless the Board can point to any specific federal limitations that compel it to impose its chosen permit requirements, the Board must comply with the Porter-Cologne Act's requirements for exercising its discretion only following a prescribed minimum degree of circumspection.**
 - A. **The Board wields broad – but not completely unqualified – discretion to either impose or exercise forbearance when establishing MS4 requirements.**

In California, the State Water Resources Control Board and the Regional Water Quality Control Boards have long been charged with administering the federal NPDES program. See *Shell Oil Co. v. Train*, 585 F.2d 408, 410 (9th Cir. 1978). Under the resulting combined state-federal permitting NPDES regime, the Board is therefore responsible for imposing permit requirements which will reduce the discharge of pollutants from the Los Angeles County MS4s "to the maximum extent practicable ("MEP")...." 33 U.S.C. § 1342(p)(3)(B)(iii).

Separately but relatedly, California Water Code sections 13241 and 13263 require the Board, whenever it is determining permit requirements, to apply six specific, non-exclusive considerations (including economic considerations, the need for regional housing, and the practical likelihood of achieving water quality improvements through coordinated efforts). Specifically, the six, non-exclusive § 13241 factors are:

- (a) Past, present, and probable future beneficial uses of water.
- (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
- (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
- (d) Economic considerations.

- (e) The need for developing housing within the region.
- (f) The need to develop and use recycled water.

As a bridge between the federal law and the Porter-Cologne Act, California Water Code section 13372 effectively provides that Sections 13241 and 13263 must be applied to the state water boards' implementation of the federal Clean Water Act unless the federal law is "inconsistent" with such an application. As the discussion below explains, the application of the Section 13241 considerations is consistent with any federally-required "MEP" determination. Moreover, as proposed, the Draft Permit would exceed the federally-required MEP, given that the Draft Permit contains requirements that the Board need not impose under federal law. Accordingly, if the Board were to finalize the Draft Permit with its current requirements, the Board would be violating California law.

The initial question that must be answered is a Board ascertainment of the MEP in any given context is consistent with the fulfillment of Section 13241. There is no inconsistency between the section 1342(p)(3)(B)(iii) mandate to require pollution reduction to the MEP and the Section 13241 mandate to take into account certain the listed non-exclusive considerations. The federal law requires the Board to ascertain the MEP; Section 13241 specifies certain *non-exclusive* factors that must be considered when making such an ascertainment. Thus, there is no conflict or inconsistency in the law sufficient to negate the Section 13241 mandate.

Relevant case law explains that the Board's legal obligation to regulate MS4 discharges "to the maximum extent practicable" requires it to exercise broad regulatory discretion. In the context of such governmental duties, a legislative directive to an agency to act or impose to the maximum extent "practicable" is equivalent to a directive to act to the maximum extent that is "advisable." *Outfitters Properties, LLC v. Wildlife Conservation Bd.* (2012) ___ Cal.App.4th ___, ___ (2012 WL 2390682 at p. 5, June 26, 2012) ("[C]ourts have said that 'practicable' in a government context means that an entity is vested with discretion to consider the 'advisability' of an action..."); *Covarrubias v. Superior Court* (1998) 60 Cal.App.4th 1168, 1183-84; *Conservation Law Foundation v. Evans* (2004) 360 F.3d 21, 28 ("[B]y using the term 'practicable' Congress intended rather to allow for the application of ... discretion in determining how best to manage [the natural] resource."). Although "practicable" is not defined in the federal Clean Water Act, virtually all definitions of the terms imply the need to consider and *balance*—i.e., to wield regulatory discretion. *See, e.g.*, 8 C.C.R. § 1504(J) ("Practicable ... [m]eans capable of being accomplished by reasonably available and workable means.").

Because the ascertainment of MEP is an exercise of discretion, the courts have persistently rejected litigants' arguments that MS4 permits must impose upon the MS4 permittees to any particular extent or in some particular manner, such as by necessarily imposing numeric limitations. *See Natural Resources Defense Council, Inc. v. U.S. E.P.A.* (1992) 966 F.2d 1292, 1308 (“[T]he language in [section 1342(p)(3)(B)(iii)] ... requires the Administrator or a state to design controls. Congress did not mandate a minimum standards approach or specify that EPA develop minimal performance requirements.”); *Divers Environmental Conservation Organization v. State Water Resources Control Bd.* (2006) 145 Cal.App.4th 246, 261 (“[I]n enacting section 402(p)[,] Congress intended to permit the EPA and [state] permitting authorities wide discretion in regulating storm water runoff....”).

The Board, its state-wide brethren, and the State Water Resources Control Board have generally defended their discretionary powers concerning NPDES permitting. However, these same agencies have also maintained that they do *not* need to comply with the Section 13241 requirements when they exercise discretion when implementing the NPDES.

The legal stance seems to be based on the unstated assumption that the federal Clean Water Act and the Porter-Cologne Act combine somehow to negate the California Legislature's Section 13241 mandate. Specifically, the Board must believe that the federal law *preempts* the California Legislature's specified mandates concerning how the water boards must exercise their discretion. The discussion below explains that the Board's implicit legal position concerning federal preemption is erroneous.

B. Federal law does not negate the Board's statutory obligation to apply and reconcile the six Porter Cologne Act “balancing factors” prescribed in Water Code section 13241 when establishing MS4 requirements.

When Congress enacted the federal Clean Water Act, it took care to “recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution.” 33 U.S.C. § 1251(b). Under the Act, the states were entitled to qualify for and, upon such qualification, to assume the primary responsibility for the implementation and enforcement of the National Pollution Discharge Elimination System (“NPDES”) as long as their state regulatory regimes were sufficient to achieve the minimum protections required by the Clean Water Act and federal limitations promulgated thereunder. 33 U.S.C. §§ 1342(b) and 1370. In 1978, the U.S. Ninth Circuit Court of Appeals explained the distribution of powers between federal and State governments concerning NPDES, and described the legal relationship as follows:

Congress clearly intended that the states would eventually assume the major role in the operation of the NPDES program.... Under § 1342(b), a state may submit to the EPA a proposed permit program governing discharges into navigable waters within its borders. If the state can demonstrate that it will apply [any federally prescribed] effluent limitations and the [Act's] other requirements in the permits it grants and that it will monitor and enforce the terms of those permits, then, unless the Administrator ... determines that a state program does not meet these requirements, he must approve the proposal (§ 1342(b)).... Upon approval of a state program, the EPA must suspend its own issuance of permits covering those navigable waters subject to the approved state program (§ 1342(c)). However, while the direct federal regulatory role largely ceases following EPA approval of a state program, the EPA does retain a review authority over the states. The EPA may veto particular [individual] permits issued by the state ..., or it may withdraw approval of the entire state program upon a determination ... that the [overall] program is not being administered in compliance with the mandates of federal law (§ 1342(c)). Despite this residual federal supervisory responsibility, the federal-state relationship established under 33 U.S.C. § 1342 is “a system for the mandatory approval of a conforming State program and the consequent suspension of the federal program (which creates a separate and independent State authority to administer the NPDES pollution controls.” *Mianus River Preservation Committee v. Administrator, EPA* (2d Cir. 1976) 541 F.2d 899, 905.

California has adopted a plan for the issuance of NPDES permits [the Porter-Cologne Act] which has been approved by the EPA. 39 Fed. Reg. 26,061 (1973). The California State Water Resources Control Board (“State Board”) and its nine subsidiary regional boards thus have primary responsibility for the enforcement of the [Clean Water Act]... in California.

Shell Oil Co. v. Train, 585 F.2d 408, 410 (9th Cir. 1978) (emphasis added).

California was the first state that EPA authorized to implement NPDES within its boundaries. As a result, EPA's role in NPDES administration was necessarily withdrawn in favor of the water boards' administration of NPDES. Under the congressionally-prescribed arrangement, EPA still: (a) reviews the permits issued by the water boards, (b) may veto inadequate permits (a reactive role), and (c) may revoke entirely California's implementing authority if EPA concludes that the state is generally implementing the NPDES program inadequately. See 33 U.S.C. § 1342(d); 40 C.F.R. § 123.44; *Save the*

Bay, Inc. v. U.S. E.P.A., 556 F.2d 1282, 1285-87 (5th Cir. 1977). Under this structure, however, whenever one of California's water boards exercises its discretion, it does so (as the Ninth Circuit explained) pursuant to its "separate and independent [state] authority to administer the NPDES pollution controls...." *Shell Oil Co. v. Train*, 585 F.2d at 410 (quoting *Mianus River Preservation Committee v. Administrator, EPA* (2d Cir. 1976) 541 F.2d 899, 905).

Here, the Draft Permit would impose many new and onerous requirements upon the permittees and their constituents, but it reflects no effort by the Board's staff to marshal evidence necessary to consider and reconcile the six balancing factors that are specifically prescribed by California Water Code § 13241. Instead, the Draft Permit's Finding R (on pp. 24-25) reflect the Board's view that no Section 13241 factors need to be considered, claiming that "the [Draft Permit] requirements ... are not more stringent than the minimum federal requirements." This statement indicates that the Board has misapprehended (i) the California Supreme Court's opinion in *City of Burbank v. State Water Quality Control Bd.*, 35 Cal.4th 613 (2005) ("*Burbank*"), (ii) the law concerning federal preemption generally, and (iii) the implications of the California Legislature's relatively minimal circumscription of the Board's discretion.

The California Supreme Court's *Burbank* opinion explains the interplay between federal and state water quality regulation and the applicability (or not) of the § 13241 balancing requirement to the establishment of state waste discharge requirements. Per the *Burbank* opinion, in any situation where such a federal minimum requirement is prescribed:

1. First, the state may not avoid any federally-prescribed requirement or relax any federally-prescribed minimum standard. The U.S. Constitution's "Supremacy Clause" operates to prevent the State from relaxing a specified federal minimum requirement. *See Burbank*, 35 Cal.4th at 626 ("[Section 13241] cannot authorize a regional board, when issuing a wastewater discharge permit, to use [section 13241 considerations] to justify pollutant restrictions that do not comply with federal clean water standards."); 33 U.S.C. § 1370 ("[A] State or political subdivision ... may not adopt or enforce any effluent limitation ... or other limitation ... which is less stringent than the effluent limitation ... or other limitation ... [established federally] under this chapter [i.e., the Clean Water Act]....").
2. Second, impliedly, if the State *exactly meets* (i.e., does not discretionarily exceed) a specified, federally-prescribed minimum standard, then the permittee cannot complain that the agency should have undertaken the minimum amount of consideration and reconciliation required under Water Code section 13241, because the failure to consider Porter-Cologne factors is of no consequence to the

permittee. Where the state agency merely conforms to a specified, federally-prescribed minimum standard, the agency itself is not exercising its own discretion to impose upon the regulated community. In such a scenario, the State agency would not need to justify its determination by considering and reconciling the legislatively-imposed Section 13241 considerations.

3. Third, however, when a state agency exercises its independent discretion to impose a permit requirement, then State must apply and reconcile the Section 13241 balancing factors, in accordance with the Porter-Cologne Act. *Burbank*, 35 Cal.4th at 628 (“The states are free to manage their own water quality programs so long as they do not compromise the federal clean water standards.”). The California Supreme Court explained clearly in *Burbank* that federal law does ***not*** foreclose consideration of the prescribed Section 13241 factors:

The federal Clean Water Act ... does not ... restrict the factors that a state may consider when exercising [its] independent authority, and thus it does not prohibit a state – when imposing effluent limitations that are more stringent than required by federal law – from taking into account [Section 13241 considerations when] doing so.

Id. at 627-28.

The California Supreme Court’s appreciation for the State’s continuing NPDES prerogatives, expressed in *Burbank*, are similarly recognized by the federal courts. *See, e.g., Mianus River Preservation Committee v. Administrator, EPA* (2d Cir. 1976) 541 F.2d 899, 905-06 (“It is quite clear ... that Congress intended that the States' programs were to be their own and that it was fully aware of the difference between States' and [the EPA] Administrator's permits.”).

Apparently, the Board does not appreciate that the specific requirements proposed in the Draft Permit are ***not*** the result of conformity to a set of federally-prescribed minimum standards. Instead, the MS4 permit’s requirements will be promulgated pursuant to the Board’s discretion, which the Board must exercise consistent with ***both*** the Porter-Cologne Act and federal law. In other words, federal law compels the Board to act as EPA’s authorized surrogate (subject to EPA’s potential veto) to ascertain the MEP and impose MS4 permit requirements; but the California law separately instructs the Board more specifically concerning how to decide what permit requirements to impose. Essentially, Section 13241 prescribes a mandatory minimum amount of circumspection that must occur when the water boards exercise their regulatory discretion.

There is nothing about complying with Section 13241 which conflicts with any federal mandate under NPDES sufficient to find federal preemption; and the body of state and federal case law that governs questions of federal preemption generally supports such a conclusion. First, the question of whether federal law preempts a state legislative directive is a question of law that is strictly for the courts to decide. *See, e.g., Industrial Trucking Association v. Henry*, 125 F.3d 1305, 1309 (9th Cir. 1997), *citing Inland Empire Chapter of Associated Gen. Contractors v. Dear*, 77 F.3d 296, 299 (9th Cir.1996) and *Aloha Airlines, Inc. v. Ahue*, 12 F.3d 1498, 1500 (9th Cir.1993) (“Preemption is ... a matter of law subject to de novo review.”); *see also Bammerlin v. Navistar International Transportation Corp.*, 30 F.3d 898, 901 (7th Cir. 1994) (meanings of federal regulations are questions of law to be resolved by the court).

The burden of demonstrating that preemption should result rests squarely with the party asserting preemption (here, the water boards) because federal preemption is an affirmative defense to a claim that a state statute applies. *See Bronco Wine Co. v. Jolly*, 33 Cal.4th 943, 956-57 (2004) (“The party who claims that a state statute is preempted by federal law bears the burden of demonstrating preemption.”); *see also United States v. Skinna*, 931 F.2d 530, 533 (9th Cir.1990) (the burden is on the party asserting a federal preemption defense). Therefore, if the Board follows through in its tentative assertion that federal law preempts the application of the Section 13241 requirements, the Board will bear the burden of demonstrating that, as a matter of law, the actions required of it under the Porter-Cologne Act are preempted by federal law.

Here, if the Board continues to assert that federal law preempts an otherwise required consideration of the Section 13241 factors, then it will face an uphill legal battle. The U.S. Supreme Court has ruled that courts should always attempt to reconcile the tension among laws to avoid federal preemption of state laws. *See Merrill Lynch, Pierce, Fenner & Smith v. Ware*, 414 U.S. 117, 127 (1973); *see also Rice v. Norman Williams Co.*, 458 U.S. 654, 659 (1982) (“[T]he inquiry is whether there exists an irreconcilable conflict between the federal and state regulatory schemes.”). Both state and federal courts have a presumption against finding federal preemption, even when a federal statute *expressly* states that at least state laws are preempted to a degree. *See, e.g., Washington Mutual Bank, FA v. Superior Court*, 75 Cal.App.4th 773 (1999):

In interpreting the extent of the express [federal] preemption, courts must be mindful that there is a strong presumption against preemption or displacement of state laws. Moreover, this presumption against preemption applies not only to state substantive requirements, but also to ... causes of action.

Id. at 782.

In the absence of any express federal preemptive language (in other words, where a defendant argues that a federal law impliedly preempts a state law), the presumption against federal preemption is even stronger:

“In the absence of express pre-emptive language, Congress's intent to preempt all state law in a particular area may be inferred where the scheme of federal regulation is sufficiently comprehensive to make reasonable the inference that Congress ‘left no room’ for supplementary state regulation.

Hillsborough County v. Automated Medical Labs, 471 U.S. 707, 713 (1985).

Armed with understanding of the strong presumption against preemption, the Board cannot reasonably maintain that the federal statute or regulations preclude the Board’s application of the California Water Code § 13241 considerations to the policy choices before it. First, there is no express federal preemption here that would preclude consideration of the Section 13241 factors. (If the Board believes that there are any, then BILD respectfully asks the Board to identify them in response hereto.) Absent any expressly preemptive federal law, if preemption exists, it must be implied – and therefore the Board must overcome the very strong legal presumption against implied federal preemption.

Second, the Board cannot reasonably argue that the federal regulatory scheme at issue here “left no room” for supplementary state regulation. To the contrary, the federal statutory scheme here (the Clean Water Act) elevates surrogate state agencies to the level of the “major” or primary governmental actors, wielding their “separate and independent State authority to administer the NPDES pollution controls.” *Shell Oil Co. v. Train*, 585 F.2d at 410; *see also* 2 Cal. Jur. 3d Admin. Law § 589 (2012) (“[W]here coordinate state and federal efforts exist within a complementary administrative framework, and in the pursuit of common purposes, the case for federal preemption becomes a less persuasive one.”).

Finally, although the Board is acting as the federal EPA Administrator’s congressionally-authorized replacement when establishing MS4 permit requirements to the MEP, the Board wields broad discretion when deciding exactly what pollution controls to require. Given the breadth of the Board’s discretion, the Board cannot reasonably maintain that it also lacked the power to consider and reconcile – at a minimum, and among any other considerations – the six non-exclusive factors for consideration which the California Legislature prescribed in Water Code section 13241.

Here especially, it is particularly clear that the Board is exercising its own discretion and should pursue Section 13241 because the Board is tentatively electing to impose water quality based NELs. The relevant case law clearly holds that the federal Clean Water Act does *not* require any such regulatory imposition. See *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166-67 (“Under 33 U.S.C. § 1342(p)(3)(B)(iii), the ... choice to include either management practices or numeric limitations in the permits was within [EPA Administrator’s or State’s] discretion.”); *BIASD*, 124 Cal.App.4th 866, 886-87 (“[S]ection 1342(p)(3)(B)(iii)'s statutory language unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply strictly with effluent limitations.” (quotation omitted)). Indeed, in *BIASD*, the water boards argued successfully that they possessed the discretion under federal law to require MS4 compliance with NELs even though such an imposition may have exceeded the MEP. See *id.* at 882 (“[The water boards] argue that the “and such other provisions” [i.e., the discretionary clause of Section 1342(p)(3)(B)(iii)] cannot be fairly read as restricted by the ‘maximum extent practicable’ phrase.”).

Given these relevant court opinions and the water boards’ own argument in the cases, the Board cannot reasonably maintain that federal law – and in particular the federal requirement to ascertain MEP – compel the Board to impose the NELs that are seen throughout the Draft Permit.

In sum, the Board cannot demonstrate that it is preempted by federal law from undertaking the minimum level of regulatory circumspection that the California Legislature prescribed in Water Code section 13241. Therefore, the Board should undertake the legislatively-prescribed level of circumspection concerning all of MS4 permit requirements that are the result of its discretion, including, but not limited to, the proposed requirements that are discussed more specifically in this comment letter.

3. The Board failed to take into account the practicability of complying with many of the numeric limitations set forth in the Draft Permit. Therefore, their use should be limited to iterative processes.

We are also very concerned with the possible implications of a number of the additional numerical requirements set forth in the Draft Permit. The technical matrix provided even herewith by BIASC many such proposed requirements. We believe that the final permit should plainly state that all such NELs are for use in an iterative process, and that exceedances are not in and of themselves *ipso facto* or presumptive permit violations.

To illustrate our concern, Table 11 and its accompanying text (see Draft Permit at VI(D)(6)(c)(iv)(1) at p. 74) could be construed to require the MS4 permittees to adopt

ordinances that would assure, without exception, that future projects built within their jurisdictions would never exceed the pollutant specific Benchmarks set forth in Table 11 (p. 75). We believe that the final permit should state clearly that such a requirement is solely for purpose of requiring the pre-development selection of best management practices (BMPs) that are expected, in good faith, to comply post-construction with the Table 11 benchmarks. In particular, the final permit should explain that if any subsequent monitoring reveals that a given project does not meet the benchmarks, that it will not constitute a violation of the MS4 permit.

Given the recent Ninth Circuit opinion concerning the existing Los Angeles County MS4 permit, the Board should not provide interested parties with any argument that a local government's good faith efforts to regulate future development should result in Clean Water Act liability simply because the MS4 permittee's efforts prove to be less than perfectly successful at all times and all places.³ Moreover, actually requiring developers to comply with the proposed new development benchmarks fails to take into account the fact that natural loads of pollutants will cross many properties regardless of either a lack of anthropogenic influence or heroic attempts to control their advance. Therefore, the Board has overlooked the basic element of *causation* concerning many of its proposed numeric limitation, as is discussed in section 4 below.

The Benchmarks in Table 11, like outfall and receiving water monitoring NELs discussed above, were not established consistent with a proper consideration of that which is "practicable." Although the concept of MEP is generally regarded as "fluid," the water boards are supposed to consider factors such as public acceptability, practical feasibility and affordability when ascertaining the MEP. See Memorandum dated February 11, 1993 by Elizabeth Jennings, counsel to the State Water Resources Control Board. Given that a finding of "practicability" necessarily requires attention to such considerations, and given that the Board apparently has chosen not to consider them,

³ We note that the Board and the State Water Resources Control Board have the power to regulate new construction through the General Permit for the Discharge of Storm Water from Construction Activities (the "CGP"). It seems unreasonable and arguably unlawful for the Board to effectively embellish the CGP's requirements (albeit outside of the CGP) by mandating, through the MS4 permit, that MS4 permittees must impose new and different requirements on new development and construction. For one thing, by doing so, the Board would deprive many landowners and others who might be interested in the CGP requirements of reasonably fair notice and an opportunity to comment on matters affecting their rights and the use of their property. In addition, the Board should not exercise its discretion in ways that infringe upon constitutionally and statutorily protected municipal powers to regulate land uses within their boundaries.

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there is no substantial evidence to support a finding of practicability concerning most if not all of the NELs reflected in the Draft Permit.

The Draft Permit and Fact Sheet also fail to show any considered analysis and evaluation of the MEP factors with respect to the many new, and more stringent low impact development (LID) and treatment control standards and requirements proposed for inclusion in the permit. The BIASC/CICWQ letter and attachments set forth in detail the new and more stringent standards proposed in the Draft Permit, but it does not appear that cost, technical feasibility or public acceptance of any those new standards or requirements have been analyzed to assure that they are consistent with treatment control to the MEP. Given the technical, economic, public health and safety, and water conservation impacts of those new, more stringent standards as discussed in that companion letter and its attachments, Board staff must, at a minimum, conduct a transparent and proper analysis of the new requirements in compliance with the federal MEP technology based standards. Moreover, at least to the extent the new requirements deviate from the MEP standard by imposing greater cost, creating technical infeasibility issues, or resulting in health and safety, water conservation or other public acceptability issues, then adoption of those requirements must further be analyzed pursuant to Porter Cologne, Cal. Water Code §§ 13263; 13421.

In addition, many of the NELs are accompanied by monitoring requirement appears may be inconsistent with Water Code section 13267, which empowers the Board to require permittees to furnish any “technical or monitoring program reports which the regional board requires.” Specifically, the two sentences of Water Code section 13267(b)(1) read as follows:

The burden, including costs, of [monitoring] reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

We are unaware of any appropriate cost-benefit analysis having been undertaken by the Board concerning, for example, the ambient receiving water and outfall monitoring; and we seriously doubt that the proposed requirements could survive such an analysis undertaken. All of these concerns suggest that the Board should make it plain that the NELs in the final permit should be employed only as part of an iterative process leading toward compliance with all such NELs.

4. **If the final permit is not clarified to state that any measured numeric exceedances do not constitute permit violations, the final permit will violate basic due process principles because the permit would fail to take into account causation as a necessary element of finding an MS4 permittee liable for a violation, particularly in regard to influent to the MS4 which is completely impossible to arrest.**

As we noted above, we believe that the Draft Permit should be revised to make it clear that certain exceedances that might be measured through required monitoring cannot be regarded as *ipso facto* or presumptive violations of the final permit. Specifically, we noted that the Board has failed to comply with either federal or state procedures for establishing enforceable numeric limits. There is, however, another equally important reason to avoid penalizing MS4 permittees and potentially (via the operation of Draft Permit § D.6.c.iv) developers preparing and implementing urban stormwater management plans for new and significant redevelopment, for problematic water quality levels within and flowing from the MS4. It is that the MS4 permittees largely in no way *cause* the water quality problems; and “due process” requires that proximate causation be considered when determining liability.

Specifically, the Board knows that many of the problems with the quality of the water within the MS4s are due to natural loads (e.g., excessive natural “waste” from mountainous natural areas) and other constituents that are uncontrollable in large storm events. It is therefore unreasonable to penalize the MS4 permittees or developers for the fate and disposition of such natural loads, because they do constitute an anthropogenic “addition” of a pollutant to receiving waters. Thus, their discharge would not constitute the discharge of a pollutant as defined in the CWA by the permittees. *See* 33 U.S.C. § 1362(12) (definition of “discharge of a pollutant” for federal Clean Water Act purposes). Similarly, other influent into an MS4 – even if it is anthropogenic in its origins – is simply impossible to prevent or reduce in many storm events (e.g., airborne deposition). Accordingly, no MS4 operator or developer should have legal responsibility under the CWA for such their inevitable discharge.

Even in the context of relatively strict industrial permits and plainly anthropogenic activities, due process concerns about causation must be taken into account. *See, e.g., American Iron and Steel Institute v. E.P.A.*, 526 F.3d 1027, 1055-56 (3rd Cir. 1975) (“due process” concerns require a net-gross adjustment if a plant could be subjected to heavy penalties because of circumstances beyond its control); *Appalachian Power Co. v. Train*, 545 F.2d 1351, 1377 (4th Cir. 1976) (“Industry is ... required [by EPA] to treat and reduce pollutants other than those added by the plant process. This, we are of opinion, is beyond the scope of EPA's authority.”) (emphasis added); *Northern Plains Resource Council v. Fidelity Exploration and Development Co.*, 325 F.3d 1155, 1162 (9th Cir. 2003) (“but for”

causation was sufficient to show that alteration of water quality was “man-induced,” and thus pollution subject to the CWA). Indeed, the E.P.A. was forced to respond to such court rulings by promulgating the so-called “net-gross” regulations found at 40 C.F.R. § 122.45(g), which allow industrial dischargers to take into account the water quality of influent into their systems. *See American Iron and Steel Institute v. E.P.A.*, 526 F.3d at 1055-56.

Here, the Board – unless it states plainly that numerical exceedances are not *ipso facto* or presumptive permit violations – will be failing to consider causation in connection with storm water discharges from the MS4s. For example, even during modest or moderate storms, sediment discharges (with their attendant readings for turbidity and total suspended solids (“TSS”)) will flow *naturally* from many land areas, including unavoidably from lands that are undisturbed by anthropogenic activity. The TSS concentrations and turbidity readings of such natural discharges will depend on many factors, each of which is extremely difficult to predict, measure, or repeat, such as the anecdotal storm movements and dynamics, fine-scale storm intensity (especially), storm duration, storm water volume, the exact site location, geology, topography, vegetation, soil characteristics, and the like. Given the myriad factors at play, it is effectively impossible to determine what proportion of problematic constituents in storm water entering and exiting MS4s should be excused due to impossibility and a lack of causation.

Because an MS4 permittee, and certainly a developer, cannot – and should not be required to – control unavoidable and natural discharges of water from its system, due process considerations should operate protect MS4 operators and developers far more than the Draft Permit suggests. “In the absence of congressional abrogation of traditional principles of causation ..., ... parties should be held liable under [the relevant statute, even if it is a strict liability statute,] *only if their ... actions proximately cause* [the harm].” *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687, 712 (1995) (O’Connor, J., concurring) (emphasis added); *Kleebauer v. Western Fuse and Explosives Co.* (1903) 138 Cal. 497, 504-05 (“The damage in question resulted from a cause entirely beyond [the defendant’s] control, and without any carelessness or negligence on its part whatever, and under the more recent and better line of authorities, as shown under such circumstances, it is not responsible.”).

The Board knows that – during any appreciable storm – MS4s will (i) necessarily yield *naturally-occurring* discharges of sediment, metals, bacteria, and the like, and (ii) unavoidably yield additional anthropogenic pollutants. Recognition of this fact alone should lead the Board to specify in the final permit that water quality standard exceedances measured either within or flowing from the MS4s should not constitute permit violations.

5. The Draft Permit's relegation of bio-filtration to an inferior status as a Low Impact Development protocol is a departure from established land use legal policy.

One aspect of the Draft Permit that should be clarified and improved is the low impact development criteria discussed in Section VI(d)(6). Particularly, these provisions would establish a hierarchy of presumptive mandates for development or redevelopment would need to be met first and foremost by designing and constructing for the parcel by parcel, on-site retention – for infiltration, evapo-transpiration or on-site reuse – of the volume of a design storm. The same provisions would relegate to a relatively inferior and inaccessible status the option of instead utilizing bio-filtration to mimic the pre-development natural flow from the site. Even though the Draft Permit would allow mitigation options where the “infeasibility” of on-site retention exists, as proposed, the requirements would impose a generally-applicable presumptive requirement that *almost no storm water (from a design storm) should be allowed to flow from a parcel that has been developed or redeveloped.*

This requirement flies in the face of recognized low impact development (LID) principles, which generally aim to have LID undertaken so that the pre-construction flows of storm waters are “mimicked” (i.e., maintained, matched, or reasonably approximated.) For example, in 2009, the U.S. E.P.A. issued an updated definition of LID, which states that the use of LID best management practices (BMPs) for *filtration* (i.e., not merely retention) is appropriate – and repeats the basic goal of trying to maintain pre-construction hydrology. Most notably, the US EPA defines LID as follows:

LID principles and practices, water can be managed in a way that reduces the impact of built areas and *promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions.*

<http://water.epa.gov/polwaste/green/index.cfm> (emphasis added).

If the Board indeed intends to relegate to an inferior or secondary status the use of LID BMPs for *filtration* and the maintenance of natural flows, and require instead as a “first and foremost” proposition the on-site retention of nearly all storm water for a design storm, then it would be contrary to thousands of years of civil law concerning the unconstrained flow of rain water (called “diffuse surface water”).

Specifically, the law in California concerning diffuse surface waters (storm water) – which itself is derived from the laws of the ancient Roman Empire – generally favors what is called the “*natural flow doctrine*,” which states that diffuse surface flows should

be permitted to flow to their natural water course. See *Gdowski v. Louie*, 84 Cal.App.4th 1395, 1402 (2000) (“California has always followed the [Roman] civil law rule. That principle meant ‘*the owner of an upper ... estate is entitled to discharge surface water from his land as the water naturally flows.*’ As a corollary to this, the upper owner is liable for any damage he causes to adjacent property in an unnatural manner.... ***In essence each property owner’s duty is to leave the natural flow of water undisturbed.***” – original emphasis altered, quoting *Keys v. Romley*, 64 Cal.2d 396, 405-06 (1966)).

The “natural flow doctrine” has been slightly altered by the California courts in recent decades in order to facilitate reasonable land development and protect local governments and land owners. Replacing the natural flow doctrine is a ***modern reasonableness test***. Property owners (both public and private) may alter the natural flow of diffuse and/or discrete surface water, but only if they are reasonable when doing so and downstream owners can effectively trump the reasonable efforts of the upstream owner only if they (the downstream owners) in turn take reasonable defensive steps. See, e.g., *Locklin v. City of Lafayette*, 7 Cal.4th 327, 337 (1994).

In addition to both the natural flow doctrine and the modern reasonableness test, there is a third, less favored legal doctrine, called the “***common enemy doctrine***.” The common enemy doctrine stands for three propositions, that (i) individual property (development) rights are paramount, (ii) in developed and developing areas, both diffuse and discrete surface water is a common scourge, and (iii) each property owner may act “for herself or himself” and take steps to alter the natural or unnatural flow of such waters for the protection of his or her property, without regard for the effect on neighbors. See *Skoumbas v. City of Orinda*, 165 Cal.App.4th 783, 792 (2008). Although the common enemy doctrine still has some viability in other states and nations – particularly in urbanized and suburban areas, the common enemy doctrine has also long been the focus of strong criticism from progressive courts, environmentalists, academics, and concerned policy makers because of the obvious and very negative implications for the broader community and for the preservation and restoration of natural flows. See, e.g., *Keys v. Romley*, 64 Cal.2d 396, 400-03 (1966) (Mosk, J., concurring).

Of these three basic legal doctrines (the *natural flow* doctrine, the *common enemy* doctrine, and the *modern reasonableness* test), the natural flow doctrine – which seeks to *maintain the natural flows* of diffuse and discrete surface water – is the doctrine that conforms best to the federal Clean Water Act’s overarching objective to “restore and *maintain*” the natural integrity of waters.⁴ See 33 U.S.C. section 1251. Accordingly, we

⁴ See S. Rep. No. 92-414, 92 Cong. 2d Sess., 2 U.S. Code Cong. & Adm. News ‘72 3668, 3674 (1992) (“The Committee believes the restoration of the natural chemical, physical, and biological integrity of the Nation’s waters is essential.”); H.R. Rep. No. 92-911, p. 76

Mr. Ivar Ridgeway
July 23, 2012
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would expect the Board and the non-governmental organizations that exist to *defend* natural resources to strongly prefer the *natural flow doctrine*, and to deviate from it (if at all) only as reasonably necessary to accommodate competing societal goals.

Rather than favor the natural flow doctrine, however, the Draft Permit – which relegates to a secondary status the *filtration* of diffuse surface water and its discharge across property lines consistent with pre-development patterns – reflects a relatively new “*universal retention doctrine*,” which stands for the proposition that, wherever feasible, no diffuse surface water should leave any parcel that has been developed or redeveloped, except in very large storms.

Very recently, we became aware of the fact that EPA representatives are presently questioning their recent policy interest in a universal retention doctrine which would favor on-site retention, which EPA has labeled “green infrastructure.” Specifically, Mr. Kemmerer of U.S. E.P.A. Region 9, who is the EPA liaison to our Southern California region, addressed a recent storm water conference and noted that the universal retention doctrine may have logical application more so in areas of the nation that have so-called “combined sewer systems” (*i.e.*, where storm sewer and municipal waste sewers are conjoined). In other words, wherever there is a combined sewer system with the clear potential for municipal sewage spills during sufficiently large rain events, the universal retention doctrine has a very sound logical basis. Notably, no combined sewer system exists within the Board’s jurisdiction; so this policy justification for on-site retention does not apply in Los Angeles County.

We respectfully urge the Board and staff to reconsider and reject the universal retention doctrine. We urge instead far more appreciation of the natural flow doctrine and competing regional needs for storm water flows. Especially in our arid region, storm water harvesting and use should be deliberately optimized (by identifying and utilizing better regional infiltration opportunities) and downstream habitat needs should be considered as well. Both of these considerations suggest that there should be no universal retention doctrine or even a priority favoring universal retention or “micro-capture.” We respectfully urge the Board’s staff to reconsider universal retention and remove from the final permit any undue preference for or hierarchy favoring parcel-by-parcel, on-site storm water retention.

* * * *

(1972) (“the word ‘integrity’ ... refers to a condition in which the natural structure and function of ecosystems is [are] maintained.”).

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Thank you for considering these comments. We look forward to ongoing discussions with the Board and its staff as the final permit provisions are decided upon and on into the future.

Sincerely,



Andrew R. Henderson
General Counsel,
Building Industry Legal Defense Foundation
and
Vice President and General Counsel,
Building Industry Association of Southern California, Inc.

cc: Holly Schroeder
Dr. Mark Grey



Leighton and Associates, Inc.

A LEIGHTON GROUP COMPANY

July 19, 2012

Los Angeles Regional Water Quality Control Board
320 W. 4th Street
Los Angeles, CA 90013

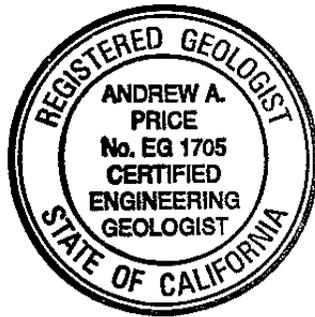
Attention: Mr. Ivar Ridgeway

**Subject: Comments on Tentative Order No. R4-2012-XXX
Waste Discharge Requirements for
Municipal Separate Storm Sewer Systems (MS4)
Discharges Within The Los Angeles County Flood Control District
Including The County of Los Angeles and Incorporated Cities Therein
Except City of Long Beach**

Leighton and Associates, Inc. (Leighton) appreciates this opportunity to provide comments to the Los Angeles Regional Water Quality Control Board on this subject matter. Leighton is a geotechnical, environmental, and materials testing and inspection consulting firm that has been serving the Southern California region for over 50 years.

The tentative MS4 permit for the Los Angeles region defines soil suitable for infiltration Best Management Practice (BMP) facilities such as basins or trenches, as having infiltration rates as low as 0.15 inches per hour. Many other agencies require suitable soils for infiltration purposes to have minimum infiltration rates of 0.3 inches per hour to 0.6 inches per hour. As compared to soils with infiltration rates of 0.3 inches per hour or higher, our experience suggests that soils with infiltration rates less-than (<) 0.3 inches per hour have limited pore space and often contain significant amounts of silt and/or clay. These soils may provide adequate infiltration upon initial exposure for use in an infiltration facility. However, they may become clogged in a relatively short time due to deposition of additional silt contained in the storm water runoff; thus reducing the limited pore space that provides for these soils to have some initial infiltration capability. Additionally, silts and clays, preexisting or deposited in stormwater runoff, may also have expansive soil characteristics, and when exposed to moisture, swelling of these soils may close the limited pore space of basin or trench soils and reduce infiltration rates to less than desired levels.

We understand that criteria for Technical Infeasibility are provided for in the permit if infiltration might exacerbate potential geotechnical hazards and that is a very important consideration. However, the focus of this letter centers on infiltration BMPs that are prone to develop reduced to no infiltration capacity in a short period of use, may create additional geotechnical hazards due to the presence of saturated soils and/or standing water over a prolonged period of time. The Fact Sheet (Attachment F of the Tentative Order No. R4-2012-XXX) makes several references to the Ventura County MS-4 permit (last corrected version dated January 28, 2010). Based upon our review of the Ventura County MS4 Permit, the minimum infiltration rate is 0.5 inches per hour for direct infiltration BMPs by referenced inclusion of the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures. Similarly, our review of the County of Los Angeles Low Impact Development Standards Manual dated January 2009 indicates a minimum infiltration rate of 0.5 inches per hour for infiltration BMPs as well. For these reasons stated above, we would suggest that similar criteria for minimum infiltration rates be considered for the Los Angeles MS4 Permit.



Respectfully submitted,

LEIGHTON & ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "A. Price".

Andrew A. Price, PG, CEG 1705
President

AAP/lr

Attachment: References



REFERENCES

County of Los Angeles, 2009, Low Impact Development Standards Manual, dated January 2009.

Geosyntec Consultants and Larry Walker Associates, 2011, Ventura County Technical Guidance Manual for Stormwater Quality Control Measures, Manual Update 2011, dated July 13, 2011.

State of California Regional Water Quality Control Board, Los Angeles Region, 2009, Waste Discharge Requirements for Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein, Order 09-0057, NPDES Permit No. CAS004002, dated May 7, 2009, Final Corrected January 13, 2010.

State of California Regional Water Quality Control Board, Los Angeles Region, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Los Angeles County Flood Control District, Including the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach, Order No. R4-2012-XXX, NPDES Permit No. CAS004001.

