



April 3, 2009

Via electronic mail

Executive Officer and Members of the Board
California Regional Water Quality Control Board
San Francisco Region
1515 Clay Street, Suite 1400
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Re: Comments on February 11, 2009, Draft San Francisco Bay Municipal Regional Stormwater NPDES Permit

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 Tentative Order R2-2009-00XX, NPDES Permit No. CAS612008—the latest draft of the Municipal Regional Stormwater NPDES Permit for the San Francisco Bay region, as updated on February 11, 2009. We appreciate the opportunity to submit the following comments on the Tentative Draft of the San Francisco Bay Area Municipal Regional Tentative Order (“Tentative Order” or “MRP”).

I. Introduction

We are disappointed with the Tentative Order. It is inconsistent with state and federal law in absolute terms and is also far weaker than the previous draft Tentative Order released over one year ago. Indeed, it appears that the considerable time period between drafts has been devoted to serially weakening a large number of provisions.¹

¹ We request that the Regional Board provide us with a list of the dates of all meetings held between the Regional Board, or any member(s) of its staff, and any interested stakeholder regarding the Tentative Order. We further request that any agenda, list of attendees, or any other documents created or exchanged with any such stakeholders(s) be provided to us. We request that all such information be included in the administrative

A principle purpose of staff's response to comments appears to be making clear in no uncertain terms that the Tentative Order is, in fact, generally weaker than previous drafts:

We have reviewed requirements in each Provision and eliminated the lower priority ones, scaled back on others, and replaced some with tasks that are easier to implement. Each Provision that contains new requirements has effective dates later than the MRP effective date to allow adequate time for implementation.

The Revised TO is a direct reflection of our responses to comments with active involvement of upper management.

(Comments and Responses Summary – Municipal Regional Stormwater Permit (MRP) – November 2007 Tentative Order Comments (March 18, 2009), at 1-2 (hereinafter “Response to Comments”).)

Even this summary, however, underemphasizes the degree to which the Tentative Order fails to reflect well-established water-pollution-reduction science and practice. One example illustrates issues that arise many times in the Tentative Order: the failure to fully utilize core best management practices that actually reduce mass emissions of pollutants and are standard operating procedure for Phase I and II MS4 permits. As these excerpts from the Response to Comments demonstrate, staff have entirely deleted commonplace practices such as street sweeping and storm drain inlet cleaning:

Street Sweeping Frequency	The entire sub-Provisions C.2.a and C.2.b., which contain the street sweeping related requirements, are deleted from the Revised Tentative Order (TO).
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Inlet Cleaning	The entire Provision C.2.f. is deleted from the TO.
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(Response to Comments, C.2 Municipal Operations, at 1, 5.)

These wholesale deletions have been proposed even though some of the most prominent science in the field shows that, for example, street sweeping is highly effective in the San

record regarding this matter. Finally, we request that the Regional Board state prior to the conclusion of the adoption hearing on this matter whether any person or entity (other than Regional Board staff) received a copy of the Tentative Order or any section or provision contained therein prior to the release of the Tentative Order to the general public on or about February 11, 2009.

Francisco Bay Area. A quarter-century ago, the U.S. EPA's National Urban Runoff Program—a groundbreaking collection of studies of the problems associated with urban runoff—concluded that pollutant reduction as a result of street sweeping in the East Bay could reduce by as much as 40% the total annual loads of lead, arsenic, chemical oxygen demand, phosphorous, and total solids that result from roadways.² The fact that the Tentative Order removes pollution control practices that are so strongly supported by prestigious scientific investigation—locally conducted—typifies the degree to which the Tentative Order requires substantial revision if it is to protect water quality in the Bay Area and if it is to be minimally adequate as a matter of law.

II. Summary of Comments

We object to the Tentative Order because it is inadequate to control pollution and protect the region's waters, including the San Francisco Bay. The Tentative Order is facially inconsistent with state and federal law in numerous respects, including failing to meet the Maximum Extent Practicable Standard and failing to ensure compliance with applicable water quality standards. The Tentative Order is dramatically out-of-step with similar permits in California and elsewhere in the nation. Significant inadequacies of the Tentative Order include, but are not limited to:

- The New Development and Redevelopment provisions fail to adequately include Low Impact Development practices common in other jurisdictions, limiting the application of the single most practicable means of protecting and restoring beneficial uses in the Bay Area;
- The New Development and Redevelopment provisions contain unprecedented waivers that would violate State Board precedential orders and allow development without meaningful stormwater pollution control in large portions of the Bay Area;
- The New Development and Redevelopment provisions unlawfully delegate authority to the Executive Officer to determine key control requirements of the Tentative Order;
- The Receiving Water Limitations provisions are inconsistent with State Board precedential orders and fail to require that the Tentative Order and municipal compliance documents ensure compliance with water quality standards;
- The Tentative Order unlawfully would allow the discharge of pollutants from new sources or dischargers to impaired waters;

² U.S. Environmental Protection Agency (1983) *Results of the Nationwide Urban Runoff Program*, Appendix G25, Castro, California, at G25-9. We have enclosed a CD that includes all of the documents referenced in our letter.

- Many provisions of the Tentative Order do not contain either numeric or narrative effluent limits, a minimum requirement of law, but merely require that unspecified limitations (in the form of BMPs) be developed in the future, contrary to law;
- The Tentative Order fails to effectively prohibit non-storm water discharges, as required by the Clean Water Act, including toxic discharges to urban streams that are well-known to the Regional Board;
- The Tentative Order does not ensure compliance with water quality standards and, in fact, is designed not to ensure compliance, contrary to state and federal law;
- The Tentative Order does not require compliance with wasteload allocations in adopted TMDLs, contrary to law;
- The Tentative Order violates the Clean Water Act's "anti-backsliding" provisions by weakening previously adopted effluent limits; and
- The Tentative Order is based on an incomplete application, which deprived the Regional Board of critical estimates of pollution control to be achieved and renders its subsequent decisions not to include effective pollution control provisions arbitrary and unsupported.

III. Standards Governing the Adoption of the Tentative Order by the Regional Board

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

The administrative decision must be accompanied by findings that allow the court reviewing the order or decision to “bridge the analytic gap between the raw evidence and ultimate decision or order.” *Topanga Ass’n for a Scenic Cmty. v. County of Los Angeles* (1974) 11 Cal.3d 506, 515. This requirement “serves to conduce the administrative body to draw legally relevant sub-conclusions supportive of its ultimate decision ... to facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions.” *Id.* at 516. “Absent such roadsigns, a reviewing court would be forced into unguided and resource-consuming explorations; it would have to grope through the record to determine whether some combination of credible evidentiary items which supported some line of factual and legal conclusions supported the ultimate order or decision of the agency.” *Id.* at 517 n.15. Currently, the Tentative Order’s provisions are not supported by more than anecdotal evidence, as discussed below, and the Regional Board has failed to explain its decision not to adopt control measures and standards that have been adopted by other jurisdictions and proven by scientific studies to be more effective than the control measures and standards in the Tentative Order. The lack of substantial evidence to support the Tentative Order renders it unlawful. *See, e.g., Bangor Hydro-Elec. Co. v. F.E.R.C.* (D.C. Cir. 1996) 78 F.3d 659, 664.

IV. The Tentative Order Is Inadequate to Control Stormwater Pollution from New Development and Redevelopment and Fails to Ensure Compliance with the Minimum Requirements of State and Federal Law

The Tentative Order’s New Development and Redevelopment section remains legally inadequate and is not based on substantial evidence in the record before the Regional Board. As currently written, the Tentative Order does not require any specific level of LID implementation and would, as explained below, allow relatively ineffective conventional treat-and-discharge techniques, as well as wholesale waivers of otherwise universally applicable SUSMP sizing criteria. There is no stated analysis that supports the staff’s proposals here or provides even a general assessment of the water quality impact of the proposed approach and, in particular, its extensive, unprecedented waiver provisions. Furthermore, the Tentative Order fails to meet the goals that staff articulate for it in the Fact Sheet, and it falls well below many other stormwater permits and regulatory documents around the country. In all of these respects, staff have failed to adequately respond to comments, deflecting in the most cursory fashion significant, expert comments submitted for their consideration.

Our concerns arise in the following categories:

- The Tentative Order’s continuing failure to require the implementation of low impact development techniques through specific numeric metrics;
- The Tentative Order’s related failure to require pollution reduction to the maximum extent practicable, as mandated by the Clean Water Act;

- The Tentative Order’s failure to impose stormwater mitigation BMPs pursuant to the requirements of the Clean Water Act;
- The Tentative Order’s creation of exemptions and alternative compliance options that have no technical basis and will seriously compromise the Tentative Order’s effectiveness;
- The Tentative Order’s violation of the Clean Water Act’s anti-backsliding prohibition through the alternative compliance program; and
- The Tentative Order’s failure to set an appropriate hydromodification standard.

In order for the Tentative Order’s post-construction requirements to pass legal muster, these problems must be remedied.

The New Development and Redevelopment section is particularly critical for addressing the root causes of stormwater pollution, which is why we have heavily focused our comments here and in previous letters on these requirements. As the U.S. EPA has noted: “Most stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.”³

A. Research and Experience Around the Country Have Demonstrated that Low Impact Development Techniques Are Superior Stormwater Management Practices and Must Be Implemented with Clear Metrics.

While the Fact Sheet notes that “LID [is] a beneficial, holistic, integrated stormwater management strategy,” (Fact Sheet, at 24), LID has been established, in fact, as a *superior and practicable* strategy and, therefore, must be required. In California, the Ocean Protection Council, for instance, strongly endorsed LID last year by “resolv[ing] to promote the policy that new developments and redevelopments should be designed consistent with LID principles” because “LID is a practicable and superior approach . . . to minimize and mitigate increases in runoff and runoff pollutants and the resulting

³ U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at v.

impacts on downstream uses, coastal resources and communities.”⁴ EPA has also called upon Regional Boards across California to prioritize the implementation of LID, even “recommend[ing] that the [South Orange County draft] permit be revised to put more emphasis on LID . . . [and to] require[] that LID be woven into the design of specified new development and redevelopment projects.”⁵ Outside of California, the issues are the same—in Washington State, for instance, the Pollution Control Hearings Board has found that LID techniques are technologically and economically feasible and must, therefore, be required in MS4 permits.⁶ The National Academy of Sciences recently issued a comprehensive report with the same recommendation for stormwater management programs: “Municipal permittees would be required under general state regulations to make [LID] techniques top priorities for implementation in approving new developments and redevelopments, to be used unless they are formally and convincingly demonstrated to be infeasible.”⁷

Critically, the prioritization of LID practices is insufficient by itself to meet the MEP standard and *must* be paired with a measurable requirement for the implementation of LID. Since its inception, the MS4 permitting program has been seriously hampered by a pervasive absence of numeric performance standards for the implementation of best management practices (“BMPs”) such as LID. For this reason, in December 2007, the State Water Resources Control Board commissioned a report which found that “[t]he important concept across all of [the] approaches [described in the report] is that the regulations established a *performance requirement* to limit the volume of stormwater discharges.”⁸ The report also noted that “[m]unicipal permits have the standard of Maximum Extent Practicable (MEP) which lends itself more naturally to specifying and

⁴ California Ocean Protection Council (May 15, 2008) *Resolution of the California Ocean Protection Council Regarding Low Impact Development*, at 2.

⁵ E-mail from Eugene Bromely, U.S. Environmental Protection Agency, to San Diego Regional Water Quality Control Board (January 24, 2008), re: Draft MS4 Permit for Southern Orange County, at 1.

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

⁷ National Academy of Sciences, Committee on Reducing Stormwater Discharge Contributions to Water Pollution, National Research Council (2008) *Urban Stormwater Management in the United States*, at 500.

⁸ State Water Resources Control Board (December 2007) *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption*, at 23 (emphasis added) (hereinafter “SWRCB LID Report”).

enforcing a level of compliance for low impact development.”⁹ Another study, completed for the Ocean Protection Council, recommended the following standard: “Regulated development projects shall reduce the percentage of effective impervious area to less than five percent of total project area by draining stormwater into landscaped, pervious areas.”¹⁰ This is the same type of approach that we have advocated and scientifically supported for the Bay Area.

EPA has highlighted similar but more specific concerns, remarking that the MRP “needs to include a numeric value for the quantity of runoff which would be directed to pervious areas” and “suggest[ing] a requirement such as proposed in the August 2007 draft Ventura County MS4 permit [5% EIA].”¹¹ In South Orange County, EPA likewise observed that “the permit must include clear, measurable, enforceable provisions for implementation of LID.... We would not support replacing ... approaches [such as EIA] with qualitative provisions that do not include measurable goals.”¹² The MRP, however, contains nothing other than qualitative provisions, as explained below and in previous comment letters, and thus fails to satisfy the Clean Water Act’s requirements.

B. The New Draft of the Tentative Order Does Not Contain—Nor Does It Justify the Lack of—Specific Standards for Implementation, which Board Staff Have Acknowledged Are Appropriate and Necessary.

As noted in our February 29, 2008, letter,¹³ the Tentative Order’s fact sheet establishes the need for “more specificity in NPDES permit language and requirements,” including the creation of “a specific level of implementation for each action or set of actions.” (Tentative Order Fact Sheet, at 1.) The Tentative Order also notes that “Water Board staff found it difficult to determine the permittees’ compliance with the current permits, due to the lack of specific requirements and measurable outcomes of some required actions.” (Tentative Order Fact Sheet, at 3-4.) This observation comports with our observations and the observations of governmental agencies, as mentioned above. Despite this acknowledgement and our repeated attempts to call attention to the vague

⁹ *Id.* at 4.

¹⁰ Ocean Protection Council of California (January 2008) *State and Local Policies Encouraging or Requiring Low Impact Development in California*, at 27.

¹¹ Letter from E. Bromley, U.S. Environmental Protection Agency, Region 9, to San Francisco Regional Water Quality Control Board, at 2.

¹² Letter from Douglas E. Eberhardt, EPA, to Michael Adackapara, Santa Ana Regional Water Quality Control Board (February 13, 2009), at 2-3.

¹³ Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (February 29, 2008), at 10-11 (hereinafter “February 29th Letter”).

language of the Tentative Order, however, the new draft falls far short of establishing the “specific requirements and measurable outcomes” whose necessity no one questions and which are necessary for the Tentative Order to be lawful.

1. The New Development and Redevelopment Provisions Remain Unlawfully Vague and General.

The Tentative Order’s LID provisions remain a collection of largely hortatory provisions with no specific measurable outcome. The following non-exhaustive list of examples illustrates the problem. First, narrative and subjective terms are still prominent, *e.g.*: “Conserve natural areas, to the extent feasible,” “Minimize impervious surface,” “Minimize disturbances to natural drainages,” “Direct roof runoff into cisterns or rain barrels for reuse,” “Construct sidewalks, walkways, and/or patios with impermeable surfaces,” etc. (Tentative Order ¶ C.3.c.i(2).) Such vague provisions would not enable the Regional Board or the Permittees to measure the outcomes of, or to enforce, the Tentative Order’s requirements since their implementation could vary enormously. Second, at projects where the SUSMP hydraulic sizing criteria apply, the Tentative Order fails to set a specific numeric performance standard for the implementation of LID, so the LID practices listed in ¶ C.3.c.i(2) would not have to be sized to accommodate any meaningful quantity of stormwater. Third, at projects where the SUSMP hydraulic sizing criteria are waived (a major problem with the Tentative Order, discussed below), *no* BMPs have to be properly sized to treat stormwater runoff, so—once again—*de minimis* implementation of LID arguably would satisfy the Tentative Order’s requirements. This is a nonsensical and unworkable structure—one that repeats past mistakes acknowledged in the Fact Sheet—and it is an unlawful result for all of the reasons identified below and previously outlined in our comment letters, which are incorporated herein by reference.¹⁴

The few LID treatment measures listed in the Tentative Order do not fix the Tentative Order’s lack of specific LID implementation parameters. While the Response to Comments admits that the LID site design requirements of ¶ C.3.c.i(2) “should be more specific”, the Regional Board staff have not followed through in the Tentative Order. (Response to Comments, Provision C.3. New and Redevelopment Controls, at 10-11; Tentative Order ¶ C.3.c.i(2)(d).) As discussed in the following section, the mere description of—and requirement to implement one of—six specific strategies that have no accompanying sizing criteria does not address the fundamental flaw in the Tentative

¹⁴ Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (February 29, 2008); Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (December 2, 2008); Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (September 17, 2007); Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (July 12, 2007); Transmittal Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (February 28, 2008); Transmittal Letter from NRDC to Bruce Wolfe, San Francisco Water Quality Control Board (March 5, 2008).

Order, which we mentioned in our February 29, 2008, letter—*i.e.*, the Tentative Order’s failure to “specify the level of control required.”¹⁵

2. The One Addition to the Tentative Order’s Post-Construction Requirements Fails to Address the Numerous Problems in this Section of the Tentative Order.

Staff point to ¶ C.3.c.i(2)’s revised hierarchy of stormwater treatment options, with an attendant requirement that the Regional Board’s executive officer be notified and/or approve a site design when certain thresholds are exceeded, as a significant improvement in the Tentative Order. This hierarchy suffers various problems that render it ineffectual and inadequate to make the Tentative Order lawful.

a. **Lack of Specific Performance Standards**

There is no numeric performance requirement for any of the treatment options in the hierarchy. The standard is, apparently, “practicability,” a phrase which appears not only to be inconsistent with the *Maximum Extent Practicable* Standard but is also left otherwise undefined.¹⁶ Despite this lack of a numeric performance requirement, the Fact Sheet states in conclusory fashion that the hierarchy of treatment measures will ensure that “the amount of runoff stored and recycled or infiltrated . . . and treated[sic] by landscape-based measures is maximized.” (Fact Sheet, at 25.) Such conclusory statements are a hallmark of this Tentative Order’s supporting documentation, and by failing to define a level of performance as is explicitly required by federal and state law, the Tentative Order would allow far less than the Tentative Order’s self-proclaimed “maximization” of recycling, infiltration, and treatment by landscape-based measures and could be interpreted in numerous ways that conflict with the Clean Water Act’s mandate.¹⁷ The Tentative Order’s failure to define “MEP” in a meaningful way is particularly problematic because it allows the Permittees to self-regulate by defining for themselves what constitutes MEP. This is poor policy and flatly unlawful. (*See, e.g., Environmental Defense Center, Inc. v. U.S. E.P.A.* (9th Cir. 2003) 344 F.3d 832, 855-56.)

¹⁵ Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (February 29, 2008), at 5.

¹⁶ The closest the Tentative Order comes to defining “practicability” is its definition of “maximum extent practicable.” (Tentative Order Glossary, at 116-17.) This definition, however, is circular, merely referencing the Clean Water Act language that creates the MEP standard. (*Id.*)

¹⁷ The first option in the hierarchy, provision (e), omits a standard altogether, although presumably this was a typographical error and the practicability standard should have been applied to this section, as well.

Apart from its legal inconsistency, the new, vague “hierarchy” also fails to be based on the facts in the record because it does not set forth any “consistent, achievable standard,” which the Fact Sheet itself calls for. (*See* Tentative Order Fact Sheet, at 26.) Indeed, by not setting forth a numeric performance standard that requires the installation of effective stormwater BMPs, such as the “effective impervious area” (“EIA”) limitation or a comparable volume-based control,¹⁸ and by not requiring any demonstration of the infeasibility of installing LID BMPs, the Regional Board will *not* be able “to more systematically and fairly measure permit compliance.” (Tentative Order Fact Sheet, at 26.) Instead, nearly everything is left to the discretion of the Permittees, which violates federal law. (*See* section F.2 of our February 29th Letter regarding impermissible self-regulatory systems (at 21-22).)

The Response to Comments purports to explain why the Regional Board does not need to impose a numeric performance standard like EIA, despite State Board and EPA admonitions to the contrary. The reasoning in the Response to Comments, however, derives from anecdotal statements without supporting materials and provides no refutation of the two, Bay Area-specific, scientific studies of LID implementation by renowned stormwater expert Dr. Richard Horner that we have submitted to the Regional Board.¹⁹ The Response to Comments claims, without citing any reports or other evidence, that “the variety of site conditions and constraints in the Bay Area” requires the Regional Board to “preserve flexibility in selection of treatment measures,” (Response to

¹⁸ We advocate the implementation of LID practices because LID practices retain stormwater onsite through infiltration, harvesting and reuse, or evapotranspiration, thus ensuring that pollutant loads do not reach receiving waters. Others have advanced interpretations of “LID” that include the use of treat-and-discharge systems—these systems are not as effective as retention practices because the discharged water may still contain pollution, even if it is significantly attenuated. Our interpretation of “LID” is consistent with the U.S. EPA’s: “LID comprises a set of approaches and practices that are designed to reduce runoff of water and pollutants from the site at which they are generated. By means of infiltration, evapotranspiration, and reuse of rainwater, LID techniques manage water and water pollutants at the source and thereby prevent or reduce the impact of development on rivers, streams, lakes, coastal waters, and ground water.” U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at iii.

¹⁹ The Response to Comments also misinterprets LID and our proposal as including only “landscape-based treatment measures,” (Response to Comments, at 11), despite our comments and studies on the use of rainwater harvesting systems and evapotranspiration BMPs. Without addressing these techniques, the Response to Comments’ justifications for not including a numeric performance standard are deficient from a scientific perspective and provide no meaningful insight. The lack of correlation between the evidence presented to the Regional Board and the requirements in the Tentative Order smacks of arbitrary decision-making.

Comments, at 11), even though Dr. Horner’s studies and our comments specifically addressed the Bay Area’s “site conditions and constraints” and demonstrated how a numeric standard could be feasibly implemented, to the great benefit of water quality.²⁰ The Regional Board has also ignored the multitude of other stormwater compliance documents around the country that impose significantly more stringent requirements than the Tentative Order, as outlined below. The Regional Board staff’s decision to ignore calls for a numeric performance standard because of anecdotal and scientifically undefended positions has resulted in a Tentative Order that does not comport with federal law, scientific evidence, the advice of expert agencies, and other MS4 permits around the country.

b. Failure to Require the Most Effective, Feasible BMPs

The “hierarchy” would allow the installation of conventional treatment systems without any particular justification by the developer or any notification to the Regional Board’s executive officer. Indeed, the executive officer must be notified only when a developer employs “vault-based systems,” which are even more notoriously ineffective than conventional treatment systems, to treat a certain percentage of the site’s design storm volume. (Tentative Order ¶ C.3.c.i(4)-(6).)²¹ Thus, every developer could use conventional treatment systems (the third category in the hierarchy) to manage the entire design storm volume without any real oversight, an outcome that is completely at odds with expert scientists’ and agencies’ judgment regarding the necessity of implementing LID BMPs wherever their use is technically feasible. This consequence of the new Tentative Order would represent a continuation of the status quo from nine years ago when the State Board issued Water Quality Order 2000-11—*i.e.*, treatment of the 85th percentile storm through any available means.²² This is an untenable proposition, given that stormwater management has advanced considerably since the last round of stormwater permits in the Bay Area and that, as demonstrated by our submissions in the

²⁰ R. Horner (2007) *Initial Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (“LID”) for the San Francisco Bay Area*, at 3, 16-20 (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 4-5 (hereinafter “Horner Supplementary Investigation”); Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (February 29, 2008), at 25.

²¹ Horner Initial Investigation, at 12-14, 16-19; Horner Supplementary Investigation, at 5.

²² In fact, the Tentative Order even represents a *retreat* from the status quo insofar as it allows waivers of the universally applicable hydraulic sizing requirements specified in State Resources Control Board Water Quality Order No. 2000-11 for certain categories of Regulated Projects, without any identification of the reasons for which such a waiver would be necessary. This concern is discussed in greater depth below.

record, far more significant stormwater reductions can feasibly be achieved than the MRP would require.²³

We have enclosed with this letter a new analysis by Dr. Horner, which demonstrates that the likely results of the new hierarchy are far worse than the results that could be expected if the Tentative Order required LID implementation with a robust numeric performance standard.²⁴ For instance, while a full LID scenario would reduce all pollutant loads by 100%, under the Tentative Order, without seeking any approval from the Regional Board or its executive officer, a Regulated Project could implement a combination of conventional BMPs and vault-based systems that would attenuate just slightly over half of the TSS, 40% of the TZn, and one-third of the TCu and TP.²⁵ Additionally, between 10% and 50% of the water retained under a full LID scenario would be discharged under the Tentative Order scenarios.²⁶ These results highlight the problematic and arbitrary nature of the Tentative Order's hierarchy of treatment methods

c. Executive Officer Notification/Approval Provisions

The executive officer notification/approval provisions are lacking and unlawful. They do not give the executive officer approval authority until a developer proposes to use vault-based treatment systems for 50% or more of the design storm volume. (Tentative Order ¶ C.3.c.i(6).) Given the very poor performance of most vault-based systems, even allowing 30% or 40% volume treatment through such features (with the balance potentially treated through conventional designs) virtually guarantees high pollutant loads and concentrations in stormwater runoff. As Dr. Horner showed in his studies, conventional practices such as continuous deflection separators achieve 0% reduction of copper loads and a mere 15-46% reduction of other pollutants, including TSS, zinc, and phosphorus.²⁷ Except for extraordinary circumstances, which could be accommodated through an infeasibility provision, LID BMPs would be able to retain the entire design storm volume onsite, thus reducing pollutant loads by 100%. In this light, and without *any* countervailing evidence from the Regional Board, it is especially problematic for the Tentative Order to impose such a high threshold for executive officer approval and to provide no criteria for judging whether conventional practices and/or vault-based treatment systems are truly necessary.

²³ Horner Initial Investigation, at 16-19; Horner Supplementary Investigation, at 5.

²⁴ 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*.

²⁵ *Id.*, at 4-5.

²⁶ *Id.*, at 2-4.

²⁷ Horner Initial Investigation, at 13.

These provisions, additionally, include no guidance for the determination of what constitutes “site constraints” that would qualify a site for the lax stormwater BMP implementation that triggers executive officer notification/approval, nor do the provisions specify under what conditions “Equivalent Offsite Treatment” could be considered “infeasible.” Indeed, it is not obvious why implementing equivalent offsite treatment would ever be infeasible, and none of the documents issued by the Regional Board contains any justification for this waiver. The sole goal of allowing offsite treatment is to create an alternative compliance option for sites where onsite compliance is infeasible. Thus, if onsite implementation of all other BMPs besides vault-based systems is infeasible, the site is exactly the type for which offsite mitigation should be required, as in numerous other stormwater regulatory documents around the country, discussed below. The general lack of guidance in these notification/approval provisions would allow the Permittees and the Executive Officer to make all meaningful decisions related to stormwater mitigation. Under *Environmental Defense Center, Inc.*, this type of self-regulatory system is unlawful, as explained above and in previous comment letters. (*See* 344 F.3d at 854-56.) State law also does not allow the Regional Board to delegate the aforementioned decision-making powers to the Executive Officer. (Cal. Water Code § 13223(a).) Such a delegation would constitute, in effect, the “issuance [or] modification . . . [of a] waste discharge requirement” because the Executive Officer would have the broad authority to determine what level of stormwater mitigation is required of Regulated Projects. (*Id.*)

Environmental Defense Center, Inc., moreover, highlights the legal necessity of public involvement and meaningful regulatory entity review during the permitting process. (344 F.3d at 856 (“[S]tormwater management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity . . . Congress identified public participation rights as a critical means of advancing the goals of the Clean Water Act in its primary statement of the Act’s approach and philosophy.”).) The Tentative Order, in contrast, would preclude both because neither the public nor the Regional Board could currently determine what the likely result of the Tentative Order’s provisions would be—the meaningful requirements, such as what percentage of a Regulated Project’s stormwater runoff will be treated with LID techniques, are left entirely to the discretion of the Permittees and/or the Executive Officer. (Tentative Order ¶ C.3.c.1(2).) Thus, the public and the Regional Board have no way to “ensure that each [MS4 permit] program reduces the discharge of pollutants to the maximum extent practicable,” as required by *Environmental Defense Center, Inc.* (344 F.3d at 856.)

Overall, the new hierarchy established by the Tentative Order does not compensate for the Tentative Order’s lack of a robust numeric performance requirement and further underscores the very problematic outcomes that could result from the Tentative Order as drafted. Despite the Response to Comments’ claims, these new provisions do not address our concerns regarding specific, enforceable, measurable requirements, nor do they address the concerns identified within the Fact Sheet itself.

C. The Tentative Order’s Post-Construction Provisions Do Not Meet the Clean Water Act’s “Maximum Extent Practicable” Standard for Stormwater Pollution Reduction.

Our February 9, 2008, letter discussed various failings of the Tentative Order that prevent it from meeting the MEP standard. Little has changed from the prior draft of the Tentative Order, unfortunately, as noted above, and the Tentative Order’s post-construction provisions are still far from legally adequate.

1. The MEP Standard Requires that the Tentative Order Impose Far More Stringent Stormwater Control Measures and Performance Criteria.

Section 402(p) of the Clean Water Act establishes the MEP standard as a requirement for pollution reduction in stormwater permits. Regional Board staff have failed to implement this standard, apparently believing that it grants them unbridled discretion and allows them to exclude effective practices commonly implemented. In fact, “the 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.)

Similarly, in the Bay Area, we have demonstrated that an onsite retention standard based on the effective impervious area of a site would be a technologically feasible approach that would reduce stormwater discharges and pollution far more than the

measures contained in the Tentative Order.²⁸ We have even called to the Regional Board's attention an EPA study which found that LID practices are frequently *less costly* than conventional stormwater BMPs,²⁹ and we have submitted our own technical analyses highlighting the cost savings that accrue from saving water through LID.³⁰ Additionally, no one has offered concrete evidence that a single site in the Bay Area could not meet this standard, assuming that—as we have consistently recommended—the Tentative Order includes an appropriate infeasibility provision tied to a technically equivalent alternative compliance requirement. The Tentative Order, as written, fails to uphold the MEP standard because it does not impose anything close to the maximum technologically practicable, but not disproportionately expensive, stormwater management BMPs with an accompanying quantitative performance requirement.

2. Other Stormwater Permits and Regulatory Documents Around the Country Have Adopted Stronger, Practicable Requirements for the Implementation of Post-Construction Stormwater BMPs, and the MRP—with No Justification—Lags Far Behind these Precedents.

In the years since the last iteration of Bay Area permits, stormwater treatment technology has metamorphosed. In 2009, this Tentative Order's development and redevelopment provisions stand out as a low bar in the constellation of stormwater mitigation requirements in the US. The Tentative Order, as currently drafted, scarcely accomplishes anything more than the last iteration of the permits that are subsumed within the MRP. As explained above, it merely gives unenforceable lip service to the implementation of LID and would allow significant portions, if not all, of the stormwater that falls on a site to be treated with relatively ineffective BMPs before flowing to receiving waters. The widespread implementation of other far more stringent requirements creates a presumption that such requirements would be practicable in the Bay Area. We have, in fact, submitted technical reports demonstrating that this is the case,³¹ and the Regional Board has provided nothing more than descriptions of anecdotal concerns in response.³²

²⁸ Horner Initial Investigation, at 3, 16-19; Horner Supplementary Investigation, at 4-5.

²⁹ U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at iv, 2, 27. See also ECONorthwest (November 2007) *The Economics of Low-Impact Development: A Literature Review*.

³⁰ Letter from NRDC to Bruce Wolfe, San Francisco Regional Water Quality Control Board (July 17, 2007), at 6.

³¹ See, Horner Initial Investigation; Horner Supplementary Investigation.

³² See, e.g., Response to Comments, at 14, 23, 25, 30-31.

Many jurisdictions outside of the Bay Area have recognized the paramount importance of mandating onsite retention of a certain quantity of stormwater since onsite retention prevents *all* pollution in that volume of rainfall from being discharged to receiving waters:

- **Anacostia, Washington, D.C.:** Retain onsite the first one inch of rainfall and provide water quality treatment for rainfall up to the two-year storm volume; offsite mitigation is allowed when onsite retention is infeasible, but only at a ratio of either 1:1.5 (for physical offsets) or 1:2 (for in-lieu fee payments);³³
- **Central Coast, California (RWQCB, Phase II):** Limit EIA at development projects to no more than 5% of total project area (interim criteria); establish an EIA limitation between 3% and 10% in local stormwater management plans (permanent criteria);³⁴
- **Federal Buildings over 5,000 square feet** (under EPA’s draft guidance for implementation of the Energy Independence and Security Act of 2007): Manage onsite (*i.e.*, prevent the offsite discharge of) the 95th percentile storm through infiltration, harvesting, and/or evapotranspiration;
- **Pennsylvania:** Capture at least the first two inches of rainfall from all impervious surfaces and retain onsite at least the first one inch of runoff (through reuse, evaporation, transpiration, and/or infiltration); at least 0.5 inch must be infiltrated;³⁵
- **Philadelphia, PA:** Infiltrate the first one inch of rainfall from all impervious surfaces; if onsite infiltration is infeasible, the same performance must be achieved offsite; and³⁶

³³ Anacostia Waterfront Corporation (June 1, 2007) Final Environmental Standards, at 16; *See also*, State Water Resources Control Board (December 2007) A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption, at 20-21.

³⁴ Central Coast Regional Water Quality Control Board, Letter from Roger Briggs re Notification to Traditional, Small MS4s on Process for Enrolling under the State’s General NPDES Permit for Storm Water Discharges (Feb. 15, 2008) (hereinafter “Central Coast Phase II Letter”).

³⁵ Pennsylvania Department of Environmental Protection (December 30, 2006) *Pennsylvania Stormwater Best Management Practices Manual*, Chapter 3, at 7.

³⁶ City of Philadelphia, Philadelphia Stormwater Regulations § 600.5; City of Philadelphia (2006) *Philadelphia Stormwater Management Guidance Manual: Version 2.0*, at 1-1, Appendix F.4.1.

- **West Virginia:** Retain onsite the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation.³⁷

Other Phase I MS4 permits within California (despite their problems) are also heading in this direction. The Ventura County draft permit sets forth an EIA limitation of 5% that would require regulated projects to infiltrate or store for beneficial reuse at least 95% of the volume of the 85th percentile storm.³⁸ The North Orange County draft permit establishes a hierarchy of options (from onsite to regional systems) that each require onsite retention of the 85th percentile design storm volume.³⁹ With such precedents in California and in other parts of the country, the MRP's failure to adopt a numeric performance standard beyond the bare-bones SUSMP hydraulic sizing criteria is particularly remarkable. The decision to waive these bare-bones criteria in various circumstances, discussed below, evidences an even more flagrant disregard for the MEP standard.

3. The Tentative Order Is Not Based on Evidence in the Record and Regional Board Staff Have Provided No More Than Inadequate, Conclusory Statements in the Response to Comments.

There is nothing in the Tentative Order or its supporting documents that demonstrates the Tentative Order's post-construction program to be representative of the MEP standard or likely to enable the achievement of water quality standards, as required by the Clean Water Act. This problem is compounded by the Tentative Order's failure to provide more than conclusory dismissals of relevant evidence in the record which shows that the Tentative Order does not require the reduction of stormwater to the maximum

³⁷ State of West Virginia (December 11, 2008) Department of Environmental Protection, Division of Water and Waste Management, Draft General National Pollution Discharge Elimination System Water Pollution Control Permit, NPDES Permit No. WV0116025 at 13-14 (hereinafter "West Virginia Draft Permit").

³⁸ Los Angeles Regional Water Quality Control Board (Transmitted February 24, 2009) Draft 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, NPDES Permit No. CAS 004002 ¶ 5.E.III.1.

³⁹ Santa Ana Regional Water Quality Control Board (March 24, 2009) Draft Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and The Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff, Order No. R8-2009-0030, NPDES Permit No. CAS618030, at 53-54.

extent practicable.⁴⁰ As previously mentioned, we have commissioned and submitted two reports by Dr. Horner to demonstrate the feasibility and multiple benefits of a retention-based approach as compared to the conventional and proprietary techniques allowed by the Tentative Order.⁴¹ This approach is quantifiably and undeniably more effective than the Tentative Order's approach to reducing stormwater pollution, yet Regional Board staff have never provided more than anecdotal conclusions in response to our suggestions (in fact, the Tentative Order's supporting documents never once even mention Dr. Horner's work, despite EPA's comments in support of his studies).⁴² In light of evolving California and national standards, this is an especially glaring omission. To justify the Tentative Order's failure to heed Dr. Horner's research and the examples of other stormwater permits and regulatory documents, the Tentative Order must provide substantial evidence in support of the requirements that it does contain and demonstrate either how these requirements are superior to the suggestions of Dr. Horner and the examples of other stormwater programs around the US or how these other, more stringent requirements are infeasible in the Bay Area. The Tentative Order has not done so, and thus the Tentative Order's current provisions have not been supported with the legally required evidence, nor has the Regional Board adequately responded to relevant, technically supported comments.

D. The Tentative Order's Site Design Provisions Cannot Be Considered "Best Management Practices" Under the Clean Water Act.

As detailed in our February 9, 2008, letter, the provisions of the Tentative Order, which remain largely unchanged from previous drafts, are insufficient to constitute "best management practices" ("BMPs"), as required by the Clean Water Act. To reiterate our comments briefly, the Tentative Order, at most, sets forth ideas around which a proposed management program and articulated BMPs could be developed, as is required in the *application* for an MS4 permit. (*See* 40 C.F.R. § 122.26.) Missing are the actual BMPs and accompanying performance standards that must be described in the Tentative Order. The closest the Tentative Order comes to identifying actual BMPs is the new list of six "design measures," mentioned above, of which Regulated Projects must implement at least one. (Tentative Order ¶ C.3.c.i(2)(d).) However, these design measures need not be hydraulically sized to treat any particular amount of stormwater, and there is no guidance/requirement for which measure to select and no requirement that more than one, non-hydraulically sized measure be implemented. This is tantamount to no regulation at all and does not satisfy EPA's counsel that, among other components, BMPs must be attached to measurable goals that include "a quantifiable target to measure progress

⁴⁰ *See, e.g.*, Response to Comments, Provision C.3. New and Redevelopment Controls, at 2, 11, 13, 18-19.

⁴¹ *See*, Horner Initial Investigation; Horner Supplementary Investigation.

⁴² Letter from E. Bromley, U.S. Environmental Protection Agency, Region 9, to San Francisco Regional Water Quality Control Board, at 1-2.

toward achieving the activity or BMP.”⁴³ As the examples from EPA’s guidance document—including in our February 9, 2008, letter—highlight, merely outlining a general technique with no quantifiable requirement for implementation does not satisfy the Clean Water Act’s mandates.

The State Water Board has also voiced its support for establishing numeric requirements that apply to stormwater BMPs, stating that, “[t]he addition of measurable standards for designing the BMPs provides additional guidance to developers and establishes a clear target for the development of the BMPs.”⁴⁴ Despite pointing out the necessity of such targets to the Regional Board in our last comment letter, the Tentative Order’s site design requirements still fail to include more than a requirement for the implementation of one non-hydraulically sized BMP and the installation of conventional or vault-based treatment systems. As a result, the provisions of the Tentative Order fail to satisfy EPA regulations and guidance and are invalid under the Clean Water Act.

E. The Tentative Order’s Alternative Compliance Criteria Would Allow Unlawful Waivers of Hydraulic Sizing Criteria, Fail to Require Sufficient Mitigation for Non-Complying Projects, and Lack the Necessary Specificity to Provide Effective Alternative Compliance.

The Tentative Order’s alternative compliance section sets forth two different “standards” for Regulated Projects, depending on whether the project qualifies under ¶ C.3.e.i(1) or ¶ C.3.e.i(2). Both standards are problematic because of the problems discussed below and also because of the arbitrary nature of the Tentative Order’s alternative compliance requirements vis-à-vis the many more stringent but feasible requirements that the Tentative Order could have adopted. We suggest the establishment of an *onsite retention* standard, such as 3% EIA, with the option for *onsite treatment* paired with *offsite mitigation* in situations of technical infeasibility. This type of standard has been adopted in wide-ranging locations around the US, as mentioned above, and we have submitted expert reports analyzing its feasibility in the Bay Area.⁴⁵ The alternative compliance section provides the perfect opportunity to adopt far more robust and appropriate requirements, but despite facts in the record to support such requirements, the Tentative Order has created a much weaker alternative compliance section and has failed to address why this is necessary.

⁴³ *Id.*

⁴⁴ State Water Resources Control Board (2000) Water Quality Order No. 2000-11, at 17.

⁴⁵ *See*, Horner Initial Investigation; Horner Supplementary Investigation.

1. The Tentative Order’s Waiver Provisions Contravene Federal and State Law and Are Ill-Conceived.

Through the first alternative compliance option, which is available to the category of projects discussed below, Regulated Projects receive an “Exemption from Installing Hydraulically Sized Stormwater Treatment Systems.” (Tentative Order ¶ C.3.e.i(1).) These Regulated Projects need only do one of seven things,⁴⁶ without any performance/sizing requirement. In other words, the Tentative Order, as written, would allow qualifying projects to install treatment systems that are incapable of handling more than one milliliter of rainfall, yet this would constitute compliance with the Tentative Order.⁴⁷ This is an unlawful result.

a. All Regulated Projects Must Meet Certain Minimum Standards, which the Tentative Order Would Waive.

Federal law and state law require that all Regulated Projects, some of which would be exempted from hydraulic sizing criteria by the Tentative Order, meet certain minimum standards. Federal regulations mandate that MS4 permits impose requirements to reduce the discharge of stormwater pollution from redevelopment projects. (40 C.F.R. § 122.26.) The State Water Board—through the *Bellflower* decision—has gone further and established the SUSMP hydraulic sizing criteria as a compliance floor for all Regulated Projects.⁴⁸ A permit cannot meet the MEP standard if it does not impose these criteria to reduce stormwater pollution, yet these criteria are exactly what the Tentative Order waives entirely for the broad category of projects described below. This is unlawful. Certainly, what constitutes MEP now is not a lesser standard than what constituted MEP nearly a decade ago.

⁴⁶ With one additional permissible measure, this is the exact same list as in ¶ C.3.c.i(2)(d).

⁴⁷ The Response to Comments is misleading in describing the import of the Tentative Order’s provisions, claiming that “[a]ll offsite projects installed as alternative compliance are required to meet the same hydraulic sizing criteria (Provision C.3.d.) that onsite projects do.” Response to Comments, at 13. This ignores the significant category of Regulated Projects that are entirely exempt from hydraulic sizing criteria and from all offsite mitigation requirements. Thus, while the Response to Comments implies that all projects utilizing the alternative compliance option will be complying with the SUSMP hydraulic sizing criteria, this is not true since certain projects are entirely exempted.

⁴⁸ State Water Resources Control Board (2000) Water Quality Order No. 2000-11, at 15-18.

b. The Tentative Order and its Supporting Documents Fail to Establish the Critical Link Between the Tentative Order’s Waiver of Hydraulic Sizing Criteria and the Maximum Extent Practicable Standard.

The Tentative Order allows certain Regulated Projects to obtain a complete waiver from hydraulic sizing. As noted in our previous comments to the Regional Board, this category includes everything from brownfields redevelopment and low-income housing to senior-citizen housing and transit-oriented development. (Tentative Order ¶ C.3.e.) The Tentative Order, as drafted, would not obligate any of these projects to demonstrate the technical infeasibility of implementing otherwise required stormwater mitigation measures—merely falling into one of these categories would accord the project a complete waiver from everything but “maximizing site design treatment controls” (a toothless requirement, as explained below). (Tentative Order ¶ C.3.e.) The Regional Board’s only justification for this blanket waiver is, apparently, a nebulous and unquantified set of environmental benefits that accrue from these types of development.

While we agree with the environmental preferability of such 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 of all meaningful 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 (this requirement is enhanced in places with numerous impaired waters, like the Bay Area). The Regional Board has not presented any evidence to demonstrate that all projects in these categories are incapable of complying with the Tentative Order. The apparent justification for such lax requirements is a “recognition of other water quality as well as societal benefits from these projects.” (Response to Comments, at 14.) Neither the Response to Comments nor the Fact Sheet, however, provides any evidence of the true water quality benefits of smart growth. We do not doubt that such benefits may exist in a particular project, but the Tentative Order’s provisions are not calibrated to ensure that they are achieved, nor are any such benefits described. There is no consideration of whether such benefits are outweighed by the water quality detriments created by urban runoff. Until the Regional Board can present more concrete, technically based, quantitative support for this blanket waiver, the Tentative Order must not grant unjustified, wholesale waivers from the proper sizing of stormwater treatment systems.

Aside from the total lack of support for this major departure from law and policy in California, the waiver provisions are, compared to other provisions nationally, a poorly crafted and crude instrument. Even in other jurisdictions where “credits” are granted to smart growth projects, these credits are a small fraction of the project’s overall obligation (*e.g.*, developing a brownfield reduces the project’s onsite retention requirement by 10%).⁴⁹ Moreover, these permits, unlike the MRP, include robust numeric performance

⁴⁹ *See, e.g.*, West Virginia Draft Permit, at 14.

standards for BMP implementation, so not only is the deviation from the baseline much more restricted than in the MRP, but the baseline itself is much higher.⁵⁰ The waiver in the MRP ensures that a significant number of projects will provide no meaningful stormwater treatment, and the waiver could undercut whatever limited reductions in pollution the MRP might otherwise accomplish.

In the end, without tying the exemption from hydraulic sizing criteria to impracticability/infeasibility in any manner, the waiver provision violates the Clean Water Act's requirement that MS4 permits reduce stormwater pollution to the maximum extent practicable. The Tentative Order's findings', Fact Sheet's, and Response to Comments' anecdotal accounts of how the exempted projects might, in theory, reduce stormwater pollution by some completely unquantified amount are wholly insufficient to counter the several technical studies we have submitted to the Regional Board to establish that the exempted projects could, in many circumstances, meet standards even more stringent than the Tentative Order's SUSMP treatment criteria.⁵¹ With nothing but contrary evidence in the record, allowing the Tentative Order to issue with the existing waiver provision would be an abuse of the Regional Board's discretion.

c. The Waiver's Transit-Oriented Development Exemption Is Particularly Ill-Conceived and Would Potentially Exempt Numerous Regulated Projects from the Installation of Properly Sized Stormwater Treatment Controls.

The definition of "transit-oriented development" ("TOD"), in the context of the MRP's area of coverage, is capacious and would allow the installation of severely lacking stormwater management BMPs across the Bay Area. The definition suffers from two central problems.

First, the requirement that a project be located within a half-mile of a "transit station" carves out large portions of the metropolitan Bay Area for waivers. (Tentative Order ¶ C.3.e.i(1)(d).) The Fact Sheet provides no indication of what percentage of the developed land in the Bay Area would qualify for waivers, but given the plethora of rail and bus lines, this percentage is undoubtedly substantial. 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 vast swaths of

⁵⁰ *Id.*, at 13-14.

⁵¹ Horner Initial Investigation at 16-19; Horner Supplementary Investigation, at 4-5.

prime real estate in downtown Oakland and Berkeley.⁵² This is 30% more than the entire land area of the City of Berkeley and doesn't even account for other rail stops or any bus hubs or ferry terminals in Alameda County, let alone transit stations outside Alameda County but within the MRP's jurisdiction.⁵³ The Tentative Order's supporting documents have provided no technical or compliance-based reasons for exempting such a huge area from MEP hydraulic sizing criteria, and, as already discussed, unquantified assumptions about the overall environmental benefits of transit-oriented development are a severely lacking basis for this exemption.

Second, the criteria for commercial projects are not especially strict: the project's FAR must be at least 3 (*i.e.*, it must be at least three stories tall without any tapering—not a difficult standard to meet in urban areas), and the project may construct no more than 3 parking spaces per 1000 square feet of restaurant space, 1.25 parking spaces per 1000 square feet of office space, and 2 parking spaces per 1000 square feet of retail. (Tentative Order ¶ C.3.e.i(1)(d).) While these parking numbers are lower than typical suburban development, they are not stringent for heavily urbanized settings—Portland, Oregon's central business district, for instance, allows no more than 0.7 parking spaces per 1000 square feet of office space and 1 parking space per 1000 square feet of retail.⁵⁴ If the Tentative Order's area of coverage is truly the “dense urban environment” that the Response to Comments (p.11) claims, then many—if not most—commercial developments within a half-mile of a “transit station” would likely meet the definition of a TOD and thus qualify for a complete waiver from hydraulic sizing criteria and effective stormwater management practices. This does not constitute reducing stormwater pollutant discharges to the *maximum extent practicable*; this constitutes, at least for the large set of waiver-eligible Regulated Projects, reducing stormwater pollutant discharges to the *minimum extent possible*.

2. The Requirements for Regulated Projects that Utilize the Alternative Compliance Option Are Unlawfully Lax.

For projects that receive waivers of hydraulic sizing criteria, the Tentative Order would require the implementation of at least one of seven control measures. (Tentative

⁵² 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.

⁵³ Berkeley's land area is about 10.5 square miles. *See* <http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=7164>.

⁵⁴ U.S. Environmental Protection Agency (January 2006) *Parking Spaces/Community Places: Finding the Balance Through Smart Growth Solutions*, at 16.

Order ¶ C.3.e.i(1).) These measures, however, explicitly do not have to be sized to treat any specific amount of runoff, and a project applicant could comply with the Tentative Order literally by directing one milliliter of roof runoff into a rain barrel. The Tentative Order cleverly calls this requirement “Maximizing Site Design Treatment Controls,” but merely using “maximizing” in this title does not overcome the lack of specific requirements and the self-regulatory structure that readily permits misinterpretation and transmutation of the requirement into a perfunctory formality.

For all infill and redevelopment projects that are not eligible for a complete exemption from meaningful stormwater measures, the Tentative Order would still allow non-compliance with onsite requirements, so long as projects “minimize[e] the new and/or replaced impervious surface on-site” and then perform “Equivalent Offsite Treatment” or contribute “Equivalent Funds” to a “Regional Project.” (Tentative Order ¶ C.3.e.i(2), fn.8.) While these requirements do impose the SUSMP hydraulic sizing criteria, they do not ensure that offsite mitigation will result in the same benefits as onsite mitigation. The principal failing of these provisions is that they allow projects implementing alternative compliance measures to select from three options for designing/sizing the offsite BMPs: (1) an equal area of impervious surface; (2) an equivalent quantity of pollutant loading; or (3) an equivalent quantity of runoff. *Id.* These options are not necessarily equal to onsite treatment, however. If an equal area of impervious surface or equivalent quantity of runoff is treated, there is no guarantee that the same pollutant loading (both in amount and pollutant type) will be mitigated. If an equivalent quantity of pollutant loading is treated, there is no guarantee that an equivalent quantity of stormwater will be mitigated, which could lead to hydromodification impacts.⁵⁵ Projects should be required either to provide offsite mitigation at higher ratios (*e.g.*, 1:1.5, as is common in the environmental context)⁵⁶ to account for any locational differences or to ensure that equivalent quantities of pollutant loading *and* stormwater runoff are mitigated.

The achievement of this goal would be more likely if the Tentative Order clarified that “landscape-based treatment measures” (Tentative Order ¶ C.3.e.i(2), fn.7) means LID retention-based BMPs, which completely eliminate runoff and thus attenuate pollution and runoff to the maximum extent practicable. As currently written, the Tentative Order’s lack of a definition for “landscape-based treatment measures” could allow the construction of conventional treat-and-release BMPs, which, as already discussed, are significantly less effective than LID features at pollutant removal and stormwater quantity mitigation. The implementation of LID retention-based BMPs

⁵⁵ The hydromodification criteria do not apply to all projects that would be eligible for alternative compliance, so the hydromodification section would not address this concern. *See* Tentative Order ¶ C.3.g.

⁵⁶ *See, e.g.*, West Virginia Draft Permit, at 15; Anacostia Waterfront Corporation (June 1, 2007) Final Environmental Standards, at 16.

should always be feasible for offsite mitigation since projects utilizing the alternative compliance option can choose from a variety of different locations and thus avoid the site constraints that, in rare cases, make onsite retention technically infeasible.

Without remedying the very substantial deficiencies of the alternative compliance section, the Tentative Order would unlawfully allow many Regulated Projects to do far less than is required to meet the MEP standard. As mentioned elsewhere in this letter, these deficiencies also hamstring the Tentative Order's ability to move the Bay Area toward compliance with water quality standards in the Bay Area's many impaired watersheds.

F. The Tentative Order's Alternative Compliance Measures Violate the Clean Water Act's Anti-Backsliding Prohibition.

The Clean Water Act establishes a general prohibition against renewing, reissuing, or modifying an NPDES permit "to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit." (33 U.S.C. § 1342(o)(1).)⁵⁷ By eliminating SUSMP hydraulic sizing criteria and allowing an "Exemption from Installing Hydraulically Sized Stormwater Treatment Systems," (Tentative Order ¶ C.3.e.i(1)), the Tentative Order effectively creates narrative effluent limitations that are substantially less stringent than those present in prior Bay Area MS4 permits, thus violating the CWA.

Exemplifying more stringent, comparable permit provisions, both the previous Alameda Countywide MS4 Permit and previous San Mateo Countywide MS4 Permit set forth provisions for "Alternative Compliance Based on Impracticability and Requiring Compensatory Mitigation."⁵⁸ These provisions allow for alternative compliance with hydraulic sizing design criteria *only* upon a showing of impracticability—as opposed to simple inclusion in a category of development typologies under the Tentative Order—and then only "with a provision to treat offsite an equivalent surface area, pollutant loading or quantity of stormwater runoff, or provide other equivalent water quality benefit, such as stream restoration or other activities that limit or mitigate impacts from excessive erosion

⁵⁷ See also, 40 C.F.R. § 122.44(l). EPA guidance states that absent certain specific circumstances, "when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit."

⁵⁸ San Francisco Regional Water Quality Control Board (2003) Alameda Countywide NPDES Municipal Stormwater Permit, Order R2-2003-0021, NPDES Permit No. CAS0029831, at 26; San Francisco Regional Water Quality Control Board (2003) San Mateo Countywide NPDES Municipal Stormwater Permit, Order R2-2003-0023, NPDES Permit No. CAS0029921, at 14.

or sedimentation.”⁵⁹ There is no such requirement, or any equivalent or greater requirement, in the MRP. Instead, the Tentative Order offers a blanket waiver of hydraulic sizing criteria under a broad range of circumstances, effectively eliminating the previous, stricter requirement for a substantial area within the Tentative Order’s coverage, as discussed above. Because the waiver of hydraulic sizing criteria in the MRP serves for all intents and purposes as an allowance for a less stringent set of BMPs, and thus enforces a less stringent set of effluent limitations than did previous iterations of permits subsumed within the MRP, the inclusion of the alternative compliance exemption from hydraulic sizing criteria stands in violation of the CWA’s anti-backsliding prohibition.

G. The Tentative Order’s Hydromodification Section Sets the Wrong Baseline and Must Be Revised.

The Hydromodification section, as explained in our last comment letter, establishes a site’s “pre-project” (existing) condition as the baseline for analysis. (Tentative Order ¶ C.3.g.ii.) This would effectively grandfather antiquated stormwater management practices and is entirely inappropriate and insufficient. For a more detailed discussion of the problems with this standard, which has not changed from the previous draft, see our February 29, 2009, letter (at 22-23).

V. The Tentative Order’s Provisions Are Not Calibrated to Achieve any Particular Result and Will Not Ensure the Attainment of—or Even Progress Toward the Attainment of—Water Quality Standards

As discussed in our last comment letter, the Tentative Order must impose stormwater mitigation to prevent discharges from causing or contributing to violations of water quality standards. All NPDES permits, including those for MS4s, must require controls to meet water quality standards. (33 U.S.C. § 1311(b)(1)(C).) Federal regulations also state that “no permit may be issued” when “the imposition of conditions cannot *ensure* compliance with the applicable water quality requirements of all affected States.” (40 C.F.R. § 122.4(d) (emphasis added).) In a precedential order, the State Water Resources Control Board elaborated on this requirement and determined that municipal stormwater permits must prohibit discharges of pollution that cause or contribute to a violation of water quality standards, and the program to meet this requirement must, in fact, be designed to achieve compliance.⁶⁰

The MRP itself identifies stormwater discharges as “significant sources of certain pollutants that cause or may be causing or threatening to cause or contribute to water quality impairments.” (Tentative Order, at Finding 11.) It further states that the Permittees shall achieve compliance with the requirement not to cause or contribute to

⁵⁹ *Id.*

⁶⁰ See State Water Resources Control Board (2000) Water Quality Control Order No. 2000-11.

violations of water quality standards through implementation of the Tentative Order. (See Tentative Order ¶ C.1.) The Tentative Order, Fact Sheet, and Response to Comments, however, are devoid of analysis demonstrating the beneficial impacts of the Tentative Order's requirements as a whole or the post-construction requirements specifically. There is no evidence whatsoever that the Tentative Order's provisions C.2 through C.15 will lead to compliance with water quality standards or that the provisions are reasonably designed to attain compliance. Rather, it appears that the Regional Board has no idea how, or even whether, the Tentative Order will ensure the attainment of water quality standards.

VI. The Tentative Order Fails to Include or Enforce Waste Load Allocations from Applicable TMDLs

The Tentative Order's inability to ensure that water quality standards will be met is particularly evident in the sections that implement the Bay Area's TMDLs. The Tentative Order's Fact Sheet recognizes that "two TMDLs . . . have been fully approved and are effective for the Permittees," (Tentative Order Fact Sheet, at 61), yet neither the Tentative Order nor the Fact Sheet includes applicable waste load allocations ("WLAs") or provides evidence that the Tentative Order will implement the applicable TMDLs consistent with the requirements of the CWA. TMDLs represent numerical calculations of the maximum amount of a pollutant that a water body impaired under section 303(d) of the CWA can receive and still meet water quality standards, and TMDLs allocate that amount of pollution to discharges from the pollutant's sources. TMDLs establish WLAs—or the maximum amount of a pollutant that each point source discharger may release into a particular waterway—which constitute a form of water quality-based effluent limitation. (See 33 U.S.C. 1313(d)(4)(A); 40 C.F.R. § 130.2.) Once a TMDL has been adopted, NPDES permits are required to include WLAs and contain effluent limitations and conditions consistent with the assumptions and requirements of the TMDL from which they are derived. (40 C.F.R. § 122.44(d)(1)(vii)(B).) However, nowhere in the Tentative Order is there any reference to specific WLAs for the two TMDLs that apply to the Permittees, nor is there any evidence to show that the Tentative Order has been drafted consistent with the requirements of the TMDLs.

The Mercury TMDL⁶¹ states that "The NPDES permits for urban runoff management agencies shall require the implementation of best management practices and control measures designed to achieve the allocations or accomplish the load reductions derived from the allocations. In addition to controlling mercury loads, best management practices or control measures shall include actions to reduce mercury-related risks to humans and wildlife." However, the Tentative Order never references any controls to achieve WLAs or reduce mercury-related risks. The Tentative Order makes a bare conclusory statement under Provision C.11 that "The purpose of this provision is to

⁶¹ San Francisco Regional Water Quality Control Board (2006) Final Basin Plan Amendment amending the San Francisco Bay Mercury TMDL, at 15.

implement the urban runoff requirements of the mercury TMDL and reduce mercury loads to make substantial progress toward achieving the urban runoff mercury load allocation.” (Tentative Order ¶ C.11.) However, Provision C.11. fails to require, or provide substantiation for, any specific control measures designed to meet the requirement above, granting instead almost unfettered discretion to the Permittees and requiring little more than the preparation of numerous plans and studies identified as “additional requirements for urban runoff management agencies” by the TMDL. (See Tentative Order ¶ C.11.a-C.11.j.)⁶²

The Tentative Order does not even include the waste load allocations set by the TMDL or demonstrate that the Tentative Order is designed to effectuate them. The Tentative Order Fact Sheet mentions that “[t]he 2003 load of mercury from urban runoff is 160 kg/yr, and the aggregate WLAs for urban runoff is 80 kg/yr and shall be implemented through the NPDES stormwater permits issued to urban runoff management agencies and Caltrans,” (Tentative Order Fact Sheet, at 74), but the identified loads appear to include aggregated WLAs for entities not covered under the Tentative Order. (*Id.*, referencing Table 4-w of the Basin Plan Amendment.) The U.S. Environmental Protection Agency has recently stated that a permit should “explicitly state that the wasteload allocations (WLAs) established by . . . TMDLs are intended to be enforceable permit effluent limitations and that compliance is a permit requirement.”⁶³ The Tentative Order fails to meet this obligation. Tellingly, there are no findings in the Tentative Order and no evidence in the Fact Sheet to demonstrate that the Tentative Order’s requirements will enable the Bay Area to meet the TMDL at all.

The Tentative Order is similarly devoid of any information related to compliance with the Pesticide Toxicity TMDL in Provision C.9. The Fact Sheet refers only cursorily to this TMDL, stating that “[t]he TMDL is allocated to all urban runoff . . . The allocations are expressed in terms of toxic units and diazinon concentrations.” (Tentative Order Fact Sheet, at 63.) The TMDL lists numeric targets for toxicity of 1.0 TU_a or 1.0 TU_c, where TU_a = 100/NOAEC and TU_c = 100/NOEC,⁶⁴ and for diazinon, such that

⁶² *See also, Id.*

⁶³ Letter from Douglas E. Eberhardt, EPA, to Michael Adackapara, Santa Ana Regional Water Quality Control Board (February 13, 2009), at 3. As an example, the Santa Monica Bay Beaches Wet Weather Bacteria TMDL establishes numeric targets for bacteria contamination and require permits to “incorporate the applicable waste load allocation(s) as a permit requirement,” effectively establishing a numeric effluent limitation. Los Angeles Regional Water Quality Control Board (December 12, 2002) Attachment A to Resolution 2002-022, at 6.

⁶⁴ San Francisco Regional Water Quality Control Board (2005) Adopted Basin Plan Amendment for Diazinon and pesticide-related toxicity in urban creeks, at 3. (“NOAEC” refers to the ‘no observed adverse effect concentration,’ which is the highest tested

“concentrations in urban creeks shall not exceed 100 ng/l as a one-hour average.” However, the Tentative Order does not mention these targets, once again violating the requirement that permits “explicitly state that the wasteload allocations (WLAs) established by . . . TMDLs are intended to be enforceable permit effluent limitations.” Further, while listing a host of requirements to develop plans or studies under Provision C.9, the Tentative Order does not verify or offer any evidence to demonstrate that the Tentative Order’s provisions will reduce pesticide loads or toxicity in impaired water bodies. The Tentative Order does not in any way establish that its provisions have been drafted consistent with the assumptions and requirements of the TMDL.

The failure to properly implement either TMDL violates fundamental principles of the CWA designed to prevent the impairment of water bodies through the use of NPDES permits. Absent findings supported by evidence in the record to show that the Tentative Order will achieve the TMDLs’ requirements, issuing the Tentative Order would be arbitrary and capricious because it fails to require the necessary control measures that would move the Bay Area’s stormwater discharge toward compliance with water quality standards. The Tentative Order must be revised both to include WLAs from these TMDLs and to demonstrate that the Tentative Order will achieve the TMDL goals.

VII. The Tentative Order Allows the Discharge of Pollutants from New Dischargers and Sources

Approval of the Tentative Order will authorize the discharge of pollutants to impaired water bodies from “new sources” or “new dischargers” in violation of the CWA’s implementing regulations. 40 C.F.R. § 122.4(i) explicitly prohibits discharges from these sources, stating that:

No permit may be issued:

... (i) To a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards or is not expected to meet those standards ... and for which the State or interstate agency has performed a pollutants load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that:

(1) There are sufficient remaining pollutant load allocations to allow for the discharge; and

concentration of a sample that causes no observable adverse effect (*i.e.*, mortality) to exposed organisms during an acute toxicity test.”)

(2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards.

(40 C.F.R. § 122.4(i).) Under 40 C.F.R. § 122.2, a “new discharger” is defined as “any building, structure, facility, or installation: (a) From which there is or may be a ‘discharge of pollutants;’ . . . (c) Which is not a ‘new source;’ and (d) Which has never received a finally effective NDPEs permit for discharges at that ‘site.’” (40 C.F.R. § 122.2.) A “new source” is defined as “any building, structure, facility, or installation from which there is or may be a ‘discharge of pollutants . . .’” that may be subject to applicable standards of performance under section 306 of the Clean Water Act. (40 C.F.R. § 122.2.) Thus, the Tentative Order may not authorize the development or redevelopment of any building or structure, including, without limitation, a new subdivision, industrial facility, or commercial structure, within the Permittees’ jurisdiction, if runoff from the new discharge adds any pollutant to discharges from the MS4 that “will cause or contribute to the violation of water quality standards” for a water body impaired for that pollutant. Furthermore, the applicant for the permit must prove the availability of any exception to this provision, as set forth above.

In *Friends of Pinto Creek v. U.S. E.P.A.*, ((9th Cir. 2007) 504 F.3d 1007), the Ninth Circuit Court of Appeals vacated an NPDES permit issued by the U.S. Environmental Protection Agency to a new discharger on the grounds that the Permittees’ “discharge of dissolved copper into a waterway that is already impaired by an excess of the copper pollutant” would violate the CWA. (*Id.* at 1011.) Citing to 40 C.F.R. § 122.4(i), the court stated that “The plain language of the first sentence of the regulation is very clear that no permit may be issued to a new discharger if the discharge will contribute to the violation of water quality standards.” (*Id.* at 1012.) The court noted that a single exception to this rule exists where a TMDL has been performed, and the “new source can demonstrate that, under the TMDL, the plan is designed to bring the waters into compliance with applicable water quality standards.” (*Id.*) Thus, where no TMDL has been completed for a specified water body and pollutant, new discharges that add pollutants that will cause or contribute to a violation of water quality standards are prohibited absolutely. Further, the court in *Pinto Creek* observed that unless a TMDL explicitly provides that existing discharges into the impaired water body are “subject to *compliance schedules* designed to bring the segment into compliance with applicable water quality standards,” issuance of a permit for new discharge was also prohibited under 40 C.F.R. § 122.4(i). (*Id.* at 1013.) In effect, a permit for new discharges may not be issued even when a TMDL for the relevant pollutant exists, unless it firmly establishes that “there are sufficient remaining pollutant load allocations under existing circumstances.” (*Id.* at 1012.) Under this holding, the Regional Board is prohibited from approving a permit that allows new sources or discharge of any pollutant to water bodies already impaired by that pollutant, unless an existing TMDL specifically provides sufficient waste load allocations for the discharge.

There are “more than 270 listings in 88 water bodies”⁶⁵ identifying water bodies or water body segments as impaired for one or more pollutants within the jurisdiction of the San Francisco Regional Board. Many of these are located in jurisdictions and municipalities covered by the Tentative Order.⁶⁶ Water bodies within the Permittees’ jurisdictions are impaired for, among other pollutants, mercury, PCBs, bacteria, nutrients, pesticides, and metals, including selenium.

The Tentative Order fully acknowledges that these and other pollutants of concern are known contaminants within stormwater in the San Francisco Bay region. Tentative Order Finding 15 states that “[p]ollutants of concern in these discharges are certain heavy metals; excessive sediment production from erosion due to anthropogenic activities; petroleum hydrocarbons from sources such as used motor oil; microbial pathogens of domestic sewage origin from illicit discharges; certain pesticides associated with acute aquatic toxicity; excessive nutrient loads, which can cause or contribute to the depletion of dissolved oxygen and/or toxic concentrations of dissolved ammonia; trash, which impairs beneficial uses including, but not limited to, support for aquatic life; and other pollutants which can cause aquatic toxicity in the receiving waters.” The Tentative Order itself emphasizes that “stormwater discharges from urban and developing areas in the San Francisco Bay Region” have been found by the Water Board “to be significant sources of certain pollutants that cause or may be threatening to cause or contribute to water quality impairment in waters of the Region.” (Tentative Order, at Finding 11.) Specifically, “the Water Board has found that there is a reasonable potential that municipal stormwater discharges cause or may cause or contribute to an excursion above water quality standards for the following pollutants: mercury, PCBs, furans, dieldrin, chlordane, DDT, and selenium in San Francisco Bay segments; pesticide associated toxicity in all urban creeks; and trash and low dissolved oxygen in Lake Merritt, in Alameda County.” (*Id.*)

This finding is further borne out by research that has consistently “identified stormwater runoff as a major contributor to water quality degradation in urbanizing watersheds.”⁶⁷ Studies have repeatedly shown that “[s]tormwater runoff typically contains dozens of pollutants that are detectable at some concentration,” including “sediment, nutrients, metals, hydrocarbons, bacteria and pathogens, organic carbon, MTBE, pesticides, and deicers.”⁶⁸ In particular, studies show that “zinc, copper and

⁶⁵ San Francisco Regional Water Quality Control Board, Total Maximum Daily Loads (TMDLs) and the 303(d) List of Impaired Water Bodies, *available at* http://www.swrcb.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/.

⁶⁶ See 2006 CWA Section 303(d) List of Water Quality Limited Segments.

⁶⁷ Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*, North American Lake Management Society, at 3-46.

⁶⁸ Center for Watershed Protection (March 2003) *Impacts of Impervious Cover on Aquatic Systems*, at 55.

cadmium pollution [were] found in urban runoff;”⁶⁹ that “[m]icrobial pollution” such as bacteria, protozoa, and viruses “is almost always found in stormwater runoff;”⁷⁰ that “cars and other vehicles contributed 75 percent of the total copper load to the lower San Francisco Bay through runoff;”⁷¹ and that “insecticides such as diazinon and malathion were commonly found in surface water and stormwater in urban areas . . . with urban runoff being the primary transport mechanism into urban streams.”⁷² The adopted Basin Plan Amendment for Diazinon and Pesticide-Related Toxicity in Urban Creeks explicitly states that “[p]esticides, including diazinon, enter urban creeks through urban runoff.”⁷³

Additionally, in the San Francisco Bay Region, a Joint Stormwater Agency Project conducted by many of the Permittees additionally estimated that stormwater from urban sources alone contributes a median estimate of 87 pounds of PCBs to San Francisco Bay per year, with an estimated median average load of 210 pounds of mercury contamination, and loads of as much as 260 pounds of chlordane and 50 pounds of DDT.⁷⁴ New discharges will only increase the mass of these pollutants entering impaired receiving waters.

As no TMDLs have been adopted to address water quality impairments formally identified by the Regional Board and U.S. EPA and caused by pollutants including bacteria, nutrients, pesticides, PCBs, and metals such as selenium, any new discharge of these pollutants would violate the terms of 40 C.F.R. § 122.4(i) and the court’s holding in *Pinto Creek*. Such discharges are prohibited. Furthermore, the Tentative Order states that “two TMDLs . . . have been fully approved and are effective for the Permittees. These TMDLs apply to pesticide-related toxicity in urban creeks and mercury in San

⁶⁹ Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*, North American Lake Management Society, at 3-48.

⁷⁰ *Id.* at 3-49.

⁷¹ NRDC, *Stormwater Strategies: Community Responses to Runoff Pollution*, at Chapter 2, available at <http://www.nrdc.org/water/pollution/storm/stoinx.asp>.

⁷² Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*, North American Lake Management Society, at 3-54.

⁷³ San Francisco Regional Water Quality Control Board (November 16, 2005) Adopted Basin Plan Amendment for Diazinon and Pesticide-Related Toxicity in San Francisco Bay Area Urban Creeks, at 3.

⁷⁴ Kinnetic Laboratories, Inc. (April 2002), *Final Report: Joint Stormwater Agency Project to Study Urban Sources of Mercury, PCBs and Organochlorine Pesticides*, at 57.

Francisco Bay.”⁷⁵ Following the court’s holding in *Pinto Creek*, a permit allowing new dischargers or sources of mercury or pesticides could be approved and issued only in the event that the applicable TMDL explicitly establishes that (1) existing discharges into the impaired water body are “subject to *compliance schedules* designed to bring the segment into compliance with applicable water quality standards,” and (2) additional allocations are available for the specified water body. (*Pinto Creek*, 504 F.3d at 1013.) The Tentative Order does not establish that such allocations exist and are available. As a result, new discharges of mercury or pesticides to impaired water bodies are prohibited, and there is no authority for the Regional Board to issue the Tentative Order. In order to be lawful, the Tentative Order must establish measures to ensure that stormwater discharges, from existing or future sources, do not cause or contribute to such impairments, and the Tentative Order has not done so.

VIII. The Tentative Order’s Receiving Water Limitations and Discharge Prohibition Provisions Are Unlawful

A. The Receiving Water Limitations Are Inconsistent with State Board Water Quality Orders 99-05 and 2001-15.

The Tentative Order’s Receiving Water Limitations exclude language required by U.S. EPA and addressed by the State Water Resources Control Board in Water Quality Order No. 99-05 (“Order 99-05”). Specifically, the State Board ordered that the “following receiving water limitation language shall be included in future municipal storm water permits.”⁷⁶ Order 99-05 then sets forth language that includes the following: “the SWMP shall be designed to achieve compliance with Receiving Water Limitations.”⁷⁷ However, Tentative Order provisions C.1 and C.1.a exclude the required sentence, substituting instead a reference to certain substantive provisions of the Tentative Order. This alteration is impermissible because it deviates materially from language that the State Board ordered “shall be included in future municipal storm water permits.”⁷⁸ The included language is not comparable because the cited sections of the Tentative Order are not designed to achieve compliance with water quality standards, and there is, likewise, no finding or evidence in the record that would even tend to support any other conclusion. Moreover, many provisions of the Tentative Order would require the development of compliance plans not yet before the Regional Board, rendering premature any judgment about their adequacy to “achieve Receiving Water Limitations.”

⁷⁵ A TMDL for PCBs in San Francisco Bay was adopted by the Regional Board on February 13, 2008; however, it has not yet been approved by the State Board and thus is not currently in effect.

⁷⁶ Water Quality Order 99-05 at 2.

⁷⁷ *Id.*

⁷⁸ *Id.*

Indeed, the Tentative Order includes dozens of provisions that require the development of substantive pollution control requirements. (See, e.g., Tentative Order ¶ C.5.d.)

Tentative Order Provision C.1.a not only excludes required restrictions, but it also includes new language that weakens the Tentative Order in a fashion inconsistent with precedential state decisions. Provision C.1.a would allow Permittees to cause or contribute to violations of water quality standards for “pesticides, trash, mercury, polychlorinated biphenols, copper polybrominated diphenyl ethers, and selenium” without submitting a report to the Regional Water Board or proposing new BMPs to eliminate the violation(s). This loophole threatens public health and the environment. It is irreconcilable with the explicit requirement in Order 99-05 stating that “discharges” that are “causing or contributing to an exceedence of *any* applicable WQS” trigger notification and submittal of a plan setting forth “additional BMPs that will be implemented to prevent or reduce *any* pollutants that are causing or contributing to the exceedence of WQSS.”⁷⁹

The Tentative Order must be revised and recirculated with Receiving Water Limitations that comport with state and federal law.

B. The Tentative Order Fails to Include Provisions that Effectively Prohibit all Non-Stormwater Discharges, as Required by the Clean Water Act.

The Fact sheet states that the Tentative Order “effectively prohibits the discharge of non-stormwater discharges into the storm sewer system.” (Tentative Order Fact Sheet, at 85). However, the Tentative Order itself, and supporting sections of the Fact Sheet, create a host of non-stormwater discharge categories that are either categorically or conditionally exempt from prohibitions against non-stormwater discharge to the MS4 system. These exceptions violate of the clear language of the Clean Water Act. Section 402(p)(3)(B)(ii) requires that permits for discharge from municipal sewers “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.” 33 U.S.C. § 1342(p)(3)(B)(ii).⁸⁰

Citing to the CWA’s implementing regulations under 40 C.F.R. § 122.26(d), however, the Fact Sheet asserts that “we recognize that certain types of non-stormwater discharges may be exempted from this prohibition if they are unpolluted and do not violate water quality standards. Other types of non-stormwater discharges may be conditionally exempted from Prohibition A.1. [of the Tentative Order] if the discharger employs appropriate control measures and BMPs prior to discharge and monitors and reports on the discharge.” Section C.15 of the Tentative Order creates “Exempted and

⁷⁹ Water Quality Order 99-05, at 3 (emphasis added).

⁸⁰ Notably, the Tentative Order does not even explicitly prohibit stormwater discharges containing pollutants that have not been reduced to the maximum extent practicable.

Conditionally Exempted Discharges” for non-stormwater, with a stated objective to “exempt unpolluted non-stormwater discharges from Discharge Prohibition A.1. and to conditionally exempt non-stormwater discharges that are potential sources of pollutants.” (Tentative Order, at 102.) The list of conditionally exempt discharges includes:

- Irrigation Water, Landscape Irrigation, Lawn or Garden Watering
- Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges
- Pumped Groundwater, Foundation Drains, Water from Crawl Space Pumps and Footing Drains
- Air Conditioning Condensate

While the Tentative Order creates limited control measures designed to reduce the potential impacts of these discharges, it does not prohibit them, as required by the CWA. Section 402(p) places a clear, mandatory duty on the Permittee to prohibit non-stormwater discharges to the MS4 system. The Permittee, or Regional Board, has no discretion to deviate from this requirement. In ascertaining the meaning of a statute, construction must begin with the text. (*Duncan v. Walker* (2001) 533 U.S. 167, 172.) “If there is no ambiguity, then we presume the lawmakers meant what they said, and the plain meaning of the language governs.” (*Day v. City of Fontana* (2001) 25 Cal.4th 268, 272.) There is no ambiguity present in the CWA’s requirement that a permit “effectively prohibit non-stormwater discharges,” and the Tentative Order’s provision of categorical exceptions stands in clear violation of its terms.

The Tentative Order’s attempt to allow exemptions to the prohibition against non-stormwater discharges to MS4 systems is not supported by 40 C.F.R. § 122.26(d)(2)(iv)(B)(1), as the Fact Sheet implies. This provision merely states the circumstances under which the Permittee must specifically design a program to prevent certain illicit discharges: “the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States.” The cited regulation, providing for an enforcement program to “prevent illicit discharges,” simply does not support staff’s surmise, as stated in the Fact Sheet, that “certain types of non-stormwater discharges may be exempted from this prohibition if they are unpolluted and do not violate water quality standards.” (Tentative Order Fact Sheet at 85.) Indeed, the interpretation adopted in the Tentative Order is not found in the plain language of the regulation, and staff’s gloss places the regulations in direct conflict with the overlying statute. A clear reading of the statute, and one that elaborates on Section 402(p)(3)(B)(ii) of the Clean Water Act rather than contradicting it, is that while non-stormwater discharges must be prohibited by the text of the Act, illicit discharge enforcement programs need only specifically address the enumerated list of non-stormwater discharges set forth in the regulations where such discharges have been identified as a source of pollutants. As written, the entire scheme in the Tentative Order is inconsistent with both the regulations and the statute that they purport to implement.

Further, even if the Permittees were afforded authority under 40 C.F.R. §

122.26(d) to exempt non-stormwater sources from the discharge prohibitions required by the CWA, the Tentative Order unlawfully allows exemption of irrigation water from lawns, gardens, or landscaping even though pollutants from these source are a known, significant source of impairment in the Bay Area. Neither a finding that irrigation discharges are “not []sources of pollutants to receiving waters,” (Tentative Order Fact Sheet, at 85), nor an exemption based on the other conditions set forth in the Tentative Order, would be consistent with facts in the record.

First, a non-source of pollutants finding would stand contrary to extensive research that has proved the opposite: studies have consistently shown that non-stormwater discharges from irrigation water or lawn water are a significant source of pollutants for which San Francisco Bay region waters are impaired. As the Tentative Order duly notes, violations of water quality standards are a problem for “pesticide associated toxicity in all urban creeks,” (Tentative Order, at Finding 11), and garden use has been identified as one of the main sources of pesticides found in urban streams.⁸¹ Lawns have further been identified as a “hot spot” for nutrient contamination in urban watersheds—lawns “contribute greater concentrations of Total N, Total P and dissolved phosphorus than other urban source areas ... source research suggests that nutrient concentrations in lawn runoff can be as much as four times greater than other urban sources such as streets, rooftops or driveways.”⁸² Thus, any claim that irrigation water is unequivocally not a source of pollutants to receiving waters cannot be sustained, and this exemption should be removed from the Tentative Order.

Second, to the extent that the Tentative Order purports to allow the implementation of BMPs as a means of authorizing the conditional exemption of potentially, or in fact actually polluted irrigation water, there has been no showing that the BMPs required under Provision C.15.b.v of the Tentative Order are sufficient to meet the regulatory requirements of the CWA. 40 C.F.R. § 122.26 provides that illicit discharge programs must address non-stormwater discharges “where such discharges are identified by the municipality as sources of pollutants.” It does not provide that requiring BMPs which “promote measures that minimize runoff and pollutant loading from excess irrigation,” (Tentative Order ¶ C.15.b.v.), may supplant the requirement that discharges contain “no pollutants,” nor is Tentative Order’s approach equivalent to “effectively

⁸¹ Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*, North American Lake Management Society, at 3-54.

⁸² Center for Watershed Protection (March 2003) *Impacts of Impervious Cover on Aquatic Systems* at 69; See also, H.S. Garn (2002) *Effects of lawn fertilizer on nutrient concentration in runoff from lakeshore lawns, Lauderdale Lakes, Wisconsin*. U.S. Geological Survey Water-Resources Investigations Report 02-4130. In an investigation of runoff from lawns in Wisconsin, runoff from fertilized lawns contained elevated concentrations of phosphorous and dissolved phosphorous.

prohibit[ing] non-stormwater discharges into the storm sewers.” (33 U.S.C. § 1342(p)(3)(B)(ii).)

Additionally, as with many areas of the Tentative Order, the BMPs required for conditional exemption under C.15.b.v are vague and fail to set out any measurable requirement, further underscoring that these provisions are not tantamount to actions that will result in non-stormwater irrigation flows free of pollutants under 40 C.F.R. § 122.26. The Tentative Order does not provide any evidence to support a contention that such measures will either effectively prohibit such discharges or even allow water quality standards to be met. The provisions of C.15.b.v, requiring that Permittees promote “conservation programs that minimize discharges” or send “outreach messages regarding use of less toxic options,” are not in themselves management practices; rather, they constitute proposals for categories of BMPs to be developed. Indeed, they echo proposals that have been introduced in previous permits and that have been tried—and failed—to prevent impacts to receiving waters from irrigation runoff.⁸³

Given the overwhelming evidence that pollution from pesticides and other contaminants constitutes a serious and ongoing problem in receiving waters under the jurisdiction of the Permittees, the conditional exemption of irrigation water from prohibitions against non-stormwater discharge violates the clear requirements of the Clean Water Act and its implementing regulations.

IX. The Permit Application Is Incomplete for Failure to Include an Assessment of Controls

The permit application is significantly incomplete, as it fails to include information required under 40 C.F.R. § 122.26(d)(2) that is necessary to ensure that the selection of controls for reducing the discharge of pollutants is not arbitrary and capricious. A permit application for discharge from a large- or medium-sized MS4 must contain an assessment of controls, including “[e]stimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program.” (40 C.F.R. § 122.26(d)(2)(v).) Rather than providing such estimates, neither the application, the Tentative Order, nor the Fact Sheet includes any required information or other discussion of the amount of pollution that will be reduced through its controls.

⁸³ See, e.g., San Francisco Regional Water Quality Control Board (2003) Alameda Countywide NPDES Municipal Stormwater Permit, Order R2-2003-0021, NPDES Permit No. CAS0029831, at 30 (providing examples of source control measures including “Landscaping that minimizes irrigation and runoff [and] minimizes the use of pesticides and fertilizers”); San Francisco Regional Water Quality Control Board (2003) Fairfield-Suisun Areawide NPDES Municipal Stormwater Permit, Order R2-2003-0034, NPDES Permit No. CAS612005, at 42 (stating that Permit Pesticide plans shall include public outreach programs to provide targeted information on “alternative, least toxic methods of pest prevention and control.”)

In effect, the Tentative Order and its provisions have evidently been selected, and other provisions rejected, based on arbitrary guesswork.

The lack of information related to pollutant loadings not only contravenes the requirements of 40 C.F.R. 122.26(d)(2) but also exposes an underlying flaw of the Tentative Order as a whole—it has diminished the extent of, and in many instances entirely deleted, effective BMPs without evidence that management practices included in the Tentative Order are adequate to meet relevant requirements and standards. The approval of the Tentative Order without this information fundamentally violates basic precepts of administrative procedure, not only because required evidence in the record is lacking, but also because the findings and related subfindings in the record are totally devoid of necessary guideposts as to why and how provisions were included or rejected.

Permittees may have relied on guidance from EPA purporting to “allow[] permitting authorities to develop flexible reapplication requirements that are site-specific.” (61 F.R. 41698.) However, nothing in the CWA’s implementing regulations permits such flexibility, and the guidance cannot reduce or remove the regulatory requirement that the Tentative Order include estimated reductions in pollutant loadings. It is axiomatic that where agency guidance is inconsistent with an unambiguous statutory scheme or its enabling regulations, the regulations must govern. (*See, e.g., Christensen v. Harris County* (2000) 529 U.S. 576, 588 (“To defer to the agency’s position would be to permit the agency, under the guise of interpreting a regulation, to create *de facto* a new regulation”); *Davis v. Florida Power & Light Co.* (11th Cir. 2000) 205 F.3d 1301, 1307 (rejecting agency policy guidance as inconsistent with its overlying statutory scheme).) In order for the Tentative Order application to meet the requirements of the CWA, the Tentative Order must include an estimate of the pollutant load reduction that it is expected to achieve.

Even if the guidance were not in direct conflict with the regulations, the guidance does not in itself specifically exempt permits from including this information. The guidance states that “as a practical matter, *most* first-time permit application requirements are unnecessary for purposes of second round MS4 permit application;” it does not state that all such information is unconditionally unnecessary. (61 F.R. 41698 (emphasis added).) The omitted pollutant reduction estimates represent a fundamentally different type of information from that required by *most* of the other provisions of 40 C.F.R. § 122.26(d)(2), such as identifying already identified “major outfalls,” for which repeating the exercise “would be needlessly redundant,” especially “where it has already been provided and has not changed.” (61 F.R. 41698.) However, the required pollutant load reduction estimates, which apply when a new application for a new permit is received, are not like “most” provisions addressed in the guidance and are, instead, self-evidently relevant to crafting and assessing the core requirements of the new permit. Such estimates are an essential means of determining whether or not the permit will ensure that water quality standards will be met and what improvements can be expected; they are not merely an administrative detail that has no effect on the permit’s functionality. This information is further indispensable when, as here, staff have rejected more effective

BMPs, since—absent information that such BMPs are not necessary to meet fundamental Clean Water Act goals—this rejection is entirely arbitrary.

Additionally, the first issuance of a *regional* stormwater permit makes the required estimated reduction in pollutant load particularly critical. Here, the area and entities covered by the MRP and the requirements imposed on the Permittees have changed from the last round of adopted permits. The MRP is, essentially, a first-time application for a permit that will largely determine the level of urban runoff control in most of the Bay Area. Given this, the necessity of basing the Tentative Order on information about its estimated efficacy should be obvious and the inapplicability of guidance to the contrary equally clear.

X. The Tentative Order Fails to Include Sufficient Findings to Justify its Lax Provisions

The Tentative Order violates long-established requirements related to agency decision-making. 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.) “[T]he intended effect is to facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions.” (*Id.* at 516.) “Absent such roadsigns, a reviewing court would be forced into unguided and resource-consuming explorations; it would have to grope through the record to determine whether some combination of credible evidentiary items which supported some line of factual and legal conclusions supported the ultimate order or decision of the agency.” (*Id.* at 516 n.15.) As a result, agencies are required to issue findings, and are precluded from issuing merely “bare” conclusions. (*See American Funeral Concepts-American Cremation Soc’y v. California State Bd. of Funeral Dir.s. and Embalmers* (1982) 136 Cal.App.3d 303, 309 (“To pass muster findings must reveal the line(s) of factual and legal conclusions upon which the board relies.”).)

However, far from revealing lines of factual and legal conclusion or providing a means to “bridge the analytic gap” between evidence and decision, the Tentative Order, as previously noted, contains only a bare minimum of findings overall and absolutely no findings with respect to critical areas of the Tentative Order, such as compliance with water quality standards, consistency with the MEP standard, section C.3, which details the requirements for new development and redevelopment, or C.15, which details the exemption or conditional exemption of certain non-stormwater sources from the Tentative Order’s discharge prohibitions. In this respect as well, the Tentative Order is deficient and unlawful. This violation is particularly glaring because the lack of information on how decisions were made as to the contents of the Tentative Order obfuscates the basis of decision-making and acts as a barrier to transparency. By not attempting to support the Tentative Order or showing clearly why it includes certain practices and excludes others that have been well-supported, the Regional Board avoids laying out clearly for the public the basis of its actions.

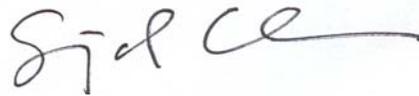
XI. Conclusion

For the many aforementioned reasons, the Tentative Order is unlawful under federal and state law. It is a long way from legally adequate and needs broad and significant revisions, as well as more thorough documentation, to pass legal muster. We urge the Regional Board to reject the Tentative Order and provide staff with clear direction on the numerous modifications that are required, as discussed above.

Sincerely,



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Noah Garrison
Natural Resources Defense Council



Sejal Choksi
San Francisco Baykeeper