



January 28, 2011

*Via electronic mail*

Executive Officer and Members of the Board  
California Regional Water Quality Control Board  
San Francisco Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
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**Re: *Comments on December 1, 2010 Draft Model Bioretention Soil Media Specifications-MRP Provision C.3.c.iii.(3)***

Dear Mr. Wolfe and Members of the Board:

On behalf of the Natural Resources Defense Council (NRDC), we offer the following comments on the December 1, 2010 Draft Model Bioretention Soil Media Specifications-MRP Provision C.3.c.iii.(3) ("Draft Bioretention Proposal") submitted by BASMAA on behalf of the Permittees to the San Francisco Municipal Regional Permit (Order No. R2-2009-0074) ("MRP"). We appreciate the opportunity to submit these comments to the Regional Board.

NRDC has commented to the Regional Board on numerous prior occasions our support for the use of low impact development ("LID") practices that retain stormwater onsite through infiltration, harvesting and reuse, and evapotranspiration.<sup>1</sup> By retaining stormwater at its source, these practices ensure that 100 percent of the pollutant load in that volume of runoff does not reach receiving waters. In contrast, practices that treat runoff through use of biotreatment with an underdrain, which we have urged are not a proper substitute for LID practices that retain water onsite, result in the release of pollutants to receiving waters. In order to achieve equivalent pollutant load reduction benefits to the use of LID practices that retain runoff onsite, these practices, which discharge significant quantities of stormwater, would have to be 100 percent effective at filtering pollutants from runoff, which they are invariably not. This conclusion is born out by studies by Dr. Rich Horner, which demonstrate that biotreatment systems using an underdrain attenuate only 57 percent of total suspended solids, 80 percent of total copper,

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<sup>1</sup> See, e.g., NRDC letter to San Francisco Regional Board re: Comments on February 11, 2009 Draft San Francisco Bay Municipal Regional Stormwater NPDES Permit, April 3, 2009.

62 percent of total zinc, and 78 percent of total phosphorus in runoff from a site.<sup>2</sup> Further, the Permittees' own data shows that biotreatment systems using an underdrain are poor methods for reducing nitrogen-nitrate levels. Analysis of nutrient removal from synthetic stormwater runoff demonstrate only 55 to 65 percent of total Kjeldahl nitrogen removal and that only 20 percent of nitrate is removed from the runoff.<sup>3</sup>

Section 402(p) of the Clean Water Act establishes the maximum extent practicable ("MEP") standard as a requirement for pollution reduction in stormwater permits. "[T]he phrase 'to the maximum extent practicable' does not permit unbridled discretion. It imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible." (*Defenders of Wildlife v. Babbitt* (D.D.C. 2001) 130 F.Supp.2d 121, 131 (internal citations omitted); *Friends of Boundary Waters Wilderness v. Thomas* (8th Cir. 1995) 53 F.3d 881, 885 ("feasible" means "physically possible").) While we do not comment here on the specific terms of the technical guidance provided in the Draft Bioretention Proposal, we believe the Permittees' recommendation to the Regional Board, that "the Regional Board take no action with regard to bioretention soil specifications," to be inconsistent with the MEP standard.

Biotreatment, even using the soil specifications recommended in the guidance provided, will result in the release of substantial pollutant loads to receiving waters in the Bay Area. The Draft Bioretention Proposal's suggestion that no specific soil specifications are prudent or necessary, "as long as . . . experimentation and innovation" with differing soil mixtures "is within the bounds of the *minimum requirements* needed to achieve effective stormwater treatment" (Draft Bioretention Proposal, at 2), entirely misses the point: stormwater treatment must be achieved "to the maximum extent practicable." The Regional Board should not abdicate its role in ensuring this standard is met by allowing open ended standards without any regard to their effectiveness at reducing pollution in stormwater. Whatever standard is set, the Regional Board must ensure that the specified practices will result in the reduction of pollution to the MEP, not that the practices meet the "minimum requirements" for treatment. We urge the Regional Board to reject this proposal.

Sincerely,



Noah Garrison  
Natural Resources Defense Council

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<sup>2</sup> R. Horner (2007) *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for the San Francisco Bay Area*, at 16-19; R. Horner (2007) *Supplementary Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for the San Francisco Bay Area*, at 3-5.

<sup>3</sup> BASMAA (December 1, 2010) *Draft Model Bioretention Soil Media Specifications-MRP Provision C.3.c.iii*, at Annotated Bibliography section 3.0.