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Defending Our Waters—from the High Sierra to the Golden Gate

February 29, 2008

Attn: Dale Bowyer
San Francisco Regional Water Quality Control Board
1515 Clay Street, 14th Floor
Oakland, CA 94612

Sent via electronic mail to mrp@waterboards.ca.gov

RE: Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit

Dear Board Members and Staff of the Regional Board:

On behalf of San Francisco Baykeeper, the Natural Resources Defense Council ("NRDC"), and Clean Water Action, we submit the following comments on the tentative order for the San Francisco Bay Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit ("Permit"), Permit No. CAS612008, noticed on December 14, 2007. This Permit will authorize discharges from the six largest municipal separate storm sewer systems ("MS4") in the San Francisco Bay Regional Water Quality Control Board's ("Regional Board") jurisdiction.

Urban runoff is recognized as one of the most significant sources of water pollution in the United States and the main cause of impairment to our nation's estuaries.[1] In the Bay Area, urban runoff is a significant, if not the largest, source of water pollution. In the past two years, this Regional Board has adopted Total Maximum Daily Loads for mercury, pesticides and PCBs that identify urban storm water as the greatest controllable source of these pollutants. Large municipalities have been required to obtain and comply with storm water permits since the early 1990s, yet the fact that so many Bay Area waters remain impaired by storm water strongly suggests that these permits have been ineffective.

MS4 permits have been ineffective in controlling storm water pollution for many reasons. The permit requirements have traditionally been vague and undefined so that it is difficult to determine what actions are required of permitees and what reductions those actions will achieve. Reporting has been inconsistent across permitees and inadequate to enable a determination of whether permitees are complying with the permit.[2] Permits have

[1] EPA 841-F-03-003, *Protecting Water Quality from Urban Runoff* (February 2003).
[2] Kosco, J. et al., *Lessons Learned from In-Field Evaluations of Phase I Municipal Storm Water Programs*, pg. 196, prepared by Tetra Tech, Inc. and U.S. EPA Region IX, available at www.epa.gov/owow/nps/natlstormwater03/19Kosco.pdf.

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failed to require sufficient monitoring to determine whether the BMPs have been effective in reducing pollution in urban runoff and in protecting water quality. Unfortunately, this permit contains many, if not all, of the flaws of the previous permits: It is still unclear what is required of the permitees, it insulates poor performers from accountability, and its effectiveness in controlling storm water pollution is highly uncertain.

The Regional Board should direct staff to make revisions to ensure that the permit requirements (1) are precise and transparent, (2) create accountability and (3) are effective in controlling pollution from storm water.

Specifically, we strongly urge the Regional Board to ask for the following changes before adopting this permit:

1. **Ensure that the Permit includes specific and detailed requirements for each management measure.** Many provisions of the Permit still lack necessary definition and specificity. Too frequently, the requirements are qualified with imprecise terms such as "appropriate." This language undermines the effectiveness of the Permit and is inconsistent with existing law.

2. **Establish numeric Municipal Action Levels and require monitoring sufficient to determine when these levels are being exceeded.** All MS4 permits must include "measurable goals," but the Regional Boards have been largely unsuccessful in developing specific and quantifiable goals for BMP-based permits to date. Municipal Action Levels are feasible and are being used by other Regional Water Boards as a quantifiable measure of program effectiveness.

3. **Specify the mechanism by which the iterative implementation process outlined in Provision C.1. will be triggered.** This Permit ostensibly requires compliance with all applicable water quality standards through an iterative process that is triggered when the Regional Board or the permittee determines that a water quality standard is being violated. The permit, however, does not explain how a violation of water quality standards will be determined based on monitoring data or any other information.

4. **Clearly and specifically prohibit discharges that violate water quality standards.** The Permit's discharge prohibitions are confusing and awkwardly drafted and do not adequately prohibit discharges that are prohibited by federal and state law.

5. **Establish a 3% maximum allowable Effective Impervious Area Standard for all new and redevelopment and require Permittees to utilize Low Impact Development Techniques to control pollutants of concern.**

6. **Strengthen TMDL Implementation requirements.** The permit should incorporate TMDL Waste Load Allocations through numeric effluent limits,

quantify the reductions in loading expected during this permit term, and increase the required implementation actions.

In addition to the issues specifically discussed below, our review of the draft Permit raised many other questions or concerns. A list of these issues is appended as Attachment A. Written comments submitted previously by Baykeeper—on November 8, 2006; December 8, 2006; and July 16, 2007—remain applicable and are also attached.

A. Specificity and Transparency. The Permit requirements are too vague.

While we acknowledge the challenge in drafting lengthy and complex MS4 permits, we are concerned that the lack of quantifiable requirements substantially weakens this Permit. As recognized by EPA, specificity is necessary to provide MS4s with a "clear target to achieve."[3] It is also necessary to determine (1) whether the permittee is in compliance with the terms of the permit and (2) whether the terms of the permit are stringent enough to ensure compliance with applicable water quality standards.

Vagueness in MS4 permits has been a consistent problem in California permitting. Language identical to that in this Permit has been identified by EPA has being unduly imprecise. A recent audit by Tetra Tech, Inc. of MS4 programs in California (which included at least eight Bay Area programs) noted that the "more specific permit requirements generally result in more comprehensive and progressive stormwater management programs."[4] Once again, we request that Regional Board staff review the Permit and ensure that it articulates specific performance criteria based on an analysis of what is necessary to implement the federal Maximum Extent Practicable ("MEP") standard, and that each permit task or objective is translated into specific, measurable requirements with associated deadlines.

1. The Permit's vagueness creates an impermissible self-regulation scheme prohibited by *Environmental Defense Center v. EPA.*

Vague permit requirements are not only troublesome from a compliance review perspective, but are contrary to existing case law. In *Environmental Defense Center v. EPA*, the Ninth Circuit, interpreting the "maximum extent practicable" standard of the federal Clean Water Act, has emphasized the need for specificity in MS4 permits.[5] In 2003, environmental groups challenged the Phase II rule issued under the CWA by EPA. Under the Phase II rule, the permittees were required to develop individualized pollution

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[3] Gentile, L. and Tinger, J, *Storm Water Phase I MS4 Permitting: Writing More Effective, Measurable Permits*, pg. 139. Available at http://www.epa.gov/owow/nps/natlstormwater03/ (hereinafter "Writing Effective MS Permits").

[4] Kosco, J. et al., *Assessment Report on Tetra Tech's Support of California's MS4 Stormwater Program*, p. 19, produced for U.S. EPA Region IX California State and Regional Water Quality Control Boards by Tetra Tech, Inc. (July 12, 2006) (Hereinafter "Tetra Tech Audit"). Available at http://www.epa.gov/region09/water/npdes/pdf/tetra-tech-ms4-stormwater-report.pdf.

[5] *Envtl. Def. Ctr. V EPA*, 344 F.3d 832 (9th Cir. 2003).

control programs. The permitting agency, however, had no obligation to review these plans.

The Ninth Circuit found that Congressional intent was clear in the language of the CWA that "stormwater management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity" to determine whether the measures implemented would actually reduce pollutant discharges. The failure to require agency review of the plans, held the Court, amounted to impermissible self-regulation because "[n]o one will review [the MS4's pollution control plan] to make sure that it is reasonable or even in good faith."[6] Therefore, the Phase II rule "would allow permits to issue that would do less then require controls to reduce the discharge of pollutants to the maximum extent practicable."[7]

More recently, the Second Circuit adopted similar reasoning in *Environmental Defense Center* in reviewing similar permit procedures for concentrated animal feeding operations ("CAFOs"), which require operators to develop and implement individualized nutrient management plans and other BMPs.[8] In *Waterkeeper*, the Second Circuit also held that the terms of self-designed programs must be subject to meaningful review.

The rationale behind both decisions applies here. Unless a permit imposes clear and specific requirements, it gives too much latitude to permittees to determine what controls they will implement. Without agency and public oversight of how this discretion is exercised, the Permit establishes a self-regulatory plan that the courts have clearly held to be impermissible.

As compared to previous MS4 permits issued by this Regional Board, this draft Permit makes progress towards eliminating vagueness and limiting permittee discretion. Many sections, however, still need substantial improvements. Specifically, we strongly recommend the use of BMP menus as the Los Angeles Regional Water Quality Control Board ("LA Regional Board") has done in the draft Ventura permit. For example, the commercial and industrial inspection provisions of the draft Ventura permit require that inspections ensure implementation of at least seven specific BMPs at restaurants, ten BMPs at retain gasoline outlets, and ten BMPs at automotive service facilities.[9] Helpfully, the BMP Identification number from the 2003 California Stormwater BMP Handbook is given for each required BMP. This draft Permit, in contrast, merely requires that permittees inspect commercial and industrial facilities to ensure "[p]revention of stormwater runoff pollution or illicit discharge by implementing

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[6] *Id.* at 855.
[7] *Id.*
[8] *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486, 499-500 (2nd Cir. 2005).
[9] Los Angeles Regional Water Quality Control Board, Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges Within the Ventura County Watershed Protection District, County of Ventura, and the Incorporated Cities Therein, NPDES NO. CAS004002, pp. 42-44 (August 28, 2007). (hereinafter "Draft Ventura Permit").

appropriate BMPs to the MEP."[10] The draft Permit provides no guidance on what BMPs are appropriate or would ensure attainment of the MEP standard.

***Recommendation*:** The Permit should be revised to ensure that Permit specifically identifies all minimum requirements. For example, every place in the permit that requires "appropriate" BMPs should be revised to include a BMP menu list of the minimum BMPs that must be implemented. Below does a partial list of provisions needing more specificity:

C.2.c.i. Street and Road Repair and Maintenance: Asphalt/Concrete Removal, Cutting, Installation and Repair. "Permittees shall develop and implement appropriate BMPs at street and road repair and/or maintenance sites."

C.2.e.i.(1). Bridge and Structure Maintenance and Graffiti Removal. "Permittees shall implement appropriate BMPs to prevent pollutant discharge from bridges and structural maintenance activities directly over water or into storm drains."

C.2.h.ii.(2)(2). Rural Public Works Construction and Maintenance. "Permittees shall develop and annually evaluate appropriate management practices for the following activities, which minimize impacts on streams and wetlands."

C.4.b. Industrial and Commercial Inspections. "Inspections shall include but not be limited to the following: (a) Prevention of stormwater runoff pollution or illicit discharge by implementing appropriate BMPs to the MEP."

C.6. Construction Inspections. "Inspections shall confirm implementation by construction site operators/developers of erosion and other pollutant controls through appropriate BMPs."

C.6.d.ii(2). Construction Plan Approval Process. "Provide construction stormwater management educational materials to site operators/developers, as appropriate."

C.9.a.ii. Adopt an Integrated Pest Management (IPM) Policy or Ordinance. "If not already in place, Permittees shall adopt appropriate IPM policies or ordinances no later than July 1, 2009."

C.9.c.i. Training of Municipal Employees. "Permittees shall ensure that all municipal employees who, within the scope of their duties, apply pesticides which threaten water quality (including over-the counter pesticides) are appropriately oriented and/or trained in IPM practices and the Permittee's IPM policy."

C.13.a. Manage Waste Generated from Cleaning and Treating of Copper Architectural Features, Including Copper Roofs, during Construction and Post-Construction. "Permittees shall require use of appropriate BMPs when issuing building permits."

[10] Draft Permit at p. 38 (emphasis added).

C.15.iii. Discharge Types: Planned, Unplanned, and Emergency Discharges of the Potable Water System. "Permittees, either when they conduct these activities, or when they permit potable water dischargers to work in the public right-of-way, shall require implementation of appropriate BMPs for dechlorination, erosion, and sediment control measures for all planned potable water discharges."

2. Specific and rigorous reporting requirements are necessary to ensure transparency.

We commend the Regional Board's efforts to address reporting problems in this Permit. One of the conclusions from Tetra Tech, Inc.'s 2006 audit of California Phase I permits was that the lack of standardized reporting across Permittees prevented effective evaluations of many programs.[11] According to the audit report, "poor [MS4] programs can hide behind well-written annual reports," because the lack of standardized reporting "allows each MS4 to choose the type of information it wants to present."[12] We believe that the Regional Board's decision to use a uniform reporting format will greatly minimize the likelihood that Permittees can avoid scrutiny based on selective reporting. The consistent reporting format will also facilitate comparing a Permittee's performance from year to year and comparing the performance of several Permittees.

B. Accountability: The Permit should include Municipal Action Levels, a specific process for triggering the iterative process described in C.1, and clear prohibitions on discharges that violate water quality standards to ensure accountability.

The most fundamental purpose of this permit is to ensure that municipalities—which have the authority to regulate land use and which recognize the benefits of urban development—take sufficient actions to reduce pollutants in storm water to the extent necessary to protect water quality. Because this Regional Board's regulation of stormwater discharges from MS4s does not incorporate end of the pipe effluent limitations, determining progress towards achieving water quality standards has been and will continue to be virtually impossible.

1. The permit should include numeric Municipal Action Levels as recommended by the State Water Board's Panel on the Feasibility of Numeric Effluent Limits.

In 2005, the State Water Resources Control Board ("SWRCB") convened a panel of experts to evaluate the feasibility of including numeric effluent limits in MS4 permits. As noted in this panel's report to the SWRCB, both the environmental and discharger

[11] Tetra Tech Audit at p. 21.
[12] Kosco, J. et al., *Lessons Learned from In-Field Evaluations of Phase I Municipal Storm Water Programs*, p. 196, prepared by Tetra Tech, Inc. and U.S. EPA Region IX, available at www.epa.gov/owow/nps/natlstormwater03/19Kosco.pdf.

community "believe that permitting has become overly complex, and that it is extremely difficult, if not impossible to objectively determine if a [] municipality is in compliance with its permit requirements."[13] While both communities agree that numeric requirements in permits will greatly simplify compliance determinations, substantial disagreement existed about how to calculate those requirements.

The panel concluded that, while numeric effluent limits for municipal stormwater may not be currently feasible, numeric action levels are feasible.[14] It proposed the use of numeric Municipal Action Levels representing "an 'upset' value, which is clearly above the normal observed variability" of storm water.[15] The report describes three currently practicable approaches to calculating the levels: a consensus-based approach wherein action levels are set at concentrations that all stakeholders agree are unacceptable, a ranked percentile distribution based on water quality samples from many different events at many different locations, and a statistically based population approach that also relies on water quality monitoring data from many events and locations.[16]

The use of numeric "action" levels has been successfully used by San Francisco Baykeeper and other environmental organizations in citizen enforcement lawsuits. When a discharger exceeds action levels, they must develop and implement an iterative plan to reduce pollutant concentrations below action levels. This arrangement gives the discharger needed flexibility in designing and implementing the plan but establishes a clear, numeric goal upon which both the discharger and enforcing entity have agreed.

The Los Angeles Regional Water Quality Control Board ("LA Regional Board") recently incorporated Municipal Action Levels into its draft MS4 permit for Ventura County. Using one of the three approaches recommended by the SWRCB's panel—the statistical based population approach—the draft Ventura County permit establishes Municipal Action levels for the following pollutants based on nationwide Phase I MS4 monitoring data: pH, total suspended solids, carbonaceous oxygen demand, Kjedahl nitrogen, nitrate, nitrite, cadmium, chromium, copper, lead, nickel, zinc, and mercury.[17] The action levels were calculated using the statistical based population approach described in the SWRCB panel's report, and a coefficient of variance of two.[18]

This Permit should also utilize Municipal Action Levels to create accountability because they provide a quantifiable measure of program effectiveness. The Regional Board should direct staff to develop action levels for the Bay Area using regional data and a

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[13] California State Water Quality Control Board, *Storm Water Panel Recommendations to the California State Water Resources Control Board The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities*, p. 2 (June 19, 2006) (hereinafter "State Board Report on the Feasibility of Numeric Limits").
[14] State Board Report on the Feasibility of Numeric Limits at p. 8.
[15] *Id.*
[16] *Id.*
[17] Ventura Draft Permit, Appendix C.
[18] Ventura Draft Permit at p. 22.

ranked percentile or a population based approach. However, in absence of existing data, permittees could 'scale-up' and use a national database like the National Stormwater Quality Database (NQSD), as this database already includes data from Alameda County. Therefore, the groundwork for a framework that is relevant to the Bay already exists. As monitoring continues, more local data should be added to this database to refine it and make it more tailored to local conditions.

The Permit should also require sufficient "end-of pipe" monitoring in various catchments to enable a comparison of the Municipal Action Levels to actual discharge concentrations. While the draft Permit contains robust monitoring requirements, the monitoring provisions are largely focused on receiving water monitoring and contain virtually no discharge, or end-of-pipe, monitoring. Not only is discharge monitoring a necessary component of the Municipal Action Levels regime, it is required by federal regulations and is standard in many MS4 permits issued by other agencies.[19]

Discharge monitoring will also fill one of the few gaps in the monitoring program required by the Permit. This Permit's requirements will generate much-needed information about mass loading from storm water and its impacts on creeks. The requirements are still deficient, however, in that the mass loading monitoring will be done only at creeks. Storm water, and its associated pollutants, reaches the Bay through both creeks and storm sewer pipes discharging directly to the Bay. In some places, such as Oakland, industrialized areas are located near the shoreline and therefore are more likely to discharge storm water directly to the Bay rather than to a creek. Other areas, like the island of Alameda, discharge only to the Bay. Failure to monitor these discharges, therefore, will result in an underestimate of storm water loading. Requiring end-of-pipe monitoring will fulfill federal requirements, enable the use of Municipal Action Levels, and improve our understanding of total loading to the Bay.

***Recommendation*:** Revise the permit to incorporate Municipal Action Levels using a ranked percentile or population-based approach and make necessary revisions to the monitoring program to ensure that there is end of pipe monitoring sufficient to determine actual discharge concentrations.

[19] Federal regulations require each MS4 to monitor five to ten outfalls or field screening points that are representative of commercial, residential and industrial land use. 40 C.F.R. § 122.26(d)(2)(iii). For each outfall, samples must be collected from three storm events occurring at least one month apart and must be analyzed for a suite of parameters, including organic pollutants, toxic metals, and cyanide. 40 C.F.R. § 122.26(d)(2)(iii)(A)(3). The San Diego permit, for example requires implementation of monitoring sufficient to characterize discharges from MS4 outfalls in each watershed during both wet and dry weather, including the rationale and criteria for selection of outfalls to be monitored. The state of Washington requires all permittees to monitor at least one outfall that represents commercial, high density residential, and industrial land uses for 75% of storms.

2. <u>As written the iterative process for complying with water quality standards (Provision C.1.) is ineffective and insulates permitees from enforcement.</u>

Section C.1. of this permit, Water Quality Standards Exceedances, is one of the most important but least comprehensible sections of the Permit and contains language that EPA has specifically criticized as being unclear.[20] We recognize that this language is based on State Board Order 98-01, which explains the iterative procedure for ensuring compliance with water quality standards. Other Regional Boards, however, have preserved the basic concept as required by the State Board but have added much-needed clarity and specificity. Similar revisions are necessary here.

***Recommendations*:**

- The Permit should identify the process for determining whether discharges are causing or contributing to an exceedance of water quality standards. Although this language has been standard in permitting for years, we are currently unaware of any instance in which the Permittees or the Regional Board has made such a determination and triggered a report or any remedial action.

  While provision C.8.e.i. suggests that the triggering of a monitoring project may also trigger the requirements of Provision C.1., the relationship between water quality monitoring results and the C.1. requirements remains unclear. Provision C.1. must be revised to plainly state how monitoring data and other information will be used to activate the requirements of provision C.1.
- The burden of continuing the iterative process should be on the permittee. Once the C.1. requirements are triggered, the draft permit provides that permittees will only have to prepare a report and increase storm water control efforts once unless otherwise directed by the Regional Board. This unnecessarily shifts the burden of reviewing monitoring data to the Regional Board. A better approach is one taken by the Los Angeles Regional Board, which requires permitees to repeat the procedures described in C.1. unless otherwise directed by the Regional Board.
- The Regional Board should explicitly retain its enforcement authority, as have other Regional Boards in permits issued to MS4s. We recommend adding a provision similar to that found in the San Diego permit and the draft Ventura permit: "Nothing in this section shall prevent enforcement of any provision of this Order."
- The first sentence should change "timely" to "implement within 30 days."
- The second sentence, referencing MEP, should be removed. As explained in our previous comments, the permit should separately prohibit discharges containing pollutants which have not been reduced to the MEP.

[20] Writing Effective MS Permits at p. 136.

3. The Permit must clearly prohibit discharges that cause or contribute to a violation of water quality standards.

The draft Permit's discharge prohibitions are unnecessarily vague and confusing and fail to clearly prohibit discharges that will cause or contribute to a violation of water quality standards. Permits issued by this Regional Board must implement both federal and state law and, therefore, must contain requirements consistent with both. The federal Clean Water Act requires permits that contain "controls to reduce the discharge of pollutants to the maximum extent practicable."[21] State law requires that permits ensure compliance, not only with the federal MEP standard, but also with "any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."[22] Permits, therefore, must prohibit discharges that cause or contribute to a violation of water quality standards.[23] This authority of the Regional Boards to require compliance with water quality standards, including all applicable discharge prohibitions, and MEP has been affirmed by the courts.[24]

The simplest mechanism for ensuring compliance with water quality standards is to prohibit all discharges that cause or contribute to a violation of water quality standards or that do not ensure compliance with MEP. Other Regional Boards, including the San Diego and Los Angeles Regional Boards have taken this approach.[25] The current language in the Permit suggests that the Regional Board intends to prohibit such discharges, but the entire section is confusing and awkwardly drafted. For example, the Permit does not clearly prohibit discharges that violate water quality standards or that do not control pollutants to the MEP standard. While the Receiving Water Limitations section contains language related to compliance with water quality standards, similar language is lacking from the Prohibition section.

***Recommendation*:** The following prohibitions should be added to the Discharge Prohibition section (Section A, page four):

> "A.3. Discharges into and from the MS4s in a manner causing or contributing to a condition of pollution, contamination, or nuisances as defined in Cal. Water Code § 13050 in waters of the State are prohibited"
>
> "A.4. Discharges from the MS4, which cause or contribute to exceedances of receiving water quality objectives for surface waters are prohibited."

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[21] 33 U.S.C. § 1342(p)(3)(B)(iii). *See In re Environ. Health Coalition*, SWRCB Order No. 98-01 (January 22, 1998).
[22] Cal. Water Code § 13377.
[23] *Environ. Health Coalition* at 8.
[24] *Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9th Cir. 1999).
[25] *Building Industry v. Ass'n of San Diego Cty v. State Water Resources Control Board*, 124 Cal. App. 4th 866 (Cal. Ct. App. 2005); *City of Rancho Cucamonga v. Regional Water Quality Control Board, Santa Ana Region*, 153 Cal. App. 4th 1377 (Cal. Ct. App. 2006).

"A.5. Discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited."

C. <u>Effectiveness</u>. The Permit should be amended to incorporate a 3% maximum allowable Effectiveness Impervious Area standard for all new and redevelopment, incorporate WLA-based effluent limits, and strengthen the TMDL implementation requirements.

1. <u>The Permit should establish objective criteria for New and Redevelopment representing the MEP standard.</u>

Section C.3 on New and Redevelopment should emphasize the necessity of Low Impact Development ("LID") practices in the larger regulatory framework of stormwater pollution in the Permit. LID techniques result in greater pollution reduction and reduction in runoff volume and rate compared with conventional BMPs. If the Board requires the utilization of LID techniques to address stormwater at its source, it can reduce the need for downstream mitigation efforts, making the whole Permit more effective. Although the Permit incorporates some LID concepts into the New and Redevelopment provisions, it does not establish objective performance measures that will meet the MEP standard or otherwise ensure compliance with water quality standards.

Recommendation: We urge the Regional Board to take the approach described by NRDC in their July 16, 2007 and February 29, 2008 comment letters. In these comments, NRDC clearly and thoroughly articulates the need for objective criteria representing the MEP standard, and explains the basis for recommending a standard of 3% maximum allowable Effective Impervious Area.

2. <u>The Permit should include numeric effluent limits based on the TMDLs' waste load allocations.</u>

Three of the most important TMDLs adopted by this Regional Board—the urban creeks pesticides TMDL, the mercury TMDL, and the newly adopted PCBs TMDL—are to be implemented primarily through this permit. All three identify storm water as the largest controllable source of loading and require significant reductions over the next two decades. Despite the fact that this Permit is to be the keystone of TMDL implementation, the Permit does not incorporate the TMDL Waste Load Allocations ("WLAs") or attempt to quantify the reductions expected to occur from the actions required.

The TMDLs' WLAs for storm water are a kind of water quality-based effluent limitation.[26] Each WLA represents the maximum amount of a particular pollutant that can be discharged in storm water without violating water quality standards. To ensure that the TMDL is properly implemented and the final WLAs for mercury, PCBs and pesticides are attained as contemplated by the TMDL, this permit should incorporate the

[26] 40 C.F.R. §130.2(h).

final WLAs and establish a numeric limit for this permit term. This approach is feasible and has adopted by the Los Angeles Regional Board, which noticed a draft Permit—the Ventura County MS4 permit—that implements TMDLs for pesticides and PCBs through numeric toxicity and concentration-based effluent limits.[27]

***Recommendation*:** Revise the draft permit to include numeric limits based on TMDL waste load allocations for mercury, PCBs and pesticides.

3. The Permit does not adequately implement the risk reduction requirements of the PCBs and mercury TMDLs.

The risk-reduction language in Provisions C.11.i (Mercury Load Reductions) and C.12.i (PCBs) must be strengthened to implement specific requirements of the Basin Plan resulting from the adopted mercury TMDL and the proposed PCBs TMDL. PCBs and mercury in Bay fish pose a serious threat to the health of the largely subsistence anglers who rely on them. Implementation of the PCBs and the mercury TMDL will not result in fish tissue concentrations that are "safe" for close to a century. It is imperative; therefore, that every effort be made to provide those who eat Bay fish with alternatives and options to protect them from the health impacts of consumption. The State Board specifically recognized this need and required specific risk reduction language be incorporated into the mercury TMDL.

The recently-adopted Basin Plan amendment for PCBs states that the Regional Board will work with other state agencies and with dischargers to pursue risk management strategies, including "investigating and implementing actions to address the public health impacts of PCBs in San Francisco Bay/Delta fish, including activities that reduce the actual and potential exposure of, and mitigate health impacts to, people and communities most likely to be consuming PCB-contaminated fish from San Francisco Bay, such as recreational and subsistence fishers and their families." Similar language is in the adopted Basin Plan Amendment implementing the mercury TMDL.

The Permit, however, reads: "Permittees shall take actions to manage human health risks from [PCBs and mercury] in Bay fish consumed by humans. The Permittees may coordinate with Bay Region wastewater dischargers in this effort. This requirement may be satisfied by a combination of related efforts through the RMP or other similar collaborative efforts."[28] This language is inadequate to ensure dischargers fully participate in fulfilling the commitments in the Basin Plan. It lacks the specificity of the analogous TMDL provision and does not require any investigations or actions to specifically target recreational and subsistence anglers and their families.

***Recommendation*:** To address this environmental justice issue, the appropriate language from the Basin Plan should be incorporated in the MRP as follows:

[27] Draft Ventura Permit at p. 86, 91.
[28] Draft Permit at 86 and 91.

> "Permittees shall investigate and implement actions to address the public health impacts of [PCBs/mercury] in San Francisco Bay/Delta fish, including activities that reduce the actual and potential exposure of, and mitigate health impacts to, people and communities most likely to be consuming [PCBs/mercury]-contaminated fish from San Francisco Bay, such as recreational and subsistence fishers and their families."

4. PCBs TMDL Implementation

The draft Permit places too much emphasis on studies and reports and, consequently, places too little emphasis on enhancing ongoing local efforts to reduce stormwater pollution based on all available information. There has been substantial public investment to study the feasibility of methods to abate PCBs in stormwater, including studies conducted by the Clean Estuary Partnership and studies funded by state bonds. Rather than using the results of these studies to move directly into implementation, however, Provision C.12 outlines a "go slow" approach, which seems to duplicate research already done in anticipation of the TMDL. These repetitive studies only serve to extend the timeline for implementation.

a. *Investigations and abatement of on-land locations with elevated PCBs concentrations should not be a pilot project.*

The steps for pilot projects described in Provision C.12.c are similar to an approach already used in a completed Proposition 13-funded study of PCB sources in the drainage area of the Ettie Street Pump Station in the City of Oakland. Although it is certainly useful and necessary to conduct investigations at more sites, Provision C.12 falls short by only requiring investigation of five sites in the entire Bay Area. To abate the PCBs found, Provision C.12 requires only that "Permittees shall conduct an abatement program in portions of drainages under their jurisdictions" within the five-year term of the permit. In fact, it is entirely feasible for municipalities to use the already tested approaches and information to identify areas most likely to have elevated concentrations of PCBs and to make a full-fledged effort to abate this source of PCBs.

***Recommendation*:** The Permit needs to put an end to pilot studies and simply require full-scale abatement of PCBs contaminated sites.

b. *The Permit should require full implementation of on-site storm water treatment via retrofit.*

Provision C.12.e, requires the municipal permittees to "evaluate on-site stormwater treatment via retrofit." Only ten "pilot projects" are required for the entire Bay Area. This seems insufficient given that industrial locations are routinely required to treat stormwater prior to discharge, and that existing permits already require new developments creating or replacing more than 10,000 square feet of impervious area to incorporate stormwater treatment systems. Elsewhere, including Portland and Seattle, municipalities are retrofitting public streets with bioretention areas. There is no need to

"pilot" the effectiveness of bioretention or sand filters in removing PCBs from stormwater, nor is there a lack of information about the feasibility of installing such facilities. Again, the "pilot" approach seems to be a means of extending the timeline for real implementation. Rather than a "pilot" approach, the MRP should set specific goals for full-scale retrofit of the most significantly polluted sites during the permit term.

***Recommendation*:** The Permit should require full-scale retrofitting of existing contaminated sites.

c. *The Permit should require expansion of the industrial inspection program.*

The Clean Estuary Partnership's PCB TMDL Implementation Plan notes that municipalities could expand their "industrial inspection programs to include potentially PCB-contaminated sites (based on age of buildings and site history). Conduct tiered evaluations of each site's potential for PCB hazard to water quality. Require remediation under existing municipal stormwater pollution prevention ordinances, including removal or fixing of PCB-containing paint and caulk, removal of contaminated soils, re-grading, and repaving." However, Provision C.12.a requires only that municipalities train inspectors to identify potential PCB sources on sites they already inspect—that is, without expanding the scope of inspection programs from the existing categories of active businesses to include additional potentially PCB-contaminated sites based on age of buildings and site history.

***Recommendation*:** The Permit should require a genuine expansion of the industrial inspection program to incorporate sites most likely to be sources of PCBs, including those sites that may be inactive.

d. *Permittees should establish adequate legal authority to abate PCBs on private property.*

A Clean Estuary Partnership report notes that municipalities have the legal authority to require property owners to take action to contain PCBs or clean up a site if the site has the potential to discharge PCB-contaminated storm water.[29] Many municipalities, however, have not established the necessary regulatory authority through adoption of ordinances or have not yet established the mechanisms and procedures needed to facilitate and oversee such actions.[30]

***Recommendation*:** The Permit should require all municipalities to establish such authority before the end of the next permit cycle.

[29] Clean Estuary Project, PCBs TMDL Implementation Plan Development, prepared by Larry Walker Associates; TDC Environmental, LLC; and Ann Blake, Ph.D, pp. 47-48 (May 2006) ("CEP Report").
[30] *Id.*

e. *Other observations and comments.*

The Permit should articulate an objective for Provision C.12.h., "Fate and Transport Study of PCBs in Urban Runoff."

The Permit should provide more guidance on implementation of the abatement program required by C.12.c.

Permittees should be required to do sufficient effectiveness monitoring of the pilot projects to evaluate the changes in discharge quality. This will help permittees design more effective abatement programs after the pilot stage.

5. Mercury TMDL Implementation

a. The Permit should require actions to identify and address air sources.

The load estimate for storm water includes airborne mercury deposited on the Bay watershed and carried into the Bay via stormwater runoff. While minimizing mercury discharges in the runoff is important, to be as effective as possible, the draft Permit should require actions to address air sources that are likely contributing to mercury concentrations in runoff. By not adequately addressing airborne sources of mercury in the watershed, this Permit fails to adequately implement the mercury TMDL and will have little hope of being able to achieve the drastic reductions required of storm water runoff.

***Recommendation*:** A new subsection should be added to Section C.11 that requires identification of potential air sources of mercury in runoff, including refineries, cement manufacturers, and crematoriums.

b. *Other observations and comments.*

The Permit should identify an objective for Provision C.11.h. "Fate and Transport Study of Mercury in Urban Runoff."

The Permit should identify the basis/criteria on which the pilot project locations will be selected other than just being evenly distributed.

The permit should include a reference to its own LID and hydromodification strategies. One of the aims of those sections is to reduce stormwater runoff and its associated pollutants. The San Francisco Estuary Institute has already identified surface, bed and bank erosion as a major contributor of mercury loading to the Bay[31]. Provision C.11 should recommend that Permittees meet part of their load reductions through the implementation of LID strategies. This would also be more cost effective for the

[31] McKee, L. and Mangarella, P. 2006. Mercury budget for stormwater conveyances in the San Francisco Bay Area: Towards achieving TMDL management goals for sediment and tissue. San Francisco Estuary Institute, http://www.sfei.org/sfeireports.htm#RMP

municipalities because they do not bear the costs of LID implementation, whereas they do bear the costs of expensive and time consuming sediment removal from storm drains or the purchasing of new street sweepers, etc. Stream restoration activities identified in Provision C.9 (monitoring), should also be specifically mentioned as an abatement activity in this section.

6. Pesticides TMDL Implementation

The Permit should identify model Integrated Pest Management policies and ordinances. The Permit requires permittees to "adopt appropriate IPM policies or ordinances,"[32] but offers no explanation of what constitutes "appropriate." Integrated Pest Management (IPM) varies widely statewide – many different definitions and applications exist. Without clear guidance on what type of IPM program is acceptable, it is possible that policies and ordinances which are not fully protective of water quality could be adopted. The Permit should define IPM and ensure that Permittees adopt definitions and ordinances that are at least as stringent as the example.

***Recommendation*:** At a minimum, the Permit should restate the definition contained in the City of San Francisco's IPM ordinance:

> "Integrated pest management" means a decision-making process for managing pests that uses monitoring to determine pest injury levels and combines biological, cultural, physical, and chemical tools to minimize health, environmental and financial risks. The method uses extensive knowledge about pests, such as infestation thresholds, life histories, environmental requirements and natural enemies to complement and facilitate biological and other natural control of pests. The method uses the least toxic synthetic pesticides only as a last resort to controlling pests.

* * *

While this Permit is a step towards effectively regulating storm water discharges, it still contains many of the shortcomings of previous permits. We strongly urge the Regional Board to direct staff to make the following revisions before presenting this Permit for adoption:

- **Establish numeric Municipal Action Levels and require monitoring sufficient to determine when these levels are being exceeded.**

- **Strengthen TMDL Implementation requirements by incorporating TMDL Waste Load Allocations through numeric effluent limits, quantifying the reductions in loading expected during this permit term, and increasing the required implementation actions.**

[32] Draft Permit at 77.

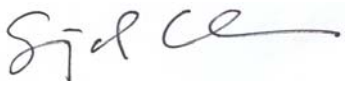
- **Establish a 3% maximum allowable Effective Impervious Area Standard for all new and redevelopment and require Permittees to utilize Low Impact Development Techniques to control pollutants of concern.**

- **Specify the mechanism by which the iterative implementation process will be triggered by explaining how a violation of water quality standards will be determined, based on monitoring data or any other information.**

- **Clearly and specifically prohibit discharges that violate water quality standards by redrafting the discharge prohibition section.**

Thank you for this opportunity to provide comments on the draft permit. We hope you will contact us if you have any questions.

Sincerely,



Sejal Choksi, Baykeeper and Program Director
Amy Chastain, Staff Attorney
Jen Kovecses, Staff Scientist
San Francisco Baykeeper

Attachments
Other Questions & Concerns

San Francisco Baykeeper MRP Comments, submitted January 16, 2007.

San Francisco Baykeeper MRP Comments, submitted December 8, 2006.

San Francisco Baykeeper MRP Comments, submitted November 8, 2006.

ATTACHMENT
Other Questions & Concerns

A. Discharge Prohibitions (Provision A)

- *Discharge Prohibition A.1.* This provision inappropriately conditions compliance with the prohibition on non-stormwater discharges with the iterative process outlined in C.1. It also wrongly purports to authorize non-storm water discharges if they are sources of pollutants. Please see the attached comments submitted by Baykeeper on July 16, 2007 and November 8, 2006 for an explanation of why these provisions are inconsistent with the Clean Water Act.

B. Municipal Operations (Provision C.2)

- *Objective.* The Permit should clearly state the objective of the provision (See San Diego's permit "[e]ach Co-permittee must implement a municipal program which meets the requirements of this section, prevents illicit discharges into the MS4, reduces municipal discharges of pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4s from causing or contributing to a violation of water quality standards."[1])

- *Street Sweeping.* Provision C.2.A.i does not specify what percentage of permitees' streets must be swept.

- *Street and Road Repair*. Provision C.2.c needs to specify minimum BMPs and/or establish specific performance criteria. As written, it requires "appropriate" BMPs and "proper management" "to avoid discharges to storm drains."

- *Bridge and Structure Maintenance and Graffiti Removal*. Provision C.2.e should specify the minimum BMPs to be implemented.

- *Corporate yard BMP Implementation.* Provision C.2.i should specify the minimum BMPs to be implemented.

- *Rural Public Works Construction and Maintenance.* Provision C.2.h should identify minimum BMPs that must be implemented by permittees and contractors.

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[1] Los Angeles Regional Water Quality Control Board, Revised Tentative Order No, R9-2008-0001, p. 48 (December 12, 2007) (hereinafter "Draft Orange County Permit"). San Diego Region Regional Water Quality Control Board, Order No. R9-2007-0001, NPDES No. CA0108758, p. 32 (January 24, 2007) (hereinafter "San Diego Permit").

C. Commercial and Industrial Inspections (Provision C.4)

- *Objective.* The Permit should clearly state the objective of the provision (See Orange County's permit "[e]ach Copermittee must implement a commercial/industrial program that meets the requirements of this section, prevents illicit discharges into the MS4, reduces commercial/industrial discharges of pollutants from the MS4 to the MEP, and prevents commercial/industrial discharges from the MS4s from causing or contributing to a violation of water quality standards."[2])

- *Businesses to Be Inspected.* Provision C.4.b.ii. does not clearly state whether every business that falls into the listed categories must be inspected or whether only businesses in those categories that could reasonably cause or contribute to a violation of water quality standards should be inspected. Clarify that it's the former by stating that "All business in the following categories must be included in the list."

- *MEP Standard.* Provision C.4.b.ii.(3) still misapplies the MEP standard. Inspections should ensure that all facilities are preventing storm water discharges that are causing or contributing to a violation of water quality standards.

D. Illicit Discharge Detection and Elimination (Provision C.5)

- *Objective.* The Permit should clearly state the objective of the provision (See the draft Ventura permit "[e]ach Permittee shall eliminate all illicit connections and illicit discharges to the storm drain system, and shall document, track and report all such cases."[3]).

- *Map.* Provision C.5.d.i. The map of the system and strategic checkpoints should require permittees to map illicit connections and discharges. The Permit should require that the map be in GIS format and be updated at least once every permit term.

- *Screening.* Provision C.5.d. is wholly inadequate because it does not require proactive screening for discharges. The permit should require development of a screening plan as described in the EPA/WEF publication: *Illicit Discharge Detection and Elimination. A Guidance Manual for Program Development and Technical Assessments.*[4] Please see the attached comments submitted by Baykeeper on July 16, 2007 for more details regarding necessary revisions to the Permit.

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[2] San Diego Permit at p. 55. See also Draft Orange County Permit at p. 35.
[3] Los Angeles Regional Water Quality Control Board, Revised Order No. 07-xxx, NPDES NO. CAS004002, p 80 (August 28, 2007). (hereinafter "Draft Ventura Permit").
[4] Available at http://cfpub.epa.gov/npdes/docs.cfm?program_id=6&view=allprog&sort=name#iddemanual

- *Coordination with creek walks.* Permittees should be required to use information gathered as part of the creek walk requirements in their illicit discharge detection and elimination programs.

E. Construction Site Control (Provision C.6)

- *Objective.* The Permit should clearly state the objective of the provision (See Orange County's permit "[e]ach Co-permittee shall implement a construction program that meets the requirements of this section, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4s from causing or contributing to a violation of water quality standards."[5])

- *Minimum BMPs.* The permit should specify the minimum BMPs to be implemented (see the draft Ventura permit which lists specific BMPs for construction sites and references the CASQA and Caltrans Handbooks[6]).

- *Erosion Control.* Provision C.6.a.ii must define "effective erosion control."

- *High Priority Construction Sites.* Explain the basis for selecting the 50-acre threshold for high priority construction sites.

- *Inspection Training Topics.* Provision C.6.g. should require training in the requirements of the State Board's General Construction Stormwater Permit.

F. Public Information and Outreach (Provision C.7)

- *Objective.* The Permit should clearly state the objective of the provision.

- *Advertising Campaigns.* This provision should explain the basis for requiring that advertising campaigns target trash/litter and pesticides versus other pollutants of concern.

G. Monitoring (Provision C.8)

- *Emerging contaminants* (Section C.8.f.vii.) The workplan for emerging pollutants needs more detail. Emerging contaminants are a major concern and will likely pose an even greater threat in the near future. It is in our collective best interest to understand what they are, where they are and what impacts they are having sooner rather than later.

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[5] San Diego Permit at p. 28. See also Draft Orange County Permit at p. 41.
[6] Draft Ventura Permit at 63.

Five years from now is not an appropriate target for starting to monitor emerging contaminants because by then we should be controlling these constituents..

- *Pollutants of Concern Monitoring* (C.8.f.). It seems contradictory that the goal of this section is to assess progress toward achieving WLAs for TMDLs, but then in footnote 32, it specifically says that the monitoring frequency and type is not sufficient to determine load allocations for the TMDL.

- *Selection of reference sites.* More guidance is needed for identification of the reference sites required for Status Monitoring (Provision C.8.c). The permit does not give any instructions on how or whether, reference sites will be chosen within the Status Monitoring. Determining reference conditions, particularly for bioassessments, is extremely important for interpreting results. Without a set of data that creates the baseline of what constitutes normal or healthy for the receiving waters, it will be difficult to know whether beneficial uses are impaired.

- *Stressor Identification Triggers.* Table 8.1 fails to describe what will trigger a stressor identification project and the language is very vague. How many samples constitute "repeatedly exceeds"? Is that across sites within a waterbody or sampling events? If it is within a sampling event, then how would "repeatedly" be defined when some counties are only required to sample one site per event?

- *Status and Trends Monitoring: Follow-up Actions.* Table G-1 outlines a weight of evidence approach to determine follow-up actions. In analyzing weight of evidence, samples from each of the lines of evidence must be taken from the same general location. Neither Table G-1 or Table 8.1 make it clear that the same general location must be used for the collection of the benthic community, the sediment chemistry and for the sediment toxicity samples.

  While Table G-1 outlines very specific numeric criteria for the chemistry and toxicity results, it does not do so for the bioassessments results. Follow up for bioassessments results are only described by vague terms like "no indications of alterations" or "indications of alterations." How are permittees supposed to determine whether there are any indications of alterations and what constitutes an alteration that is severe enough to require follow up action? The language in the footnote does not serve to clarify this issue. "Alterations are exhibited if metrics indicate substantially degraded community" is also vague. This is particularly important given the restriction that sampling only occur at sites with catchments that have 60% land use and the lack of clear guidance on selecting reference sites.

- *Table 8.3.* Table 8.3 should list which organics are required. Is it all the organics that are listed in method 8260 or just a subset?

- *Stressor Identification.* The permit needs to clarify how Permittees will cap the number of stressor identification projects. What criteria will be used to prioritize which sites get a stressor identification project and which ones do not?

H. Trash (Provision C.10)

- *Trash Reduction Target* (C.10.c). The Permit needs a specific, numeric target. The current "no trash impact goal" is imprecise and will not facilitate meaningful enforcement. What level of trash constitutes an impact to beneficial uses? How will permittees know when they have achieved the goal? How will compliance be assessed?

- *Pilot Project Goal* (C.10.a). This pilot project needs to be more clearly articulated. There is currently no well-defined goal for the pilot project. Is the purpose to quantify the effectiveness of the BMPs at reducing the total amount of trash entering San Francisco Bay? Is it to identify which types of areas generate the most trash and would thus be the most effective areas to target for BMP installation? Is the ultimate purpose to prevent trash from entering the bay and ocean, or to protect beneficial uses of creeks and streams?

  The answers to these questions have implications for the design of the long term abatement program. Understanding the effectiveness of the full capture devices installed during the pilot phase is extremely important to allow permittees to choose the most cost-effective strategies in the long-run. We feel that it would benefit the permittees to include bypass assessment in the pilot full capture devices. This would allow permittees to know that trash found downstream of the device arrived from other sources that would need further control.

- *Pilot Phase Monitoring* (C.10.b.ii). The pilot monitoring is overly focused on downstream areas of the watersheds.[7] The downstream focus would make sense if the goal of controlling trash was solely to keep it from entering San Francisco Bay and ultimately, the open ocean. However, the stated goal is also to protect the beneficial uses of stream receiving waters. Trash can and does accumulate for long periods of time in upstream locations. Therefore, this strategy would not capture the impacts to many parts of the creeks.

  For example, assessments done in Santa Clara found that there were "no apparent spatial patterns for trash conditions in creeks ('Optimal' and 'Suboptimal' sites were located in both upper and lower reaches of watersheds)."[8] The permit does require permittees to conduct additional trash monitoring. However, this additional

[7] Provision C.10.1.ii (1) ("these catchments shall be to the extent possible in the lower reaches or upstream tidal reaches of major tributaries …").
[8] SCVURPPP 2006. Trash Evaluation and Management Factsheet. http://scvurppp-w2k.com/pdfs/0506/trash%20factsheet-email.pdf

monitoring is poorly conceived. Provision C.8, Table 8.1 requires additional trash monitoring at locations where water quality/pollutant monitoring is done. This seems to be a random choice that will not serve to improve the Permittees understanding of trash accumulation and impacts, or its management. Additional trash assessments should be tied to the stream surveys required in Provision C.8. (Table 8.1). The recommended stream survey protocols include identification of trash problem areas in creeks.

Therefore, the results from the surveys should serve as the basis for identifying additional trash assessment locations. This would have the added benefit of helping the permittees identify where most of the trash problems are in every creek and help narrow down which sections within creeks are most problematic. A more rational approach would be to use the Center for Watershed Protection's USA stream survey methodology to identify the appropriate areas to apply the URTA or RTA prior to implementation of the pilot project and subsequent to implementation. This strategy would not change the pilot phase schedule, as it could easily be worked into the schedule as written.

- *Pilot Project Implementation* (C.10.b). More guidance should be given on the implementation of the pilot projects. In C.10.i, the term "high trash and litter (trash) impact catchments" is not defined. There should be some specific criteria articulated to make it easy for permittees to determine what are considered high trash impact catchments (e.g., catchments with sites that fall into specific categories using the URTA or RTA protocols). It is important that a consistent set of criteria are used Bay wide to ensure that all watersheds receive adequate protection and that the pilot projects will result in consistently effective trash control strategies.

- *Full Captures Devices* (C.10.b.i.(2)). Floating booms should not be allowed to qualify as meeting any part of the pilot phase requirements, even at the reduced catchment area criteria as their effectiveness is, at best, limited to floating objects, which can represent a very small fraction of trash.[9] The Los Angeles RWCB has already certified several specific devices as meeting the full capture requirements. These certified devices should be the minimum list for the pilot phase.

- *Reporting* (C.10.d). The current reporting requirements in Provision C.10.b.ii. (Assessment and Reporting), will lead to confusion because the two methodologies recommended for assessment are not directly comparable. Although the names of the categories are very similar between the two protocols (e.g. URTA 'Least Disturbed Optimal Urban' versus RTA 'Optimal'), the range of values used to define the categories in the RTA and the URTA are very different, with the RTA being much more conservative in its definition of each category.[10] Permittees should be required

[9] Santa Clara Valley Urban Runoff Pollution Prevention Program. Trash BMP Toolbox. Treatment and Institutional Controls. July 2007, pg TC-5, 4.

[10] For example, in the RTA, the 'optimal' category for 'Actual Number of Trash Items Found' is defined as 0 – 10 items of trash. This is dramatically different from the URTA, which defines 'Optimal Urban' Actual Number of Trash Items Found as 0 – 100. The URTA could rank a site as

to use one method or be required to disclose the raw numbers so that comparisons can be more accurate and assessment of effectiveness more rigorous.

I. PBDES, Legacy Pesticides, Selenium (Provision C.14)

- *Characterization Plan* (C.14.a.i.). The characterization plan should include more specific details like the minimum number of sites for monitoring, where monitoring should occur, and when it should occur. It is unclear why these three categories of pollutants would not simply be added to the list of elements to be monitored in Provision C.8. Similarly, this section should have a minimum requirement. Loadings can be estimated from very few sites and as a result give very uncertain estimates. Permittees should be required to collect a minimum amount of data to allow for a robust loading estimate.

'Optimal Urban', where the RTA might call that same site as 'Marginal'. These are not subtle differences.

BAYKEEPER®

Defending Our Waters—from the High Sierra to the Golden Gate

July 16, 2007

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Sent via electronic mail to MRP@waterboards.ca.gov

RE: Comments on the May 1, 2007 Draft Municipal Regional Urban Runoff NPDES Permit

Dear Regional Board Staff:

On behalf of Baykeeper and its members, thank you for the opportunity to once again provide feedback on a working draft of the Municipal Regional Urban Runoff NPDES Permit ("Permit"). We appreciate the considerable thought and time that has gone into producing this draft and look forward to see continued improvement and refinement in the next iteration.

Ensuring that municipalities—which have the authority to regulate land use and which recognize the benefits of urban development—take consistent and measurable steps to reduce pollutants in stormwater discharges is necessary to ensure protection of beneficial uses. According to the United States Environmental Protection Agency (EPA) urban runoff is one of the leading sources of water quality impairment to our nation's estuaries.[1] In the Bay Area, many pollutants in urban stormwater are known to impair beneficial uses of the Bay and local creeks, lakes and reservoirs.[2] In recent years, urban stormwater has been identified as the leading controllable source of impairing pollutants, such as the pesticide diazinon and bioaccumulative polychlorinated biphenyls (PCBs).

Because regulation of stormwater discharges from municipal separate storm sewer systems (MS4s) is not focused on end of the pipe effluent limitations, determining municipalities' compliance with federal and state requirements, as expressed in permits,

[1] EPA 841-F-03-003, *Protecting Water Quality from Urban Runoff* (February 2003).
[2] According to the State 303(d) list, stormwater is a significant source of many impairing pollutants, including pesticides, PCBs, PAHs, selenium, nutrients and pathogens. California State Water Quality Control Board, 2006 Clean Water Act Section 303(D) List Of Water Quality Limited Segments, available at http://www.swrcb.ca.gov/tmdl/303d_lists2006.html.

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is, at best, challenging.[3] As recognized by EPA, a high level of specificity is necessary to provide MS4s with a "clear target to achieve."[4] It is also necessary to determine whether the permittee is in compliance with the terms of the permit and whether the terms of the permit are stringent enough to ensure compliance with applicable water quality standards. Our comments below focus on specific sections of the draft Permit, but in general we ask that the Regional Board once again review the draft Permit with an eye towards ensuring all requirements and performance measures contain objective criteria with which compliance can easily be determined. If staff has not already done so, we respectfully recommend review of EPA guidance entitled *Storm Water Phase I MS4 Permitting: Writing More Effective, Measurable Permits*.[5]

1. Section A. Discharge Prohibitions

- *Discharge Prohibition A.1. wrongly applies the iterative process to non-stormwater discharges.*

Discharge Prohibition A.1. inappropriately conditions compliance with the prohibition on non-stormwater discharges with the iterative process outlined in C.1. Section 402 of the Federal Water Pollution Control Act (Clean Water Act)[6] requires that all permits for discharges from MS4s "include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."[7] Contrary to the language in the draft Permit, compliance with this requirement cannot be demonstrated through the Permittee's implementation of C.1.[8] Conditioning the prohibition on the iterative process is confusing and inconsistent with the plain language of the Clean Water Act.

We ask that the Section A.1. be modified to read as follows:

> The Permittees shall, within their respective jurisdictions, effectively prohibit the discharge of non-stormwater (materials other than stormwater) into the storm drain systems and watercourses <u>unless such discharges are either authorized by a separate National Pollutant Discharge Elimination System permit or not prohibited in accordance with section C.15</u>.[9]

- *The Permit may not authorize discharges of non-stormwater if they are sources of pollutants.*

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[3] Kosco, J. et al., *Lessons Learned from In-Field Evaluations of Phase I Municipal Storm Water Programs*, pg. 195, prepared by Tetra Tech, Inc. and U.S. EPA Region IX, available at www.epa.gov/owow/nps/natlstormwater03/19Kosco.pdf.
[4] Gentile, L. and Tinger, J, *Storm Water Phase I MS4 Permitting: Writing More Effective, Measurable Permits*, pg. 139. Available at http://www.epa.gov/owow/nps/natlstormwater03/.
[5] *Id.*
[6] 33 U.S.C. 1251 et seq.
[7] 33 U.S.C. § 1342(p)(3)(B) (ii).
[8] Draft Permit at 24.
[9] This language is based on similar language in the San Diego permit.
San Diego Region Regional Water Quality Control Board, Order No. R9-2007-0001, NPDES No. CA0108758 (January 24, 2007) (hereinafter "San Diego Permit").

Discharge prohibition A.1 also mistakenly purports to authorize non-stormwater discharges provided that they contain no pollutants of concern at concentrations that will impact beneficial uses or cause exceedances of water quality.[10] As stated above, the Clean Water Act requires Permittees to effectively prohibit discharges of non-stormwater to their systems. Permittees must develop a program to control non-stormwater discharges from an enumerated category of discharges or flows if those discharges are "identified by the municipality as sources of pollutants to waters of the United States."[11]

The threshold for control of non-stormwater discharges, therefore, is not whether they contain pollutants of concern at concentrations that may violate water quality standards but whether they are sources of pollutants. To ensure that Discharge Prohibition A.1 correctly states federal regulations, we recommend that the second sentence (beginning "C.15. describes a tiered categorization") be deleted in its entirety.

2. Section C.1. Water Quality Standards Exceedances

- *The reference to MEP in Provision C.1. should be deleted.*

The second sentence of Provision C.1.—which requires Permittees to implement control measures to the maximum extent practicable (MEP)—should be removed. While somewhat conflated in the draft Permit, compliance with the federal MEP standard and compliance with receiving water limitations are two different requirements.

Section 402 of the Clean Water Act requires that permits contain "controls to reduce the discharge of pollutants to the maximum extent practicable."[12] State Board orders impose an additional requirement that all municipal stormwater permits contain language specifically requiring compliance with discharge prohibitions and receiving water limitations via an iterative process.[13] The Santa Ana and San Diego Regional Boards have issued permits with similar language, including no reference to MEP, that have been challenged and upheld in litigation.[14]

Presumably, the intent of mentioning MEP in Provision C.1., on page 25 of the draft Permit, is to state that the permit requirements are intended to achieve the federal standard by reducing the discharge of pollutants to the maximum extent practicable. We recommend, instead, that the sentence related to MEP be deleted and a finding added that states the Regional Board's express intent that implementation of the permit requirements is intended to reduce the discharge of pollutants to the maximum extent practicable as

[10] Draft Permit at 24.
[11] 40 C.F.R. § 122.26(d)(2)(iv)(B)(1).
[12] 33 U.S.C. § 1342(p)(3)(B)(iii).
[13] SWRCB Order No. 99-05 (June 17, 1999) (revising SWRCB Order No. WQ 98-01).
[14] *Building Industry v. Ass'n of San Diego Cty v. State Water Resources Control Board,* 124 Cal. App. 4th 866 (Cal. Ct. App. 2005); *City of Rancho Cucamonga v. Regional Water Quality Control Board, Santa Ana Region,* 153 Cal. App. 4th 1377 (Cal. Ct. App. 2006).

required by Clean Water Act section 402. This change will clearly distinguish between the federal and state requirements and will ensure that Provision C.1 is consistent with precedential State Board orders.

• *The process described in Section C.1. should not terminate after only one iteration.*

As written, Provision C.1. only requires Permittees to identify and implement additional stormwater control measures/BMPs once when receiving limitations are violated unless otherwise directed by the Regional Board. To truly be iterative, the process described in Provision C.1. must be implemented until receiving water limitations are met. We suggest that, as long as violations of water quality objectives occur, the Permittees should be required to annually propose and implement changes to their permit requirements. To this end, we ask that the last paragraph of section C.1. be revised as follows:

> As long as Permittees have complied with the procedures set forth above and are implementing the revised Permit, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations more than once each year unless directed by the Water Board to develop additional control measures and BMPs, and re-initiate the Permit amendment process.[15]

3. Section C.2. Municipal Maintenance

• *The Permit should require mapping of major storm drain outfalls, pump stations, and the conveyance system.*

As part of the permit application process, dischargers must identify the location of any major outfall that discharges to waters of the United States, as well as the location of major structural controls for storm water discharges.[16] A major outfall is any outfall that discharges from a single pipe with an inside diameter of thirty-six (36) inches or more or, for areas zoned for industrial activities, any pipe with a diameter of twelve (12) inches or more. The permitting agency may not process a permit until the applicant has fully complied with the application requirements.[17] If, at the time of application, the information is unavailable, the Permit must require implementation of a program to meet the application requirements.[18]

Although the Permit requires that Permittees maintain for inspection all maps of storm drain inlets, outfalls and drainage areas, information currently available to us strongly

[15] We recognize that the language of section C.1. is based on State Water Resources Control Board Order WQ 99-05 (June 17, 1999) and emphasize that the Regional Boards have authority to implement more stringent requirements than those contained in that order. If the Regional Board determines that more frequent revisions of the permit are necessary to ensure attainment of Basin Plan objectives, it has the authority to require them.
[16] 40 C.F.R. § 122.26(d)(1)(ii)(B)(1), (d)(2)(ii).
[17] 40 C.F.R. § 124.3 (applicable to State programs, see § 123.25).
[18] 40 C.F.R. § 122.26(d)(1)(iv)(E).

suggests that most Permittees do not have such maps and/or that the they have failed to provide them to the Regional Board or otherwise identify the location of major outfalls and structural controls.

Failure to require basic information about the location of major outfalls and other significant components of the MS4s is not only at odds with long-standing federal regulations, it impedes effective implementation of the Permit. For example, the MS4 regulations contemplate that field screening for illicit discharge detection begin at major outfalls, where detecting illicit discharges should be easiest.[19] Many communities have found that mapping storm sewer outfalls and pipes is useful in conducting and prioritizing field investigations for illicit discharges.[20] Additionally, as discussed in more detail below, federal regulations require monitoring of stormwater from outfalls representative of various land use activities. Identification of illicit discharges and representative monitoring locations cannot occur unless the Permittee has a complete map of its MS4, including outfalls.

Furthermore, many other permitting agencies already impose mapping requirements. The State of Washington requires permittees to implement an "ongoing program for mapping and documenting the MS4."[21] Similarly, New Jersey requires municipalities to annually certify that an outfall pipe map has been completed or is being prepared in accordance with permit conditions and to report the number of outfall pipes mapped within the year and the total number of outfall pipes mapped to date.[22] The recently issued San Diego permit requires each Permittee to develop and/or update a "labeled map of its entire MS4 system and the corresponding areas within its jurisdiction" and to check the map's accuracy during dry weather field screening.[23]

To ensure that this Permit reflects applicable regulations and requires a level of effort consistent with the most recent round of California MS4 permits, we ask that it impose a deadline for Permittees to map, electronically, all major outfalls, pump stations, and other key components of the permitees' storm water system. The Permit should further require regular updating of the map and consistent reporting of progress in developing and/or updating the map.

4. Section C.3. New Development and Redevelopment

Baykeeper's comments on the draft Permit's New and Redevelopment section can be found in the letter submitted jointly by Natural Resources Defense Council and Baykeeper on July 12, 2007.

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[19] 40 C.F.R. § 122.26(d)(1)(iv)(D.
[20] Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, pg. 28 (October 2004).
[21] Phase I Municipal Stormwater NPDES and State Waste Discharge General Permit for Western Washington, p. 7 (January 17, 2007).
[22] New Jersey Tier B Permit at pg. 15.
[23] San Diego Permit at 42.

5. Section C.4. Industrial and Commercial Inspections

- *Section C.4.b.ii.(3) (Types/Contents of Inspections) misapplies the MEP standard.*

Section C.4.b.ii.(3) requires Permittees to conduct inspections that include "[p]revention of stormwater runoff pollution or illicit discharge by implementing appropriate BMPs to the MEP."[24] As discussed above, MEP describes the extent to which the Permittees must reduce discharge of pollutants. It does not, as is suggested by the language in the draft Permit, describe the degree to which stormwater BMPs must be implemented by private facilities. The correct requirement is that inspections ensure that commercial and industrial facilities do not discharge non-stormwater and are implementing BMPs in compliance with all municipal and county ordinances. Please make the following change to section C.4.b.ii.(3)(a):

> Prevention of stormwater runoff pollution or illicit discharge by implementing appropriate BMPs ~~to the MEP~~

- *Require inspectors be trained in Statewide general permit requirements and recommend adoption of requirements consistent with the general permit.*

A relatively recent audit of MS4 permits in California that included several Bay Area permit concluded that local MS4 industrial and construction inspectors are often unaware of State general industrial and construction permit requirements.[25] It further concluded that, while this is often intentional so that MS4s can avoid responsibility of enforcing the statewide permits, the lack of familiarity with state requirements complicates compliance for both inspectors and the facilities being inspected. Consistent with the recommendations that followed from that audit, we ask that the Permit include (1) a recommendation that Permittees adopt legal requirements consistent with or identical to the statewide permit requirements for a stormwater pollution prevention plan and (2) require that all inspectors receive training on the statewide permit requirements.

- *Implementation of the Industrial and Commercial Inspection Program should include establishment of a database of facilities identified as being subject to the State Board General Industrial Permit.*

The regional Permit, when issued, should require submission of an annually updated database of facilities subject to the General Industrial Permit and ensure that all those facilities which were inspected maintain a SWPP onsite. Other Regional Boards regularly require more information than that currently required by the draft Permit. For

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[24] Draft Permit at 52.

[25] Kosco, J. et al., *Lessons Learned from In-Field Evaluations of Phase I Municipal Storm Water Programs*, pg. 195, prepared by Tetra Tech, Inc. and U.S. EPA Region IX, available at www.epa.gov/owow/nps/natlstormwater03/19Kosco.pdf.

example, the 2001 Los Angeles permit requires permittees annually update a database of facilities subject to the General Industrial Permit with the facility's name, site address, SIC code, and NPDES storm water permit coverage state. It also requires that inspections include confirmation that the facility has a proper WDID and has a SWPP onsite.[26]

- *Permittees should not provide facilities advance notice of inspections.*

Most facilities can largely control stormwater pollution through implementation of good housekeeping measures. By their nature, housekeeping controls require relatively little effort, but their ongoing effectiveness during the rainy season is based on regular and consistent implementation. If Permittees provide advance notice of an inspection to facilities that primarily use housekeeping best management practices, these facilities may remedy any existing violations before the inspection, but since inspections are bound to occur infrequently, they cannot ascertain whether BMPs are regularly implemented. To ensure the effectiveness of housekeeping BMPs, we strongly recommend that the Permittees be prohibited from providing advance notice of inspections.

6. Section C.5. Illicit Discharge Detection and Elimination

- *The illicit discharge detection and elimination requirements are inadequate because they fail to require proactive efforts to identify illicit discharges.*

The field screening requirements for detection of illicit discharges fail to meet federal requirements. Applicants for a municipal separate storm sewer system NPDES permit must include in their application results of a field screening analysis for illicit connections that includes, at a minimum, a description of visual observations made at each designated field screening point.[27] Field screening points are either all major outfalls or outfall points randomly located throughout the storm drain system and identified by overlaying the system with a 0.5 mile square grid system and selecting one field screening point for every 1/16th square mile cell.[28]

As far as we are aware, the Regional Board has not asked Permittees to submit the required field screening information or conduct the level of screening necessary to generate the information required by the regulations governing MS4 permit applications. The proposed Permit appears to require Permittees to conduct screening only when "Permittee staff are working in the collection system and at strategic collection system access points."[29] We interpret this to mean that, if no staff work on the system at or near strategic collection system access points, then no screening is required. Our reading is supported by finding number 54, which states that "Permittee staff can detect discharges during the course of other tasks, business owners and other aware citizens can observed [sic] and report suspect

[26] Los Angeles permit at 28 and 31
[27] 40 C.F.R. § 122.26(d)(1)(iv)(D).
[28] *Id.*
[29] Draft permit at 59.

discharges." At a minimum, the Permit must require Permittees to conduct field screening consistent with federal application requirements, which require proactive efforts to identify illicit discharges.

The draft Permit's failure to require proactive screening is particularly concerning considering the audit results of several Bay area stormwater programs. A summary of the audits conducted by Tetra Tech, concluded that "[M]any MS4s fail to identify and eliminate dry weather discharges."[30] In 2003, Tetra Tech, Inc. audited the Santa Clara Valley MS4 program and noted it was deficient in that the Permittee conducts investigations based solely on complaints.[31] An audit of San Mateo's program identified the same flaw and singled out the permit's performance standard for criticism: "The illicit discharge performance standards rely on municipal and county staff to identify evidence of illicit discharges 'while conducting other routine work.' The performance standard does not require regularly scheduled screening for illicit discharges or dry weather flows. Regular and consistent dry weather outfall screening is an effective method to proactively identify chronic or ongoing illicit discharges."[32]

Other permitting authorities have found much more rigorous field screening requirements to be practicable, which suggests to us that the level of effort required in the proposed permit does not meet the MEP standard. For example, New Jersey requires that permittees conduct an initial physical inspection of all outfall pipes.[33] Washington requires that each city covered by the permit conduct field screening for at least 60% of the conveyance systems no later than four years after the effective date of the permit.[34] Los Angles requires screening of all major outfalls during the permit term, and defines "screening" as "using proactive methods."[35] San Diego requires screening of at least one point in each drainage area during the dry season.[36] In contrast to these permits, the Regional Board's proposal is insufficient in

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[30] Kosco, J. et al., *Lessons Learned from In-Field Evaluations of Phase I Municipal Storm Water Programs*, prepared by Tetra Tech, Inc. and U.S. EPA Region IX, available at www.epa.gov/owow/nps/natlstormwater03/19Kosco.pdf.

[31] Program Evaluation Report Santa Clara Valley Urban Runoff Pollution Prevention Program: County of Santa Clara and City of San Jose, NPDES Permit No. CAS029718 (January 20, 2004), available at http://www.epa.gov/region09/water/npdes/ms4audits.html#caleval.

[32] Program Evaluation Report San Mateo Area Stormwater Program, NPDES Permit No. CAS0029921 (October 24, 2003), available at http://www.epa.gov/region09/water/npdes/ms4audits.html#caleval.

[33] NJPDES Tier A Municipal Stormwater General Permit, Permit No. NJ0141852; issued August 1, 2005; effective September 1, 2005; pg. 15. Available at http://www.njstormwater.org/tier_A/index.htm.

[34] State of Washington, Dep't of Ecology, NPDES and State Waste Discharge General Permit for discharges from Large and Medium Municipal Separate Storm Sewer Systems; issued January 17, 2007; effective February 16, 2007; pg. 18. Available at http://www.ecy.wa.gov/programs/wq/stormwater/municipal/index.html.

[35] Los Angeles Regional Water Quality Control Board, Order No. 01-182, NPDES Permit No. CAS004001; Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach; adopted December 13, 2001; amended September 14, 2006 by Order R4-2006-0074; pg. 56, 64.

[36] San Diego Regional Water Quality Control Board, Order No. R9-2007-000; NPDES No. CAS0108758; Waste Discharge Requirements For Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County Of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority; Receiving Waters And Urban Runoff Monitoring And Reporting Program, pg. 11.

terms of designation of field screening stations and requiring regular monitoring of those stations.

We ask that the Permit clearly state the minimum number of field screening points to be designated, how they are to be selected, and how frequently they are to be inspected. We further suggest that the Regional Board look to the San Diego and Los Angeles permits for help in developing appropriate performance standards.

7. Section C.6. Construction Inspections

- *Section C.6.c.ii.(1)(h) (Minimum Required Management Practices) misapplies the MEP standard.*

As mentioned in the context of industrial and commercial inspections, MEP describes the extent to which the Permittees must reduce the discharge of pollutants. Section C.6.c.ii.(1)(h) misapplies the MEP standard to retention, reduction and proper management. We recommend that the language be changed to "[R]etention, reduction, and proper management of all pollutant discharges."

- *Require inspectors be trained Statewide general permit requirements and recommend adoption of requirements consistent with the general permit.*

As discussed in more detail in the industrial and commercial inspection section, making municipal requirements and training consistent with the statewide general construction permit would benefit the construction community as they would have only one set of stormwater requirements with which to comply. We request that that section C.6.a. (Legal Authority) recommend that Permittees establish legal authority consistent with the terms of the general statewide permit and that section 6.6.g (Staff Training) require that all staff conducting inspections be trained on the requirements of the general statewide permit.

- *Permittees should report on the minimum set of BMPs designated to be implemented at construction sites.*

As drafted, section C.6.c. (Minimum Required Management Practices) does not contain any reporting requirements. Permittees should be required to at least identify in their annual reports the minimum BMPs and other measures required to be implemented at construction sites.

- *Please articulate the basis for selecting 50 acres as the size threshold for high priority construction sites.*

The statewide General Permit for Discharges of Storm Water Associated with Construction Activity regulates all construction activities that disturb one or more acres of land because stormwater discharges from that size project can cause or contribute to

violations of water quality standards. In light of the General Permit's size threshold, please explain the rationale for selecting 50 acres as the threshold for high priority sites.

8. Section C.7. Public Information and Outreach

- *Please explain why advertising campaigns must only target two pollutants of concern.*

The draft Permit identifies ten pollutants of concern, yet the public information and outreach provisions only require advertising campaigns address two. Please explain the rationale for only requiring campaigns to target two pollutants and include in the Permit the factors to be considered by the Permittees in selecting which pollutants to target.

- *Permittees should conduct outreach to pesticide companies.*

Section C.7.k. should include the option to conduct outreach directed at pesticide application companies to ensure that they are not illegally discharging polluted non-stormwater from, for example, allowing wash water to reach storm drains.

9. Section C.8. Water Quality Monitoring

- *The Permit lacks monitoring of actual stormwater as required by federal regulations.*

We strongly support the detailed and comprehensive nature of the monitoring program described in the Permit, but find it lacking in one significant respect: it fails to require sufficient monitoring of actual stormwater discharges. Monitoring of stormwater discharges is necessary to determine when the iterative process described in section C is triggered and to comply with federal regulations, which require characterization of stormwater discharges and monitoring sufficient to estimate mass loadings of pollutants from stormwater.

Federal MS4 regulations require permit applicants to submit quantitative monitoring data from five to ten outfalls or field screening points that are representative of commercial, residential and industrial land use.[37] For each outfall, samples must be collected from three storm events occurring at least one month apart and must be analyzed for a suite of parameters, including organic pollutants, toxic metals, and cyanide.[38] If data is not available, then the permit application must include "a proposed monitoring program for representative data collection for the term of the permit that describes the location of outfalls or field screening points…[and] why the location is representative."[39]

MS4 permits issued by other permitting agency require monitoring of outfalls. The San Diego permit, for example requires implementation of monitoring sufficient to characterize discharges from MS4 outfalls in each watershed during both wet and dry weather, including

[37] 40 C.F.R. § 122.26(d)(2)(iii).
[38] 40 C.F.R. § 122.26(d)(2)(iii)(A)(3).
[39] 40 C.F.R. § 122.26(d)(2)(iii)(D).

the rationale and criteria for selection of outfalls to be monitored.[40] The state of Washington requires all permittees to monitor at least one outfall that represents commercial, high density residential, and industrial land uses for 75% of storms.[41]

To ensure implementation of a monitoring program that is consistent with federal law and that can be used to determine whether stormwater is causing or contributing to an exceedance of water quality standards, the Permit must require monitoring of stormwater. Baykeeper recommends that a new subsection be added that requires Permittees to identify of major outfalls that drain various land uses and develop a monitoring program for those outfalls that (1) requires monitoring of at least three storm events, including first flush, (2) describes why those monitoring locations are representative of stormwater discharges, and (3) describes how the monitoring results will be used to estimate mass loading and determine compliance with receiving water limitations.

10. Section C.9. Pesticides Toxicity Prevention

- *The Permit should identify model Integrated Pest Management policies or ordinances.*

Integrated Pest Management (IPM) varies widely statewide – many different definitions and applications exist. The Permit should define IPM and ensure that Permittees adopt definitions and ordinances that are at least as stringent as the example. As a starting point, we recommend the definition contained in the city of San Francisco's IPM ordinance:

> "Integrated pest management" means a decision-making process for managing pests that uses monitoring to determine pest injury levels and combines biological, cultural, physical, and chemical tools to minimize health, environmental and financial risks. The method uses extensive knowledge about pests, such as infestation thresholds, life histories, environmental requirements and natural enemies to complement and facilitate biological and other natural control of pests. The method uses the least toxic synthetic pesticides only as a last resort to controlling pests.[42]

11. Section C.10. Trash Reduction

San Francisco Bay's trash problem is not trivial. Data collected at fourteen Bay Area creeks as part of the Surface Water Ambient Monitoring Program (SWAMP)[43] led researchers to conclude that trash is "a ubiquitous problem at the bottom of all

[40] San Diego MS4 Permit at 9.
[41] Western Washington Permit at 41.
[42] San Francisco City and County Environment Code § 301(f).
[43] "A Rapid Assessment Method Applied to Waters of the San Francisco Bay Region: Trash Measurement in Streams," Draft Report, San Francisco Bay Regional Water Quality Control Board (August 22, 2005).

watersheds…with particularly high plastic levels in wet weather."[44] The study also noted that the already "alarmingly high" levels of trash may actually be rising in some locations.[45] Studies by other groups have led to similar conclusions: one conducted at Baxter Creek concluded that a previous restoration effort intended to improve beneficial uses for wildlife and humans was undermined by "the large volume of trash and its negative effects on water quality."[46] The presence of trash and other debris is impacting important urban creek beneficial uses, such as fish migration, marine habitat, and recreation.

As the population in the San Francisco Bay region grows, the amount of trash inevitably will too. The Regional Board should take immediate steps to decrease the impact of trash on water quality. The San Francisco Bay Trash TMDL should include more aggressive measures in order to better protect water quality.

- *The Permit should define trash.*

Including definitions for trash will ensure consistency in identification of the types of discharges that constitute trash. We suggest that the Permit incorporate the definition used by the Los Angeles Regional Board in their recently issued and proposed TMDLs. The Los Angeles Regional Board defines "trash" as: "man-made litter as defined in California Government Code Section 68055.1(g)…for purposes of this TMDL, we will consider trash to consist of litter and particles of litter, including cigarette butts."[47] By establishing a basic definition of "trash," the Regional Board can more clearly set out its goals to reduce trash.

- *The Permit should articulate a "zero trash" goal.*

Baykeeper believes the Regional Board should implement a "zero trash" goal over a ten-year time frame. The San Francisco Bay Basin Plan contains a number of provisions relating to trash; it prohibits floating material, suspended, settleable materials that cause nuisance or adversely affect beneficial uses.[48] Even small quantities of trash violate the Basin Plan objectives by harming habitat and maiming or killing wildlife that becomes entangled in, or ingests the debris.

The trash TMDL issued by the Los Angeles Regional Board recognizes that small amounts of trash impair beneficial uses: the TMDL contains a "zero trash" numeric

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[44] "Executive Officer's Report," California Regional Water Quality Control Board, San Francisco Bay Region, page 6 (September 2005). Available at http://www.waterboards.ca.gov/sanfranciscobay/Agenda/09-21-05/_Toc114474055.
[45] Rapid Assessment, pg. 29.
[46] Bronner, C. et al., "Post-Project Appraisal of Baxter Creek at Booker T. Anderson Park: Shopping Carts-the New Boulders," Water Resources Center Archives, University of California (2005).
[47] Los Angeles Regional Water Quality Control Board, Staff Report: Trash Total Daily Maximum Loads, p.4 (March 20, 2007).
[48] San Francisco Bay Basin Plan, Chapter 3: Water Quality Objectives, 3.3.6 Floating Material; 3.3.13 Settleable Material; and 3.3.14 Suspended Material.

target derived from the Los Angeles Basin Plan narrative water quality objectives similar to those in the San Francisco Bay Basin Plan.[49] While LA TMDL's "zero trash" goal was challenged in *City of Arcadia v. State Water Resources Control Board*, the Court of Appeals determined that setting a load allocation of zero was not an abuse of the Regional Board's discretion or arbitrary and capricious.[50]

The draft Permit, however, states no overarching trash goal except a desire "to address this [the Basin Plan] and to control the discharge of trash." Simple assessment of the trash problem, however, does not solve the trash problem. General requirements imposed on Permittees can be ineffective without the larger context of an overall trash-control strategy.

The Los Angeles TMDL explicitly outlines requirements such as a "full capture system" in order to reach its "zero-trash" goals. The TMDL defines the full capture system and its specifications including a "5mm mesh screen with a design treatment capacity of not less than the peak flow rate of Q = C x I x A." The proposed Permit would be more effective if it incorporated numeric goals both for overall trash reduction as well as numerical value of technologies required.

- *The Permit should require measurable reductions over a specified timeframe.*

The Regional Board's proposed time frame for controlling trash is short-term and does not specify measurable reductions in trash discharges over its 5-year implementation schedule. For example, the proposed Permit only refers to trash assessments and an action level required in Year 4 if assessments indicate trash accumulation rates/scores that are worse than an accumulation rate of 2 pieces per 100-foot segment per day (wet season) and 1 piece per 100-foot segment per day (dry season). Rather than additional assessments, the Permit should implement a specific trash reduction goal to be met each year (such as 70% in the first year, and a 10% reduction each subsequent year, like the Los Angeles TMDL). A greater focus on implementation now will help the Regional Board make significant reductions in the Bay Area's trash problem.

- *The Regional Board should require the use of full-capture systems.*

The trash provisions of the draft Permit are unduly monitoring-focused and should instead require installation of strategically placed full-capture systems in order to immediately reducing trash loading. We suggest something similar to the requirement imposed by the LA Trash TMDL, which defines full capture systems as "any device or series of devices that traps all particles retained by a 5mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the subdrainage area."[51] The Regional Board should identify key outfalls

[49] Los Angeles Regional Water Quality Control Board, Trash Total Maximum Daily Loads for the Los Angeles River Watershed, p. 16 (September 19, 2001).
[50] *City of Arcadia v. State Water Resources Control Board* 135 Cal.App.4th 1411 (2006) at 1427-30.
[51] Los Angeles Regional Water Quality Control Board. *Amendments to the Water Quality Control Plan – Los Angeles Region for the Los Angeles River Trash TMDL.*

contributing trash to the Bay, such as pump stations, and initiate aggressive trash management by requiring full-capture devices at these critical locations.

12. Section C.11. Mercury Load Reduction

- *The Permit should require Permittees to address potential air sources of mercury within their jurisdiction.*

The load estimate for stormwater includes airborne mercury deposited on the Bay watershed and carried into the Bay via stormwater runoff. While minimizing mercury discharges in the runoff is important, to be as effective as possible, the draft Permit should require actions to address air sources that are likely contributing to mercury concentrations in runoff. Specifically, we ask that a new subsection be added to Section C.11 that requires identification of potential air sources of mercury in runoff, including refineries, cement manufacturers, and crematoriums.

- *The risk reduction language is inappropriate.*

Section C.11.b (and section C. 12.i relating to PCBs) requires development and implementation of a regional risk reduction program "to mitigate loads of mercury."[52] The purpose of risk reduction is to mitigate the risk to individuals who rely on Bay fish for consumption, not to mitigate loading of mercury to the Bay. We recommend that the risk reduction language be revised accordingly.

- *The Permit should quantify the level of load reduction required.*

The mercury TMDL contemplates significant reductions in mercury loading from urban stormwater, yet the draft Permit fails to quantify the progress that Permittees should make towards reducing loading. The Permit should communicate the expected load reductions and should require Permittees to estimate load reductions using all four of the methods described in section C.11.e. Requiring the use of all methods will help reduce the uncertainty in estimating reductions and help ensure that Permittees are making significant progress towards achieving their TMDL wasteload allocations.

- *Inspections should include an evaluation of and control measures for airborne sources of pollutants*

With regard to implementation actions to achieve the mercury TMDL waste load allocations, the draft Permit should require identification of potential airborne sources of mercury in their watershed. These sites should be inspected and assessed for further actions to reduce aerial deposition of mercury into stormwater runoff.

[52] Draft permit at 96.

13. Section C. 12. PCBS

- *Permittees should be required to identify and clean up abandoned industrial sites containing significant amounts of PCBs.*

Many abandoned industrial sites are known to contain high levels of PCBs as a result of the use of PCB-laden construction materials. These sites are not inspected as part of regular industrial inspections because they are not in use and, therefore, may escape attention. The Permittees should be required to identify abandoned industrial sites with high levels of PCBs and use their legal authority to require clean up of these sites.

14. Miscellaneous

- *A consistent and detailed reporting format should be used for all Permittees.*

One of the conclusions from Tetra Tech, Inc.'s review of California Phase I permits was that "poor [MS4] programs can hide behind well-written annual reports."[53] The lack of standardized reporting "allows each MS4 to choose the type of information it wants to present."[54] A detailed and uniform reporting format would minimize the likelihood that Permittees could avoid scrutiny based on selective reporting. It would also greatly facilitate comparing a Permittee's performance from year to year and comparing the performance of several Permittees. We suggest that the Regional Board work towards developing a reporting format that captures the same information for the various Permittees.

* * *

We look forward to discussing these and other issues. Please feel free to contact us at (415) 856-0444 with any questions.

Sincerely,

Amy Chastain
Staff Attorney

Sejal Choksi
Program Director

[53] Kosco, J. et al., at page. 196.
[54] *Id.*

BAYKEEPER®
Defending Our Waters–from the
High Sierra to the Golden Gate

December 8, 2006

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Sent via electronic mail to MRP@waterboards.ca.gov

RE: Additional Comments on the Draft Municipal Regional Urban Runoff NPDES Permit.

Dear Regional Board Staff:

Thank you for accepting these comments on the first working draft of the Municipal Regional Urban Runoff Permit ("MRP"). Please note that, because no new working draft has been issued since our last letter, these comments are largely a restatement of the points made by Baykeeper and the Natural Resources Defense Council on November 8, 2006.

In addition to the points below, Baykeeper strongly urges the Regional Board to continue its independent efforts to create a progressive and effective stormwater permit. Despite the municipalities' insistence, the draft permit submitted by BASMAA can not be the basis for any future permits. Baykeeper has and will continue to strenuously oppose the writing of permits by permittees, regardless of whether they are public or private entities. Permittees can offer valuable insight, but will always be faced with a conflict of interest when it comes to regulations.

A. Numeric Effluent Limits.

The permit should contain numeric effluent limits or, at a minimum, numeric benchmarks. Numeric limits are feasible and provide a clear standard against which compliance with the permit and/or success of the iterative process can be determined. If the MRP does not contain numeric limits or benchmarks, then the permit findings should thoroughly articulate the basis for rejecting them during this permit cycle.

WATERKEEPER® ALLIANCE FOUNDING MEMBER

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B. Permit Goals and Specific Performance Criteria.

Despite several iterations of Bay Area permits, stormwater pollution is still preventing attainment of water quality standards in the Bay Area. One of the flaws of current permits is that they lack sufficiently specific and quantifiable requirements, without which the determination of (1) compliance with the terms of the permit and (2) efficacy of the permit in reducing stormwater pollution is impossible. To remedy this shortcoming, the MRP should articulate the goals and requirements of the permit in terms of concrete and measurable criteria. As we previously stated, some sections of the draft permit look promising in this respect, while others still remain vague.

C. Non-Stormwater Discharges.

As written, the permit appears to condition compliance with the prohibition on non-stormwater dischargers on the iterative process outlined in section C.1. This is illogical and inconsistent with the section 401(p)(3)(B) of the Clean Water Act ("CWA") which unambiguously requires permits for municipal sewers to "effectively prohibit non-stormwater discharges into the storm sewers." To this end, we recommend removal or revision of the sentence reading "Compliance with this prohibition shall be demonstrated in accordance with Provision C.1 and C.9 of this order."

D. Reporting.

During the public MRP discussion meetings on November 15 and 20, many permitees expressed concern that the draft reporting requirements are too onerous. While the new permit may require investment of additional resources, comprehensive reporting is necessary to ensure that the iterative process is successful. Unless it is clear what BMPs are being implemented at what level, it will be impossible to determine what additional work needs to be done.

E. Low Impact Development.

Low-impact site design practices are effective in reducing the quantity and improving the quality of stormwater runoff. This permit should incorporate low impact development provisions, such as those contained in the Los Angeles MS4 permit.

F. New & Redevelopment Threshold.

We strongly oppose increasing the final new and redevelopment threshold to 10,000 square feet as requested by the permitees. The lower, 5,000 square feet threshold represents progress and has already been incorporated into other regions' MS4 permits. If, as the permittees claims, decreasing the threshold will not result in appreciable improvements to water quality, then they should submit comprehensive data to support this allegation.

G. TMDL Implementation.

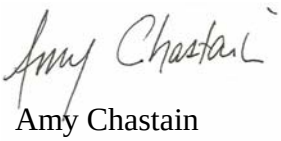
While we recognize that this section is still very much in a preliminary form, it appears to lack concrete and measurable requirements—other than pilot projects—to address sources of impairing pollutants. We urge the Board to identify and set deadlines for actions that can be immediately implemented to reduce loading of pesticides, PCBs, and other pollutants via storm water. We also suggest that the Regional Board consider incorporating and making enforceable the wasteload allocations contained in TMDLs, as was recently done by the Los Angeles Regional Board.

H. Water Quality Monitoring.

We support the detail and comprehensive nature of the receiving water monitoring outlined in the permit, but request that it focus more on monitoring of actual stormwater and monitoring to support BMP effectiveness evaluation. The primary objective of any NPDES monitoring program is to demonstrate compliance with applicable water quality standards and effluent limitations. *See* 40 C.F.R. § 125.63(a)(1)(i)(a). To this end, other regions, including Washington state and San Diego have draft MS4 monitoring programs that require outfall monitoring to characterize discharges from each watershed. Similar monitoring is also contemplated by the federal regulations governing MS4 applications, which require applicants to submit quantitative data from outfalls representative of the land use areas in a watershed. *See* 40 C.F.R. § 122.26. We ask that the Regional Board review other permits that require outfall and BMP effectiveness monitoring and incorporate appropriate provisions into the MRP.

We look forward to receiving a second working draft of this permit.

Sincerely,



Amy Chastain
Bay Program Associate

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Defending Our Waters—from the High Sierra to the Golden Gate

November 8, 2006

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Oakland, CA 94612

Sent via electronic mail to MRP@waterboards.ca.gov

RE: Preliminary Comments on the Draft Municipal Regional Urban Runoff NPDES Permit.

Dear Regional Board Staff:

Thank you for the opportunity to provide input on the working draft of the Municipal Regional Urban Runoff NPDES permit ("MRP"). Based on our initial review, many aspects of the permit appear encouraging, and we appreciate the effort that staff put into developing this draft. Please note that, because of limited time and the working nature of this draft, these comments are not comprehensive, rather they are a general discussion of some of the areas in which room for improvement exists.

1. Evaluation Metrics

While we acknowledge the challenge in crafting complex MS4 permits, we are concerned that the draft permit language fails to contain specific, quantifiable requirements. As recognized by EPA, such specificity is necessary to provide MS4s with a "clear target to achieve."[1] It is also necessary to determine (1) whether the permittee is in compliance with the terms of the permit and (2) whether the terms of the permit are stringent enough to ensure compliance with applicable water quality standards.

One way to accomplish the necessary specificity is through numeric effluent limits, which are feasible and would provide a very clear target for dischargers. If, as this permit is currently written, the permit limits are narrative, then it is even more important that the permit articulate detailed and measurable requirements. Past permits have suffered from a lack of detail in terms measurable goals. We hope and expect that this one to be a significant improvement. To this end, we ask that the permit:

[1] Gentile, L. and Tinger, J, *Storm Water Phase I MS4 Permitting: Writing More Effective, Measurable Permits*, at 139. Available at http://www.epa.gov/owow/nps/natlstormwater03/.

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- Include a statement of quantifiable permit goals and objectives for the permit as a whole. While this iteration of the MS4 permit is not likely to solve the Bay Area's stormwater problem, it should identify and, whenever possible, quantify the level of improvement the Regional Board and the permittees expect to achieve through this permit cycle.

- Articulate specific performance criteria based on an analysis of what constitutes MEP. Each permit task or objective should be translated into specific, measurable requirements and associated deadlines. Vague language and requirements must be avoided. As an example of terms to be avoided, the construction section lacks any detail about what BMPs must be implemented or the frequency of inspections. In contrast, the San Diego draft permit lists sixteen BMPs that must be implemented at each site and establishes a minimum inspection frequency.[2] To be effective, the permit must describe the activities required of the permittees and set clear and detailed performance expectations for those activities.

2. Water Quality Monitoring

Some of our strongest concerns and objections relate to the draft monitoring program, which suffers from the same flaw as the current program—it is not calculated to determine the permit's effectiveness in reducing or eliminating impacts to receiving waters. One of the primary objectives of any NPDES monitoring program is to demonstrate compliance with applicable water quality criteria.[3] The draft monitoring provisions, however, appear inadequate to meet this objective because they require relatively little actual stormwater monitoring.

When viewed in the context of the iterative process, the lack of monitoring sufficient to demonstrate compliance is particularly frustrating. As written, the permit's iterative process is triggered by "a determination…that discharges [from the permittees] are causing or contributing to an exceedance of an applicable WQS."[4] No one disputes that stormwater pollution is impairing Bay Area water bodies. To our knowledge, however, monitoring conducted pursuant to Bay Area MS4 permits has yet to identify discharges causing or contributing to this impairment and, therefore, has never formally triggered the iterative process.

Despite the importance of monitoring, our review of the permit failed to reveal substantive requirements that the permittees actually monitor stormwater. To remedy this shortcoming, the draft permit should draw upon requirements similar to those currently in other permits, which include monitoring stormwater at MS4 outfalls, pump stations and

[2] California Regional Water Quality Control Board, San Diego Region, Tentative Order No. R9-2006-0011, NPDES N. CAS0108758.
[3] *See* 40 C.F.R. § 125.63(a)(1)(i)(a).
[4] *Draft permit* at 2.

other stormwater conveyances.[5] Only once these requirements are in place and the permit monitoring program is sufficient to determine the permit's effectiveness will the iterative process work.

3. Total Maximum Daily Load Implementation

In addition to monitoring, we are also concerned about the draft Total Maximum Daily Load ("TMDL") implementation section. While we recognize that this section is still very much in a preliminary form, it appears to lack concrete and measurable requirements—other than pilot projects—to address sources of impairing pollutants.

Work in support of TMDL development by the Regional Board clearly identifies stormwater as the single greatest source of PCBs and pesticides impairment to Bay waters. By its nature, the TMDL process relies heavily on permits for implementation of wasteload allocations ("WLA"). The draft permit, however, lacks the level of detail necessary to begin implementing these allocations. Baykeeper asks that the permit:

- Incorporate a provision to implement and enforce approved WLAs for municipal stormwater dischargers. This approach was recently adopted by the Los Angeles Regional Board for implementation of their bacteria TMDL.

- Identify and set deadlines for actions that can immediately be implemented. As previously mentioned, at least two TMDLs—the draft pesticides and PCBs TMDLs—are to be implemented primarily via reductions in stormwater loading. When implementation of a WLA is in the form of BMPs, the there must be sufficient evidence to support a finding that the BMPs will be sufficient to implement the WLAs.[6] Thus, as a matter of policy and law, this permit must require permittees to do more than "evaluate," "study," and "implement pilot projects." It must require implementation of BMPs and other actions that will result in actual load reductions in accordance with the TMDL during the term of this permit.

4. New & Redevelopment Standards

In general, the new and redevelopment provisions represent a significant step forward. In particular, Baykeeper commends the Regional Board for selecting a threshold of 5,000 square feet, requiring development of a database for smaller projects, and applying the provisions to roads. In addition to these requirements, Baykeeper requests:

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[5] California Regional Water Quality Control Board, Los Angeles Region, Order No. 01-182, NPDES Permit No. CAS004001 (December 13, 2001; Amended on September 14, 2006 by Order R4-2006-0074); Tentative Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2006-0011. *See also* Draft Phase I Municipal Stormwater NPDES and State Waste Discharge General Permit for Western Washington (February 2006).

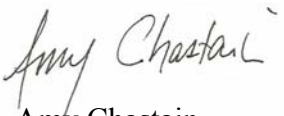
[6] Citing 40 C.F.R. §§ 124.8, 124.9, 124.18.

- Incorporation of low-impact development requirements. Low-impact site design practices are effective in reducing the quantity and improving the quality of stormwater runoff. The permit should require implementation of such practices for every priority new and redevelopment project.

- Further refinement of the alternative compliance programs. As currently drafted, alternative compliance is available when onsite treatment is impracticable and no regional project is available. Baykeeper asks that staff (1) explain the rational for their definition of impracticable, (2) justify the decision to allow permittees to develop alternative compliance programs rather than establishing a regional fund or project and (3) elaborate, in the permit, how Regional Board will ensure adequate oversight of the alternative compliance projects.

We look forward to discussing these and other issues. Please feel free to contact me with any questions.

Sincerely,



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