



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
dbowyer@waterboards.ca.gov

***Re: Comments on December 1, 2010 Draft Special Projects Proposal/LID
Treatment Reduction Credits MRP Provision C.3.e.ii.(ii)***

Dear Mr. Wolfe and Members of the Board:

We write on behalf of the Natural Resources Defense Council (NRDC) and San Francisco Baykeeper. We have reviewed the December 1, 2010 Draft Special Projects Proposal/LID Treatment Reduction Credits MRP Provision C.3.e.ii.(2) (“Draft 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 the following comments to the Regional Board.

We are strongly disappointed with the Draft Proposal. While we appreciate that the number and type of categories of projects that would qualify for treatment reduction credits has been reduced from that originally, and unjustifiably, proposed in early drafts of the MRP, the Draft Proposal nevertheless presents ill-conceived and unduly broad exemptions from the MRP’s low impact development (“LID”)-based retention and alternative compliance requirements. Inexplicably, the Draft Proposal would provide “Special Projects” with a categorical exemption from meeting any of the LID requirements under section C.3.c.i.(2)(b) of the MRP. The Draft Proposal fails to provide passable technical support or compliance-based reason for such a blanket waiver.¹ Further, its proposed terms are inconsistent with state and federal law, most

¹ An administrative decision must be accompanied by findings that allow a court reviewing the order or decision to “bridge the analytic gap between the raw evidence and ultimate decision or order.” (*Topanga Ass’n for a Scenic Cmty. v. County of Los Angeles* (1974) 11 Cal.3d 506, 515. Abuse of discretion is established if “the order or decision is not supported by the findings, or the

notably with the Clean Water Act's "maximum extent practicable" ("MEP") standard. For the reasons presented below, we strongly urge the Board to reject the Draft Proposal.

A. Any LID Treatment Credit System Must Meet the Federal Clean Water Act's MEP Standard.

Section 402(p) of the Clean Water Act establishes the 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").) As one state hearing board held:

[MEP] means to the fullest degree technologically feasible for the protection of water quality, except where costs are wholly disproportionate to the potential benefits.... This standard requires more of permittees than mere compliance with water quality standards or numeric effluent limitations designed to meet such standards.... The term "maximum extent practicable" in the stormwater context implies that the mitigation measures in a stormwater permit must be more than simply adopting standard practices. This definition applies particularly in areas where standard practices are already failing to protect water quality...

(*North Carolina Wildlife Fed. Central Piedmont Group of the NC Sierra Club v. N.C. Division of Water Quality* (N.C.O.A.H. October 13, 2006) 2006 WL 3890348, Conclusions of Law 21-22 (internal citations omitted).) The North Carolina board further found that the permits in question violated the MEP standard both because commenters' highlighted measures that would reduce pollution more effectively than the permits' requirements and because other controls, such as infiltration measures, "would [also] reduce discharges more than the measures contained in the permits." (*Id.* at Conclusions of Law 19.)

Low Impact Development has been established as "a practicable and superior approach . . . to minimize and mitigate increases in runoff and runoff pollutants and the resulting impacts on downstream uses, coastal resources and communities."² Of note, the U.S. Environmental Protection Agency originally threatened to "consider objecting to the [MRP] permit" if it did not include "additional, prescriptive requirements" for LID.³ Further, NRDC

findings are not supported by the evidence." Cal. Civ. Proc. Code § 1094.5(b); *see also Zuniga v. Los Angeles County Civil Serv. Comm'n*, 137 Cal. App. 4th 1255, 1258 (2006)

² California Ocean Protection Council (May 15, 2008) *Resolution of the California Ocean Protection Council Regarding Low Impact Development*, at 2.

³ Letter from Douglas E. Eberhardt, EPA, to Dale Bowyer, San Francisco Bay Regional Water Quality Control Board (April 3, 2009), at 1.

and Baykeeper submitted several technical studies to the Regional Board to establish that the exempted Special Projects, including “smart growth” or urban infill and redevelopment projects, could in many circumstances meet standards even more stringent than the LID requirements adopted in the MRP.⁴

Yet, here the Permittees propose to allow a broadly defined swath of Special Projects to be granted a complete waiver from meeting the MRP’s LID requirements. Of particular concern, the Draft proposal would exempt *any* development or redevelopment project from the MRP’s LID requirements if it occurs within ½ mile of an existing or planned “transit hub.” (Draft Proposal, at 10.) The Draft Proposal would not obligate any Special Project to demonstrate that it is technically infeasible to implement the MRP’s LID stormwater mitigation measures—merely falling into one of the specified categories would accord the project a complete waiver from the retention requirements, or even the requirement to use biotreatment where onsite retention is technically infeasible.⁵ (Draft Proposal at 6.) The only justification presented for this waiver is a set of generalized and largely unquantified environmental benefits that may, in theory, accrue from the exempted projects, and vague assertions made regarding the complexity involved in procuring approval for smart growth projects.

While we do agree with the environmental preferability of smart growth projects in comparison to their greenfield counterparts (indeed, NRDC is a national advocate of smart growth), in the MS4 permitting context there is no reason to establish a blanket waiver from proven stormwater mitigation requirements simply because a project constitutes “smart growth.” If a project can feasibly implement stormwater treatment measures, it must be required to do so (particularly for regions such as the Bay Area that contain numerous impaired waters). As discussed in the sections below, the Draft Proposal does not present any evidence to demonstrate that all projects in these categories are incapable of complying with the MRP, nor does it present any evidence to demonstrate that any perceived benefits of smart growth or development in proximity to a transit hub will outweigh the water quality detriments created by additional urban runoff. As a result, simply authorizing a blanket waiver such as the one proposed here would fail to properly implement the requirement that development reduce the impacts of stormwater “to the maximum extent practicable.”

⁴ 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 (hereinafter, “Horner Initial Investigation”); 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 (hereinafter, “Horner Supplementary Investigation”); *See also*, 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.

⁵ The Draft Proposal would likewise exempt all designated Special Projects from any requirement to participate in the MRP’s alternative compliance programs, including the requirement to perform offsite mitigation or provide payment of in-lieu fees under section C.3.e.1.

1. The Draft Proposal Fails to Provide Support for Water Quality Benefits Claimed to Arise from Development of Special Projects.

Rather than proposing specific LID treatment reduction credits for different types of “Special Projects,” as specified in the MRP under section C.3.e.ii.(2), the Permittees propose instead to exempt all designated Special Projects from the MRP’s LID requirements entirely. The Draft Proposal states that the benefits of “Smart Growth strategies . . . are expected to offset any potential for increases in pollutant loading that may result from allowing” Special Projects to use alternative compliance measures. (Draft Proposal, at 20.) However, the Draft Proposal provides no credible basis to support such a claim.

The Draft Proposal claims that “[s]mart growth strategies . . . will achieve significant water quality benefits.” (*Id.*) The Proposal then cites to several reports, each of which point to benefits that can, generally speaking, be derived from smart growth development. For example, the Draft Proposal points to a U.S. EPA report that states that “high density” development of 8 houses per acre would produce approximately 20 percent less runoff annually than would medium density development of only 4 houses per acre. (See Draft Proposal, at 21.)⁶ While we would dispute the characterization of typical suburban development on 1/8 acre lots as “high density,” there is nothing to this finding that demonstrates that a 20 percent reduction in runoff will occur for any specific Special Project in particular, let alone that a benefit would accrue to justify a complete and total waiver from requirements to retain runoff onsite or to comply with the MRPs alternative compliance provisions. Neither the Draft Proposal nor the studies it cites (either the EPA report or others cited on pages 21-24) point to specific, quantifiable pollutant load reductions that would occur as a result of smart growth or other development designated as Special Projects; the proposal in no way provides validation for its claim that “increases in pollutant loading” resulting from the proposed blanket waiver would be offset. Effectively, the Draft Proposal provides no evidence of the true water quality benefits of smart growth.

While we do not doubt that such benefits may exist for a particular project, the Draft Proposal’s blanket waiver is simply not calibrated to ensure such benefits are achieved. Nor does the Draft Proposal address the issue that, discussed in section A.3, below, many, if not a majority of designated Special Projects will be able to feasibly implement LID-based retention practices to address some or all of the required volume of runoff, obviating any claimed need for such a credit in the first place.

⁶ Paradoxically, the Draft Proposal repeatedly claims that one of the benefits of smart growth or transit oriented development is that they can “reduce existing impervious surfaces,” but then proposes to exempt the redevelopment of existing impervious surfaces entirely from any requirement to actually do so.

2. The Draft Proposal Overstates the Effectiveness of Proposed Alternative Methods of Compliance in Reducing Stormwater Pollution.

Far from having been “proven capable of providing good stormwater treatment,” the proposed alternative practices the Draft Proposal advocates for represent a demonstrably inferior means of addressing stormwater pollution compared with LID practices that infiltrate, evapotranspire, or harvest and re-use runoff. For instance, retaining the design storm volume onsite would prevent 100 percent of the runoff, and therefore, 100 percent of the pollutants in that runoff, from ever reaching receiving waters. In contrast, under the Draft Proposal a Special Project could implement a vault-based system with conventional treatment BMPs (such as sand filters) that would only attenuate just slightly over half of the total suspended solids (TSS), 40% of the total zinc (TZn), and one-third of the total copper (TCu) and total phosphorous (TP) in that volume of runoff.⁷ For tree-box-type high-rate biofilters, the Draft Proposal acknowledges that it is unable to provide any conclusive data as to “whether effluent quality . . . is as good or better than effluent quality from a bioretention facility.” (Draft Proposal, at 6.) However, unless the tree box filter is designed with the same capacity to store and infiltrate or evapotranspire water as the bioretention system, it is unlikely to provide comparable performance. As we have demonstrated in technical papers previously, full biotreatment systems utilizing an underdrain are likely to attenuate only 57 percent of TSS, 80 percent of TCu, 62 percent of TZn, and 78 percent of TP⁸ even under optimum conditions, let alone when engineered to allow infiltration rates of up to 100 inches per hour. Biotreatment systems with underdrains have additionally proven relatively ineffective for removal of total nitrogen or nitrate.⁹ Given the poor performance of these systems, even allowing partial treatment through such features all but guarantees high pollutant loads and concentrations in the resulting stormwater runoff, and refutes any claim that a blanket waiver will “achieve significant water quality benefits.”

That Special Projects would be “[s]trongly encourage[d]” to implement retention practices is entirely insufficient (see Draft Proposal, at 6); this Language represents, at best, a toothless, hortatory suggestion that will not ensure Special Projects are developed in a manner that reduces stormwater pollution to the MEP. The Regional Board should reject the Draft Proposal’s claims regarding use of alternative practices and the proposal they purportedly support.

⁷ R. Horner (2009) *Assessment of Hydrologic and Water Quality Implications of Stormwater Management under Provisions of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*, at 4-5.

⁸ *Id.*, at 2.

⁹ See, BASMAA (December 1, 2010) *Draft Model Bioretention Soil Media Specifications-MRP Provision C.3.c.iii*, at Annotated Bibliography section 3.0 (noting reduction of only 55 to 65 percent of total Kjeldahl nitrogen and only 20 percent of nitrate). We note as well that the Draft Proposal provides no specific design, performance, or sizing standards for these proposed alternative methods, meaning there is absolutely no assurance that they will serve to reduce pollution in an effective manner.

3. The Draft Proposal Fails to Articulate any Demonstrated Basis for a Blanket Waiver of the MRP's LID Requirements.

The MRP requires Regulated Projects to retain a specified volume of runoff onsite using LID practices that infiltrate, evapotranspire, or harvest and reuse rainfall, or, where these practices are technically infeasible to implement, to treat the runoff using biotreatment BMPs or by performing alternative compliance. (MRP, section C.3.c.i.(2)(b).) The Draft Proposal claims, without citation to data or other evidence, that “[d]evelopments where none of the methods prescribed by the Water Board are possible will include smart growth, high density, and transit oriented development.” (Draft Proposal, at 1.) The Draft Proposal then claims, again without support, that a blanket waiver from the MRP’s LID requirements is necessary for all development in the above categories because the development “would otherwise likely be directed to the suburban fringe.” (Draft Proposal, at 3.) However, even disregarding their anecdotal nature, the Draft Proposal itself disqualifies these claims as the basis for any waiver.

In numerous places, the Draft Proposal points out not that a complete (or even partial) exemption is required for these types of development, but that implementing the MRP’s LID requirements will be entirely feasible. The Draft Permit openly points out that “[i]nfiltration is feasible on some of these project sites,” that evapotranspiration “may be implementable for some projects, “ and that even though it may not be “universally applicable,” rainwater capture and reuse “may be implementable.” (Draft Proposal, at 7.) Even in the event none of these practices can be feasibly implemented, the Draft Proposal fully admits that “[b]iotreatment will be implementable on many projects.” Yet, the Draft Proposal insists that a complete waiver is necessary in order to allow for Special Projects to be built. As the Draft Permit states “none of the four permit prescribed LID-options . . . can be counted on to be feasible in *every* case.” Draft Proposal, at 7 (emphasis added). “[I]t is possible,” the Draft Proposal states, “one or more projects proposed somewhere within the 76 regulated municipalities during the permit term would require a choice of additional options for stormwater treatment.”¹⁰ (Draft Proposal, at 9.) The implication being that, because meeting the MRP’s LID requirements may be infeasible for some, or even one Special Project within the 76 municipalities subject to the MRP, no Special Project should be required to meet them. This suggestion is poorly taken, and inconsistent with the requirements of the Clean Water Act’s MEP standard.

Aside from the total lack of support for the Draft Proposal’s assertion that such an exemption is needed, the proposed waiver is, compared to other provisions nationally, a poorly crafted and crude instrument. Even in other jurisdictions where “credits” are granted to smart growth projects, and with which we disagree over need for, these credits are a small fraction of the project’s overall obligation (*e.g.*, reduction of a project’s onsite retention requirement by

¹⁰ The Draft Proposal additionally ignores that even if this were the case, the project would be able to perform alternative compliance under section C.3.e.i. of the MRP.

20%).¹¹ In California, multiple permits have declined to incorporate a credit system, finding instead that allowing the use of alternative compliance to meet the permit's LID requirements suffices to encourage or allow smart growth and urban infill projects to proceed. For example, the Ventura County MS4 Permit introduces its alternative compliance provisions by stating explicitly that they are in place in specifically "[t]o encourage smart growth and infill development of existing urban centers" where onsite compliance with LID requirements may be technically infeasible.¹²

Moreover, the criteria for commercial and mixed-use projects proposed for Special Project status under Category B are not especially strict when compared with other urban settings, and would not appear to warrant a credit; under the Draft Proposal, a project's FAR must be at least 2—*i.e.*, it must be at least two stories tall without any tapering—not a difficult standard to meet in urban areas.¹³ (See Draft Proposal, at 9.) In total, the Draft Proposal would ensure that a significant number of projects that are capable of meeting the MRP's LID requirements will provide stormwater management that is comparably lacking instead. These deficiencies, apart from being inconsistent with federal and state law, will serve to hamstring the MRP's ability to move the Bay Area's many impaired watersheds toward compliance with water quality standards.

4. The Draft Proposal's Transit-Oriented Development Exemption Is Particularly Ill-Conceived and Would Potentially Exempt Numerous Regulated Projects from the MRP's LID Requirements.

Just as it was when originally proposed in the February 11, 2009 Draft MRP, the definition of "transit-oriented development" ("TOD") presented by the Draft Proposal in the context of the MRP's area of coverage is overly broad and would allow the installation of stormwater management BMPs across the Bay Area that are far less protective of water quality than required under the MRP's LID standards. The definition suffers from two central problems.

¹¹ See, e.g., State of West Virginia (July 22, 2009) Department of Environmental Protection, Division of Water and Waste Management, General National Pollution Discharge Elimination System Water Pollution Control Permit, NPDES Permit No. WV0116025, at 14.

¹² Los Angeles Regional Water Quality Control Board (July 8, 2010) 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 No. R4-2010-0108, NPDES Permit No. CAS004002, at section 4.E.III.2.a.

¹³ Additionally, Special Project categories D, and E do not appear to comply with the categories allowed for LID Treatment Reduction Credits under the MRP.

First, and related to comments we submitted to the Regional Board during the MRP adoption process¹⁴ the requirement that a project be located within a half-mile of an “existing or planned transit hub and/or located within an area designated as a transit village . . .” would carve out large areas of the metropolitan Bay Area for waivers from LID requirements under the MRP. The percentage of land and, as a corollary, of development that would qualify for waivers is substantial. The Draft Proposal identifies the amount of new or replaced surface under this category to be between “168 and 503 acres, or 5% to 15% of the total new or replaced impervious surface” for Regulated Projects under the MRP; up to 15 percent of all Regulated Projects would be 100 percent excused from meeting the MRP’s key requirement for reducing stormwater pollution. This analysis, while showing the extensive impact that such a blanket waiver would provide, is perhaps even conservative given the abundance of rail and bus lines in the region.

There are, for instance, 19 BART stations within Alameda County alone. Accounting for the close proximity of some stations to each other, the BART system in Alameda County would create approximately 13.5 square miles of waiver-eligible land, which includes considerable portions of downtown Oakland and Berkeley.¹⁵ This is 30% more than *the entire land area of the City of Berkeley* and doesn’t even account for other rail stops, bus transfer stations, or ferry terminals in Alameda County, let alone transit hubs outside Alameda County but within the MRP’s jurisdiction.¹⁶ Moreover, the TOD Special Projects designation would not set any restrictions on the type or attributes of development that would qualify for a complete waiver from the MRP’s LID requirements. Comparatively low density projects, that will contribute substantial volumes of stormwater runoff and associated pollutant loading, and for which it would be entirely feasible to implement LID-based retention practices, will be authorized to address stormwater by using demonstrably less effective practices, resulting in increased stormwater pollution. This does not constitute reducing stormwater pollutant discharges to the maximum extent practicable.

While the Draft Proposal identifies a group of environmental goals that may be furthered by TOD generally, such as reduced vehicle miles travelled or reduced “automobile-related pollutant impacts,” the document provides no credible reason, either technical or compliance-

¹⁴ 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, at 23-24.

¹⁵ The radius of waiver eligibility around a transit station is a half-mile, meaning that the total area eligible for a waiver is $\Pi(0.5)^2$ (approximately, 0.79 square miles). With 19 BART stations in Alameda County, this has the potential to create 15 square miles of waiver-eligible land, but the short distances between some BART stations, particularly in downtown Oakland, creates an overlapping area of approximately 1.5 square miles.

¹⁶ Berkeley’s land area is about 10.5 square miles. See <http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=7164>.

based, to exempt such a huge area from the MRP's LID requirements.¹⁷ Unquantified assumptions about the overall environmental benefits of transit-oriented development are a severely lacking basis for any exemption.

B. Conclusion

For the many aforementioned reasons, the Draft Proposal is ill-conceived, inadequately supported, and unlawful under federal and state law. It requires broad and significant revisions, as well as more thorough documentation, to pass legal muster. We urge the Regional Board to reject the Draft Proposal.

Sincerely,



Noah Garrison
Project Attorney
Natural Resources Defense Council



Ian Wren
Staff Scientist
San Francisco Baykeeper

¹⁷ As discussed in section A.1., while the Draft Proposal points to the problems caused by automobile travel and benefits of TOD generally, it makes no specific claims as to the water quality benefits or the specific pollutant load reductions that will result from development of any Special Project or group of Special Projects.