CONTRA COSTA
CLEAN WATER
PROGRAM

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Program Manager

October 4, 2011

Mr. Bruce Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

SUBJECT: Amendment of the Municipal Regional Stormwater Permit for Special Development Projects, Biotreatment Soil and Green Roof Specifications

Dear Mr. Wolfe:

The Contra Costa Clean Water Program (CCCWP) comprises Contra Costa County, the 19 cities and towns within the County, and the Contra Costa County Flood Control and Water Conservation District.[1]

The CCCWP supports the proposed amendment to the MRP. However, the amendment has the perverse consequence of *weakening* the effectiveness, with regard to water quality, of Low Impact Development (LID) policies Contra Costa municipalities have been implementing since 2005.

In addition, the proposed amendment fails to address specific, significant needs Contra Costa municipalities have experienced during six years of implementing LID as part of our land development policies. These are the following special situations[2] where LID treatment is not always feasible:

1. Portions of sites that are not being developed or redeveloped, but which must be retrofit to meet treatment requirements in accordance with the "50% rule."[3]

2. Sites smaller than one acre approved for lot-line to lot-line development or redevelopment as part of a municipality's stated objective to preserve or enhance a pedestrian-oriented "smart growth" type of urban design.

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[1] Of the 19 cities within the County, 16 are within the San Francisco Bay Region, and the other three are within the Central Valley Region. The Program includes 18 of the 76 agencies subject to the Municipal Regional Permit.
[2] These same special situations are identified in our April 3, 2009 letter commenting on the Board's February 11, 2009 Revised Tentative Order.
[3] The "50% rule" refers to the requirement in MRP Provision C.3.b.ii.(3)(a) and elsewhere, which states that when a redevelopment project results in an alteration of more than 50% of the impervious surface of a previously existing project that was not subject to Provision C.3, the entire project must be included in the treatment system design.

3. Addition or replacement of roadway or other impervious surface within an existing right-of-way.

Lastly, the amendment would restrict the selection of soils used in bioretention facilities to a mix meeting one design specification. That soil mix specification was originally developed by staff of Contra Costa municipalities (with assistance from consultants retained by CCCWP). However, by including the specification in the proposed permit requirements, Water Board staff has gone too far in specifying the means and methods by which compliance shall be achieved. This bulky addition to the permit will tend to stifle developers and municipalities' experimentation with soil mixes that could treat stormwater more effectively than the specified mix.

We ask for changes to the amendment to address these specific, significant needs (see Attachment A to this letter).

We further ask your Board to review the process by which the current amendment was crafted. We believe a flawed decision-making process led to an amendment that is not as protective of water quality as it could be and that also has more impact on economic development than is necessary to achieve the Board's water-quality-related objectives.

The CCCWP supports the proposed amendment to the MRP.

The main effect of the amendment will be to allow a narrowly defined set of development projects to select, as an option, non-LID methods of treatment. The overall effect will be, by our estimate that LID treatment will be provided for 90% or more of the aggregate impervious area created or replaced as part of development projects approved during the remaining MRP term. The remaining 10% or less of impervious area created or replaced will receive treatment by either vault-based media filtration or by higher-rate biofiltration in a tree-box-type unit. The permittees will carefully track the use of LID and non-LID treatment in development projects approved during the remaining MRP term.

At a regional scale, this amendment is an overwhelmingly positive outcome for advocates of LID. The MRP's LID requirements, most of which go into effect December 1, 2011, are new and very far-reaching. Up to now, regionally, LID implementation has been patchy outside of Contra Costa. To achieve LID treatment for runoff from 90% or more of impervious area to be created or replaced beginning only two years after the MRP's 2009 adoption is extraordinarily ambitious. We encourage the Board to endorse this 90% + approach, although we recognize there will continue to be concerns about the remaining 10% or less of impervious area created or replaced for which other, also effective, treatment methods will be allowed.

The amendment weakens the effectiveness of Contra Costa's LID policies.

In 2005, Contra Costa municipalities adopted an LID approach to meeting stormwater treatment requirements for new developments subject to their discretionary review. The Program pioneered a design methodology, including formats for submitting calculations and other design information, to ensure thorough and effective LID implementation on these projects. Through the CCCWP, Contra Costa municipalities conducted extensive outreach to

land developers and have provided in-depth training, approximately annually, for local land development engineers and other professionals. Late in 2005, to further encourage the use of LID, the municipalities adopted a policy prohibiting the use of hydrodynamic separators, when used alone, as a method of meeting stormwater treatment requirements.

In 2007, after two years of LID implementation, municipal staff involved in land development review recognized that, although they were generally successful in getting LID implemented on development projects where LID was feasible, they had difficulty mustering the technical expertise and other resources they needed to respond to project proponents' frequent appeals to be allowed to use non-LID methods of treatment. They requested the Program develop a policy restricting non-LID treatment. They reasoned correctly that—although municipal staff would still need to review a small number of projects case-by-case for LID feasibility—in most cases LID would be mandated without a need for such a review.

The CCCWP established such a policy in a March 21, 2007 memorandum. This policy, which was adopted voluntarily and without encouragement from Water Board staff, was carefully crafted to identify narrow categories of projects where the most experienced LID practitioners and reviewers had found LID might not be feasible. Specific examples were considered. The policy was reviewed by the CCCWP's C.3 Implementation Work Group and was adopted by the CCCWP's Management Committee.

The policy went into effect immediately and, as updated, has been included in CCCWP guidance published since, including the 4th and 5th (current) editions of the *Contra Costa Clean Water Program Stormwater C.3 Guidebook.* The 5th Edition, published in October 2010, identifies the following categories of projects where LID may not always be feasible:

- Portions of sites which are not being developed or redeveloped, but which must be retrofit to meet treatment requirements in accordance with the "50% rule."

- Sites smaller than one acre approved for lot-line to lot-line development or redevelopment as part of a municipality's stated objective to preserve or enhance a pedestrian-oriented "smart growth" type of urban design.

After more than four years implementing this policy, Contra Costa municipalities have found it feasible to implement LID on projects not meeting these criteria, although achieving 100% LID treatment is challenging for some high-density projects that exceed an acre of impervious area created or replaced.

In 2010, as part of the submittal required by the MRP,[4] BASMAA conducted an analysis to project the amount of impervious area for which non-LID treatment would be allowed, during the remaining permit term, if similar policies were adopted regionwide. For the analysis, 631 past development projects were reviewed; comprising approximately 60% of the developments approved Bay-area wide during the four preceding years. (The results were normalized for the purposes of the projection.)

In the BASMAA analysis, Categories "A" and "D" correspond closely to Contra Costa's current policy. The BASMAA analysis estimates that projects in Category "A," "Projects creating no more than one acre of impervious surface area with permanent structures

[4] Special Projects Proposal, Provision C.3.e.ii., submitted by BASMAA to the Water Board on December 1, 2010.

extending effectively lot-line-to-lot-line..." would constitute about 0.29% (that is, less than one-third of one percent) of the total amount of the aggregate impervious area subject to Provision C.3. The BASMAA analysis estimates only two projects in Category "D", "portions of sites which are not being developed or redeveloped but must be retrofitted to meet treatment requirements per [the 50% rule]," would be approved regionally during the remaining permit term. The aggregate amount of impervious surface area for so few projects cannot be reliably estimated. However, very conservatively, the affected portions of those projects would be sure to constitute less than one-half of one percent of the aggregate impervious area subject to C.3.

Thus, if Contra Costa's current policy were adopted regionwide, then LID treatment would be provided for more than 99% of aggregate impervious area created or replaced and non-LID treatment would be provided for less than 1% of aggregate impervious area created or replaced.

If this proposed amendment is adopted, Contra Costa municipalities will *expand* the current allowance of non-LID treatment to cover the additional categories defined in the amendment. This will include partial or total allowances for Transit-Oriented Development (TOD) projects. By our best estimates, this will increase the aggregate amount of impervious area for which non-LID treatment may be provided by between 400% and 1000%, compared to the current Contra Costa policy. Although municipal staff with the most experience reviewing proposed development projects had previously determined that LID treatment is feasible for TOD projects greater than an acre, Contra Costa municipalities will, as a result of this amendment, allow non-LID treatment for some or all impervious areas within TOD projects.

Generally, our municipalities could not, as a practical matter, require LID treatment always be used for these types of projects after the Regional Water Board has specifically identified these same types of projects as eligible for non-LID treatment. In accordance with the BASMAA proposal, Contra Costa municipalities will strongly encourage proponents of these projects to include LID treatment rather than non-LID treatment. BASMAA recommended Board staff include this requirement (to strongly encourage LID treatment even for projects eligible to use non-LID treatment) in the proposed permit amendment but Water Board staff chose not to do so.

The amendment also fails to address specific, significant problems Contra Costa municipalities have experienced when applying LID requirements.

The most significant problem is the lack of any provision to allow non-LID treatment on portions of sites which are not being developed or redeveloped, but which must be retrofit to meet treatment requirements in accordance with the "50% rule."

The permit's 50% rule affects only redevelopment projects, and places redevelopment of already urbanized sites at a distinct economic disadvantage compared with "greenfield" development on agricultural or open space lands. An example of a typical project affected by the "50% rule" would be placement of a new building on an existing parking lot. For such a project, the applicant would be required to provide treatment for runoff from the roof of the new building (even though the building's footprint was already impervious) and, under the 50% rule, would also be required to retrofit *previously existing buildings on the*

same site to route their drainage to treatment, even if those buildings were intended to remain untouched by the development project currently proposed.

The "50% rule" has been carried forward, with minor modifications in language, from stormwater NPDES permits dating back to 2000. At that time, permit treatment technical criteria foresaw that extended detention basins and in-line treatment units such as hydrodynamic separators—all non-LID methods—would be used to achieve compliance. Typically, when extended detention basins are used, a single extended detention basin is used for an entire development site, and it made some sense to require that the extended detention basin be upsized to provide enough capacity to treat runoff from the already built portions of the site, as well as from the portions of the site to be developed with new impervious surfaces. Similarly, an existing site drainage system can be retrofit with in-line treatment units, sometimes at relatively reasonable cost and with acceptable impacts, to treat runoff from the portions of a site which are to be otherwise unaltered by a currently proposed project.

LID design poses an entirely different engineering problem, because bioretention and other LID facilities are distributed throughout the project and are located on the surface rather than underground. For some projects, drainage from the existing portions of the site can be rerouted into LID facilities, such as bioretention, that use, infiltrate, evapotranspirate, or biotreat runoff. For other projects—such as where roof leaders on existing buildings are tied into underground pipes that discharge directly to municipal storm drains—rerouting drainage to LID facilities would require substantial alterations that would otherwise not be required as part of the development project.

Although such projects are rare, it is likely that there will be one, two, or more development projects in the region, during the remaining permit term, where the requirement, as it appears in the proposed amendment, could kill a development project by making it too costly or technically difficult to comply. This would be very unfortunate, as this type of development project—effectively, redevelopment of a previously built site to increase its density and economic use—is much more desirable, from a water-quality standpoint, than a project on previously undeveloped land (where the "50% rule" never applies).

By omitting this needed change from the proposed amendment language, Water Board staff has effectively tied their own hands in this matter. No matter how desirable a specific proposed "smart growth" redevelopment project might be, and no matter how strong the case that non-LID treatment should be allowed because of technical constraints at the project site, there would still be no legal way to allow the project to go forward, because of the way Water Board staff has drafted the amendment language. Any informal exceptions or promises of "non-enforcement" of this permit requirement by Water Board staff would circumvent the Water Board's authority, would amount to selective enforcement by staff of the Board's Order, and in any case would likely be insufficient to satisfy a development project's lenders and insurers.

We ask that the Water Board incorporate in the amendment language (see Attachment A) that identifies, as narrowly as possible, the specific condition where retrofitting drainage from existing buildings and pavement that would otherwise be unaltered may be done using non-LID treatment methods.

We further request that the maximum size for projects to meet "Category A Special Project Criteria" be changed to one acre to be consistent with Contra Costa's current policy. As noted above, BASMAA's analysis shows that projects meeting Contra Costa's current criteria, including the one acre size limit, account for 0.29% of the aggregate impervious area created or replaced in the region over the four preceding years. Reduction of the size limit to half an acre is arbitrary, as there has been no analysis relating the change in size limit to any water quality benefit. In any case, such a benefit would be minimal in the context of total aggregate impervious area that will be constructed during the remaining permit term.

Lastly, we ask that the allowance for non-LID treatment be extended to roadways and new impervious area constructed within existing public right-of-way, where LID treatment measures are infeasible because the drainage from the additional traffic lanes cannot be routed to vegetated areas. BASMAA's study found that the municipal permittees anticipate very few, if any, such projects. However, as with the "50% rule," Water Board staff has tied their own hands in drafting the amendment; as it is currently written, an exception, no matter how badly needed or how well justified technically, could not be granted. We ask that the Water Board provide some limited flexibility by adopting the modification shown in Attachment A.

We ask your Board to review the process by which the current amendment was crafted.

In closing, we ask that the Water Board review the decision-making process leading up to the publication of the proposed amendment, particularly with regard to the "Special Projects" provision.

In developing Contra Costa municipalities' present policy on non-LID treatment, in our comments on drafts of the MRP prior to adoption, and in our contributions to BASMAA's December 1, 2010 proposal, we focused on maximizing the water quality benefits to be obtained from LID while providing minimal exceptions—minimal, that is, in terms of the aggregate amount of impervious area, and therefore the aggregate amount of runoff, that would potentially receive non-LID treatment rather than LID treatment. We believe this is the only metric that makes sense from a water-quality standpoint. The metric references a clear cause-and-effect relationship relevant to water quality. The metric can be easily planned, projected, and measured, the results can be analyzed, and the policy can therefore be periodically updated and continuously improved. The collective design and project review experience of Contra Costa municipalities' staff, dating back more than four years, helped identify narrow categories of needed exceptions which would result, by our estimates, in at least 95% and quite possibly greater than 99% of aggregate impervious area receiving LID treatment, with the remaining *de minimis* exceptional projects receiving non-LID treatment.

However, rather than make use of the available data and facts, Water Board staff chose instead to focus on subjective preferences for various types and characteristics of different types of development—acting, in effect, as a land use planning agency (or perhaps a Design Review Board). The resulting proposed amendment reads like a zoning code, complete with references to dwelling units per acre, floor area ratios, clustering, and street amenities. There has been no data or analysis relating this exceedingly complex scheme to quantities of impervious area, or of runoff, that would receive LID vs. non-LID treatment.

In the end, as we document above, this reliance on Water Board staff's subjective preferences rather than data and facts led to an amendment that (at least in Contra Costa) will actually *increase* the aggregate amount of impervious area and of runoff that will receive non-LID treatment, as compared to present policy. At the same time, the amendment fails to protect against the scenario where a needed development project is killed because of a lack of flexibility in the new permit requirements.

Although we support Water Board staff's proposed amendment, we are disappointed, and believe it could have been done better.

Sincerely,

Thomas Dalziel, Program Manager
Contra Costa Clean Water Program

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Enclosures:

Cc: Elizabeth Lee, Central Valley Regional Water Quality Control Board
Tom Mumley, Francisco Bay Regional Water Quality Control Board
Dale Boywer, Francisco Bay Regional Water Quality Control Board
Selina Louie, San Francisco Bay Regional Water Quality Control Board
Steven Spedowfski, Management Committee Chair, Contra Costa Clean Water Program

Attachment A

Provision (following proposed amendment)	Requested Change	Reason for Request
C.3.b.ii.(1)(c) and C.3.b.ii.(3)(a).	Add the following underscored sentence: "Where a project results in an alteration of **more than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire development project). 100% of the amount of runoff identified in Provision C.3.d. for the new and replaced impervious surfaces must be treated with LID treatment measures. 100% of the amount of runoff identified in Provision C.3.d. for existing impervious surfaces must be treated with LID treatment measures, except where the use of LID treatment measures would require significant alterations to existing structures, paving, or walkways that would not otherwise occur. In such cases, other treatment methods may be used."	The change would make the provision consistent with Contra Costa municipalities' current policy. Although the change affects a fraction of 1% of the aggregate impervious area subject to Provision C.3., it provides needed flexibility for certain projects subject to the "50% rule" and avoids the scenario where a "smart growth" development project is killed because of inability to comply.

Provision (following proposed amendment)	Requested Change	Reason for Request
C.3.b.ii.(4)(b)	Add the following underscored sentence: "Widening of existing streets and roads with additional traffic lanes. 100% of the amount of runoff identified in Provision C.3.d. for the existing impervious surfaces must be treated with LID treatment measures except where the use of LID treatment measures is infeasible because the drainage from the additional traffic lanes cannot be routed to vegetated areas. In such cases, other treatment methods may be used.	Although the change affects a fraction of 1% of the aggregate impervious area subject to Provision C.3., it provides flexibility that may be needed for certain roadway projects.
C.3.c.i.(2)(b)(vi)	Delete the last sentence, which states "Permittees shall ensure that Regulated Projects use biotreatment soil media that meet the minimum specifications set forth in Attachment I."	Attachment I, which should also be deleted, goes too far in specifying the means and methods by which compliance shall be achieved. Such specificity is redundant to the requirement that soil media "sustain healthy, vigorous plant growth and maximize stormwater runoff retention and pollutant removal," which is also included in Provision C.3.c.i.(2)(b)(vi). Inclusion of the restrictive specification in Attachment I will stifle innovation and experimentation which could lead to soil mixes that treat stormwater more effectively.

Provision (following proposed amendment)	Requested Change	Reason for Request
C.3.e.ii.(2)(a)(iii)	Change the provision as follows: "Create and/or replace one ~~half~~ acre or less of impervious surface area."	The change would bring the category in line with Contra Costa municipalities' current policy, which is estimated to account for only 0.3% of the aggregate impervious area of projects subject to C.3. No estimate or water-quality-related justification has been provided for the different threshold.