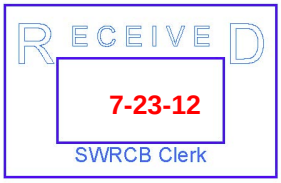

July 23, 2012

Via electronic mail

Mr. Tom Howard, Executive Officer
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Re: Comments on May 18, 2012 Draft Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (General Permit)

Dear Mr. Howard:

On behalf of Heal the Bay and the Natural Resources Defense Council ("NRDC"), we are writing with regard to the Draft Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (General Permit), NPDES General Permit No. CASXXXXXX dated May 18, 2012 ("Draft Permit"). We appreciate the opportunity to comment on the Draft Permit. We appreciate staff's inclusion of post-construction requirements in the Draft Permit. The Draft Permit makes important strides in this area from the current permit and previous drafts. However, some of the specific requirements should be clarified to ensure that the intent of the provisions is met. We are concerned that in several aspects the Draft Permit will not serve to adequately protect California's water resources, and falls short of the requirements of the Clean Water Act's "maximum extent practicable" ("MEP") standard. In multiple respects, the Draft Permit reflects a dramatic retreat from previous iterations of the draft permit. For instance, the previous draft permit's monitoring program dated June 7, 2011 was much stronger than is currently proposed. We see no justification for this weakening. Additionally, many of the concerns outlined in our September 8, 2011 letter remain unaddressed. We have focused our comments in particular here on the Draft Permit's Post Construction Storm Water Management, TMDL, Water Quality Monitoring and BMP Assessment provisions, and look forward to working further with Board staff to address critical shortcomings of the Draft Permit.

I. Stormwater is a Leading Source of Pollution to Surface Waters

The U.S. EPA considers urban runoff to be "one of the most significant reasons that water quality standards are not being met nationwide."[1] As the U.S. EPA has stated:

> Most stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.[2]

The State Board has acknowledged these issues, finding that "the runoff leaving the developed urban area is greater in pollutant load than the pre-development runoff from the same area . . . [and] runoff leaving developed urban area is significantly greater in runoff volume, velocity, peak flow rate, and duration than pre-development runoff from the same area." (Draft Permit, at Finding 2.) The State Board notes that pollutants that can be found in urban runoff that is discharged to receiving waters include "sediments, non-sediment solids, nutrients, pathogens, oxygen demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclis aromatic hydrocarbons (PAHs) trash, and pesticides and herbicides," (*id*. at Finding 3), and that "urban storm water is listed as the primary source of impairment for ten percent of all rivers, ten percent of all lakes and reservoirs, and 17 percent of all estuaries." (*Id*. at Finding 10.) Pollution in stormwater runoff further contributes to impairment in a substantially greater percentage of California's inland and coastal waters.

II. Stormwater Must be Reduced to the Maximum Extent Practicable

Consistent with the federal Clean Water Act, a fundamental goal of all municipal stormwater permits is to ensure that discharges from storm sewers do not cause or contribute to a violation of water quality standards. (33 U.S.C. § 1341.) Notably for MS4s covered under the National Pollutant Discharge Elimination System ("NPDES") program, a fundamental requirement is that permits for discharges from municipal storm sewers "shall require controls to reduce the discharge of pollutants to the maximum extent practicable." (33 U.S.C. § 1342(p)(3)(B)(iii).) These requirements apply to small MS4s such as those covered under the Draft Permit. (64 Fed. Reg. 68,722, 68754 ("EPA interprets this standard to apply to all MS4s, including . . . the small MS4s regulated under [the Phase II rule]").) As one state hearing board held:

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[1] U.S. General Accounting Office (June 2001) *Water Quality: Urban Runoff Programs*, Report No. GAO-01-679, available at, http://www.gao.gov/new.items/d01679.pdf. See also, Draft Permit at Findings 2-6, 8.

[2] U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at v, available at, http://www.epa.gov/owow/nps/lid/costs07/.

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

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

Where the use of specific best management practices ("BMPs") and performance standards in stormwater permits is widespread across the state or country, it provides ample evidence as to their "practicability." Thus, as the MEP standard evolves, "general permits issued under Phase II will ordinarily contain numerous substantive requirements," which themselves evolve with each subsequent permit issued. (*Environmental Defense Center, Inc. v. EPA* (9th Cir. 2003) 344 F.3d 832, 854.)

III. The Draft Permit Must Require Compliance With the Core Requirements of its Post Construction Storm Water Management Program And Ensure Adequate Public Process For Any In-Lieu or Watershed Process Program

We are pleased to see that the Draft Permit requires that "All Permittees must implement post-construction and monitoring programs as specified in this Order." (Draft Permit, at E.1.b. (citing exceptions to provisions allowing for in-lieu program approvals by the Regional Boards).) However, we are concerned that the Draft Permit elsewhere creates the potential for approval or implementation of such in-lieu programs in place of the permit's Post Construction controls, including the Permit's low impact development ("LID") and hydromodification requirements, and in several provisions lacks clarity that could allow for regulated projects to escape requirements to implement the Draft Permit's otherwise applicable terms. These issues must be addressed in order for the permit to pass legal muster under the Clean Water Act's MEP standard.

a. The Draft Permit Properly Requires Retention of the 85th Percentile, 24-Hour Storm Event

The Draft Permit properly establishes requirements broadly for projects to retain, or "capture, infiltrate, and evapotranspire the runoff from the 85th percentile storm" to the MEP.

Regulatory bodies in a wide variety of jurisdictions, including in California, have already successfully implemented requirements to retain a specified volume of rainfall such as the 85th percentile storm onsite through LID practices such as infiltration, harvesting and reuse, or evapotranspiration, thus ensuring that pollutant loads do not reach receiving waters. These include, for example:

Ventura County: MS4 permit requires onsite retention of ninety-five percent of rainfall from the 85th percentile storm; offsite mitigation allowed if onsite retention is technically infeasible.[3]

North and South Orange County: MS4 Permit requires onsite retention of the 85th percentile storm.[4]

Central Coast, CA: MS4 permit limits impervious surfaces that generate runoff at development projects to between three and ten percent of total project area as a permanent criterion;[5]

West Virginia: Statewide Phase II MS4 permit requires on-site retention of "the first one inch of rainfall from a 24-hour storm" event unless infeasible;[6]

Philadelphia, PA: Infiltrate the first one inch of rainfall from all impervious surfaces; if onsite infiltration is infeasible, the same performance must be achieved offsite;[7] and,

These jurisdictions, among many others implementing similar requirements, have recognized the paramount importance of mandating onsite retention of a certain quantity of stormwater since onsite retention prevents *all* pollution in that volume of rainfall from being discharged to receiving waters.

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[3] Los Angeles Regional Water Quality Control Board (July 8, 2010) Ventura County Municipal Separate Stormwater National Pollutant Discharge Elimination System (NPDES) Permit; Order No. R4-2009-0057; NPDES Permit No. CAS004002.

[4] Santa Ana Regional Water Quality Control Board, Order No. RB8-2009-0030, at ¶ XII.E.1; San Diego Regional Water Quality Control Board (December 16, 2009) Order No. R9-2009-0002 (South Orange County MS4 Permit).

[5] Central Coast Regional Water Quality Control Board, Letter from Roger Briggs re: Notification to Traditional, Small MS4s on Process for Enrolling under the State's General NPDES Permit for Storm Water Discharges (Feb. 15, 2008), available at, http://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/muni_phase2/ms4enrollment/docs/phasellnotifications021228.pdf.

[6] State of West Virginia Department of Environmental Protection, Division of Water and Waste Management, General National Pollution Discharge Elimination System Water Pollution Control Permit, NPDES Permit No. WV0116025 at 13-14 (June 22, 2009), available at, http://www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Documents/WV%20MS4%202009%20General%20Permit.pdf.

[7] City of Philadelphia (Jan. 29, 2008) Stormwater Management Guidance Manual 2.0, at 1.1, available at, http://www.phillyriverinfo.org/programs/subprogrammain.aspx?Id=StormwaterManual.

The requirement to retain runoff from the 85th percentile storm onsite is particularly necessary for smaller MS4s, including those with populations of 25,000 or less, which include areas that may not yet have seen large scale development and whose receiving waters are still pristine.[8] As detailed above, most runoff is the result of man-made development in the landscape. Regional Boards in California have repeatedly recognized that even small increases in impervious surface within an area can have significantly deleterious effects on surface waters. For example, the Los Angeles Regional Board recently noted that, "[s]tudies have demonstrated a direct correlation between the degree of imperviousness of an area and waterbody degradation . . . Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 3-10 percent conversion from natural to impervious surfaces in a subwatershed."[9] Given the need to protect such watersheds, it is critical that the permit apply the requirement to retain the runoff produced by the 85th percentile storm to all small MS4s, not only those above a certain size threshold.

b. The Draft Permit Must Ensure that All Development is Covered By its Core Performance Criteria and Provisions.

While we fully support the Draft Permit's generally applicable standard requiring retention of the 85th percentile, 24-hour storm event, we are concerned that the Draft Permit's definitions for "Regulated Project Categories" under section E.12.d.1.a could be construed as unlawfully limiting the type of development that the permit's LID provisions are applied. For example, while the Draft Permit requires projects under specific commercial designations to comply with the Permit's LID controls, as well as broadly "industrial," "mixed-use," and "residential housing subdivisions," there is no catch-all category for commercial development generally. We suggest the Draft Permit include all commercial development under its categories of Regulated Projects, and that the Draft Permit additionally provide a catch-all for "all other development not specified under the category of Regulated Projects, with a threshold trigger of creating and/or replacing 10,000 square feet of impervious surface.

c. The Draft Permit's Numeric Sizing Criteria for Storm Water Retention and Treatment Should be Referenced in the Permit's Site Design Section.

While the Permit appropriately requires retention of the 85th percentile, 24-hour storm event, the Draft Permit's LID based Site Design Measures mention that the methods employed under E.12.d.2(ii)(2) "are based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event." It would clarify Draft Permit requirements if this section instead referred to use of the above practices, "to the extent feasible, to meet the Permit's "Numeric Sizing Criteria for Storm Water Retention and Treatment" under Section E.12.d.2(ii)(3)d.

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[8] Renewal MS4 Permittees in particular, which have been subject to discharge requirements under the existing Phase II General Permit since 2003, are already familiar with the permitting structure and requirements of the NPDES program and should not be exempted from critical terms such as the Draft Permit's Water Quality Runoff Standards.

[9] Los Angeles Regional Water Quality Control Board Order No. R4-2009-0057, at Finding B.16. See also, Center for Watershed Protection (March 2003) Impacts of Impervious Cover on Aquatic Systems, available at, http://www.cwp.org/documents/cat_view/78-other-center-publications.html.

d. The Draft Permit's Alternative Designs Criteria Must Specify That All Criteria Must Be Met To Be Allowed, and Must Specify that Alternative Designs are Not Permitted Where On-Site Retention is Technically Feasible.

The Draft Permit's Alternative Designs provisions list 4 categories of "effectiveness" that may allow for use of an alternative design to the Permit's Stormwater Treatment Measures requirements. (See E.12.d.2(ii)(3)(a). The Draft Permit should specify that all 4 criteria must be met in order for the Permit term to apply, and given the section's reference to biotreatment (i.e., filtration with discharge), must specify that BMPs resulting in discharge of runoff and/or pollutant loading are permitted only where on-site retention of the design volume is technically infeasible.

To this end, to the extent that the Draft Permit allows use of biofiltration in place of retention to meet a project's LID requirements, the Draft Permit must specify that biofiltration is available only in cases of technical infeasibility for on-site retention, and then must, in line with other permit's in California, require a performance multiplier to ensure that receiving waters are adequately protected.

In contrast to retention practices, which ensure that 100 percent of the pollutant load in the retained volume of runoff does not reach receiving waters, biofiltration practices that treat and then discharge runoff through an underdrain result in the release of pollutants to receiving waters. Indeed, in order to achieve equivalent pollutant load reduction benefits to the use of on-site retention, biofiltration practices would have to be 100 percent effective at filtering pollutants from runoff, which they are invariably not. As a result, we have previously commented that biofiltration practices are not a proper substitute for LID practices that retain water on-site.

This conclusion is borne out by data presented in the Draft Ventura County Technical Guidance Manual, which estimates pollutant removal efficiency for total suspended solids to be 54-89 percent, and for total zinc to be 48-96 percent.[10] Biofiltration has additionally been shown to be a particularly ineffective method of pollutant removal for addressing nitrogen or phosphorous, two common contaminants found in stormwater.[11] The Draft Ventura Technical Guidance, for

[10] Ventura County Low Impact Development Technical Guidance Manual, July 13, 2011, at D-7.

[11] Lawn irrigation has been identified as a "hot spot" for nutrient contamination in urban watersheds—lawns "contribute greater concentrations of Total N, Total P and dissolved phosphorus than other urban source areas . . . source research suggests that nutrient concentrations in lawn runoff can be as much as four times greater than other urban sources such as streets, rooftops or driveways." Center for Watershed Protection (March 2003) *Impacts of Impervious Cover on Aquatic Systems* at 69; see also H.S. Garn (2002) *Effects of lawn fertilizer on nutrient concentration in runoff from lakeshore lawns, Lauderdale Lakes, Wisconsin*. U.S. Geological Survey Water- Resources Investigations Report 02-4130 (In an investigation of runoff from lawns in Wisconsin, runoff from fertilized lawns contained elevated concentrations of phosphorous and dissolved phosphorous).

example, indicates that biofiltration achieves pollutant removal efficiency for total nitrogen at between only 21-54 percent,[12] as compared with 100 percent for runoff retained on-site.

e. The Draft Permit unlawfully removes meaningful review by the agency in the Watershed Process provisions.

The Draft Permit appears to establish a scheme for the Permittee to develop their own strategy for Watershed Process:

> "Within the second year of the effective of the permit, The State and Regional Water Boards will determine whether the requirements in E.12.d and E.12.e. are protective of the watershed processes identified below or if modified criteria should apply. The Regional Boards may also, following evaluation of watershed processes, approve in-lieu programs allowing applicants to financially participate in projects that protect or enhance watershed processes as an alternative to on-site compliance. Permittees shall work collaboratively with the appropriate Regional Water Board to incorporate watershed process-based numeric criteria for new and redevelopment projects."[13]

However, the Draft Permit is unclear as far as what level of review will occur at the Regional Board. This raises significant concerns with respect to public process and agency review requirements. For example, by putting such review authority solely in the Executive Officer shields the development of these critical, core permit requirements from oversight and creates a self-regulatory scheme in violation of the Clean Water Act. In Environmental Defense Center, Inc. v. U.S. E.P.A, 344 F.3d 832, 854-56 (9th Cir. 2003), the court explained: "[S]tormwater management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity. . . . Congress identified public participation rights as a critical means of advancing the goals of the Clean Water Act in its primary statement of the Act's approach and philosophy."

In bypassing the public review process, this provision instead has the potential to exempt development from participation in the Permit's core requirements to prevent the discharge of pollutants to the MS4 system. These requirements are necessarily reviewed in order to determine whether the permit meets the requirements of the Clean Water Act's MEP standard. This determination lies properly with the State Board and Regional Board, through the process of public review and hearing. Thus, this potential "off ramp" should be eliminated or revised to ensure proper review.

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[12] Ventura County Low Impact Development Technical Guidance Manual, July 13, 2011, at D-7. See also, BASMAA (December 1, 2010) *Draft Model Bioretention Soil Media Specifications-MRP Provision C.3.c.iii*, at Annotated Bibliography section 3.0 (noting nutrient removal from synthetic stormwater runoff demonstrated only 55 to 65 percent of total Kjeldahl nitrogen removal and that only 20 percent of nitrate is removed from the runoff).

[13] Draft Permit at 57.

f. The Draft Permit's Storm Water Treatment Measures and Baseline Hydromodification Management Measures provisions should be clarified.

The Draft Permit establishes provisions to addresses runoff from remaining impervious DMAs. The goal of directing runoff to one or more facilities designed to infiltrate and/or evapotranspire is appropriate.[14] However, the approach outlined is extremely convoluted and should be clarified and streamlined. Through these provisions, the State Board should ensure that each project retain the 85th percentile, 24-hour storm event. While use of DMAs to promote this result can be an appropriate means of addressing site runoff, the Permit must be clear that it is the overall project runoff volume that must be addressed, not isolated components of each project.

IV. The Draft Permit's Interim Hydromodification Management Provisions Should Require Compliance with Pre-Development, not Pre-Project, Conditions

As discussed above, requirements that a project meet pre-project conditions are not adequately protective of water quality, and will ensure that impervious surfaces that generate polluted runoff or high volumes of runoff persist in the built environment effectively indefinitely. This is of particular concern with regard to the effects of hydromodification. Recent studies conducted in California indicate that intermittent and ephemeral streams are even more susceptible to the effects of hydromodification than streams from other regions of the U.S. with stream degradation being recognized when the associated catchment's impervious cover is as little as 3-5%."[15] In order to address the presence of impervious surfaces that generate runoff contributing to flooding, erosion, and other volume related impacts to receiving waters, the Draft Permit should use the term "pre-development" in place of "pre-project" in its hydromodification criteria under section E.12.e. The Draft Permit should also clearly state that "pre-development" refers not to the condition of a site prior to construction of the particular project under review, but rather the condition of a site in its *undeveloped* state. (Draft Permit at ¶ E.12.e)

V. The Draft Permit Must Address Both Discharges to Areas of Special Biological Significance

a. The Draft Permit Must Include Specific Provisions to Eliminate Waste Discharges into Areas of Special Biological Significance

Environmental Groups have advocated for the implementation of the decades-old Ocean Plan discharge prohibition for years, and have been similarly active in the process to address the ongoing discharges to Areas of Special Biological Significance ("ASBSs"). ASBSs are home to the state's most unique and sensitive marine communities, each one encompassing a complex and fragile ecosystem.[16] To protect these communities, the State Board deliberately adopted a

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[14] As discussed above, biofiltration should only be allowed when technically infeasible to infiltrate.

[15] Los Angeles Regional Water Quality Control Board, Order No. R4-2009-0057, at Finding B.16.

[16] *See, e.g.*, State Water Resources Control Board (Jan. 18, 2011) Program Draft Environmental Impact Report, Exception to the California Ocean Plan for Areas of Special Biological Significance Waste Discharge Prohibition for Storm Water and Nonpoint Source Discharges, with Special Protections, at sections 5.1 and

prohibition in the Ocean Plan on waste being discharged into ASBSs, thereby recognizing that the discharge of waste affects the maintenance of natural water quality. The California Ocean Plan states that:

> Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.[17]

The ASBS Waste Discharge Prohibition is incorporated into, and is an enforceable requirement, of all NPDES Permits coastwide. Thus, unless an exception has been obtained, the Ocean Plan prohibits discharge of waste (including stormwater runoff) into ASBSs, and discharges near ASBSs must be located a sufficient distance away to ensure maintenance of natural water quality. The Board must incorporate discharge controls into the Draft Permit that eliminate Permittees' illegal discharges into ASBSs. Additionally, ASBS-specific monitoring requirements should be added to track the progress of waste discharge reductions into ASBSs.

VI. The Draft Permit Must Include All Applicable TMDL Waste Load Allocations

Section E.15 of the Draft Permit appropriately states that Permittees comply with all applicable TMDL waste load allocations, load allocations, effluent limitations, implementation requirements and monitoring requirements in the regional water board Basin Plans.[18] Further Attachment G of the Draft Permit outlines TMDL WLAs and specific implementation requirements. However, this Attachment is incomplete. For instance, there are no Region 4 TMDLs listed. The Draft Permit states that they are incorporated by reference and there will be a reopener. State Board staff should coordinate with Region 4 and all other regions to ensure that all applicable TMDL WLAs and implementation measures are reflected in Attachment G. At a minimum, the Permit should state that the reopener will occur within one year. The Draft Permit is the regulatory mechanism that makes the TMDL and its requirements enforceable, thus it is critical to include all these requirements to ensure that they are actually undertaken by the Permittee and that water quality standards are attained.

We support the inclusion of milestones that may be outside of the permit term, in the event that the General Permit is administratively extended which is frequent occurrence.

VII. Require All MS4s to Conduct Water Quality Monitoring to Ensure Stormwater Discharges Do Not Degrade Water Quality

While we appreciate the addition of monitoring requirements for Areas of Special Biological Significance (ASBS), the Draft Permit's remaining monitoring requirements are completely insufficient and illegal. We are disappointed to see that numerous monitoring elements that were in the June 7, 2011 Draft Permit have been eliminated. What is the reasoning for the major steps backward?

5.5, available at, http://www.swrcb.ca.gov/water_issues/programs/ocean/docs/asbs/asbspeir_draft2011jan.pdf.

[17] 2009 California Ocean Plan, Sec. III.E.1.

[18] Draft Permit at 75.

The Clean Water Act and its implementing regulations explicitly require monitoring for NPDES permits.[19] NPDES permits must specify monitoring requirements necessary to determine compliance with effluent limitations.[20] The Clean Water Act mandates, "The Administrator shall require the owner or operator of any point source to . . . install, use and maintain such monitoring equipment and methods", which includes biological monitoring and sampling of effluent.[21] Likewise, the federal regulations direct: "All permits shall specify. . . [r]equired monitoring including type, intervals, and frequency." [22] Because these monitoring requirements dominate the Clean Water Act's permitting program, the Act clearly views monitoring as an integral part of all permits. Many elements of the draft Monitoring Program under section E.13 of the Draft Permit must be strengthened in order to meet this requirement. The Permit must contain minimum monitoring requirements, which are necessary to assess compliance and impacts from the MS4. Specifically, the monitoring program must be strengthened as discussed in detail below in order to ensure that discharges do not degrade water quality.

a. Applicability

The Draft Permit limits monitoring requirements to Permittees falling under specific categories. Water quality monitoring in the Draft Permit is only required if a Permittee: 1) discharges into an ASBS, 2) discharges into a waterbody with a Total Maximum Daily Load (TMDL) and is identified as a responsible party, 3) discharges into a § 303(d) listed waterbody, or 4) has a population greater than or equal to 50,000 and is listed in Attachment A. In the case of 303(d) monitoring, the permittee can "consult" with the regional water board Executive Officer to determine if monitoring is necessary at all. This narrow scope is inappropriate as all Permittees are obligated to determine if their discharge is impacting water quality regardless of their size or current requirements.

Further weakening the monitoring requirements, the Draft Permit requires receiving water monitoring only when no ASBS, TMDL or 303(d) monitoring is conducted. Also the Draft Permit appears to allow for special studies in place of receiving water monitoring.

> "Traditional Small MS4 Permittees with a population greater than 50,000 listed in Attachment A that are not already conducting ASBS, TMDL or 303(d) monitoring efforts shall participate in one of the following monitoring programs subject to Regional Water Board Executive Officer approval: a) Regional Monitoring; b) Receiving Water Monitoring; c) Special Studies." (Draft Permit at 65).

This is completely inappropriate and should be removed. In a hypothetical situation, a Permittee could monitor for a single waterbody-pollutant impairment and have no additional monitoring requirements. ASBS, TMDL and 303(d) monitoring is not necessarily sufficient to assess the condition of the waterbody any impacts from the discharge. These types of monitoring all serve different purposes. The Draft Permit should not focus solely on known impairments but instead should assess the overall water quality.

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[19] *See* 33 U.S.C. § 1318(a); 40 C.F.R. §§ 122.48, 122.41.
[20] See CWA section 402(a)(2); 40 C.F .R. I 22.44(i).
[21] See 33 U.S.C. § 1318(a).
[22] See 40 C.F.R. §§ 122.48; 122.41(j).

b. Receiving Water Monitoring

Receiving water monitoring is a critical component of any water quality monitoring program. We strongly support the bioassessment monitoring in the Draft Permit; however, we have some concerns with the program as proposed.

> The Draft Permit provides as an objective of the urban/rural program:
>
> "…the Permittee shall develop and implement a receiving water monitoring program to determine if new development LID BMPs are effective at minimizing degradation in waterways."[23]

The objectives of a receiving water program should be much more far-reaching. For instance a receiving water monitoring program will determine if receiving water limits are being achieved, assess trends in pollutant concentrations over time and determine whether designated beneficial uses are fully supportive. While assessing LID is a good goal, it is hard to imagine with the slow pace of new and redevelopment projects that specific benefits will be measurable within two years of adoption of the permit, especially given the limited nature of the proposed monitoring scheme. Thus, the additional goals outlined above should be incorporated in the requirements and utilized to develop a sufficient receiving water monitoring program. Also additional guidance should be provided if a regional monitoring program is pursued. The Draft Permit should require that regional monitoring programs assess: 1) the condition of the receiving waters; 2) What are the sources of the stressors; and 3) Are the management decisions effective.

Further, the required receiving water monitoring parameters are insufficient to meet the goals of a receiving water program. This list should be greatly expanded. Pollutants such as nutrients, metals such as copper and zinc, and conventional pollutants (TSS, TDS, specific conductance, pH, turbidity, total hardness) are notably absent. Total coliform, fecal coliform and enterococcus should be specified instead of "bacteria." Also pyrethroid monitoring should contain reporting limits that are sufficiently low to be under the toxic levels. This inadequacy is compounded by the fact that there is only one monitoring location per HUC 12 watershed. An HUC 12 is very large watershed (up to 63 square miles). Thus, there will be extremely limited monitoring data collected under this scheme. We urge the State Board to enhance the monitoring program by expanding the parameters monitored and the number of monitoring locations.

c. End-of Pipe Monitoring

The Draft Permit does not include any monitoring at end-of-pipe outfalls. The State Board and regional boards must include this type of monitoring for compliance-assurance and source identification purposes. Drainages carrying stormwater from commercial, industrial, and high-use transportation should be prioritized for monitoring. In addition to outfall monitoring, there should be downstream receiving water monitoring for each outfall monitoring station to determine if MS4 discharges are causing or contributing to exceedances of water quality standards. Monitoring should occur at the first storm event of the wet season and two additional events. Ironically, the Program Effectiveness section of the permit states that the program assessment will be based in part of "MS4 discharge quality"[24] and requires municipal watershed pollutant load quantification of parameters such as nitrogen and metals[25]. How will the

[23] Draft Permit at 67.

[24] Draft Permit at 71.

[25] Draft Permit at 73.

Permittee accomplish these tasks with no outfall data? The State Board should include this critical monitoring component.

d. TMDL Monitoring

We support the inclusion of TMDL monitoring requirements and other TMDL implementation milestones in Attachment G of the Draft Permit. "[O]nce a TMDL is developed, effluent limitations in NPDES permits must be consistent with the WLA's in the TMDL." (Communities for a Better Env't v. State Water Res. Control Bd. (2005) 132 Cal.App.4th 1313, 1322 (citing 40 C.F.R. § 122.44(d)(1)(vii)(B) (NPDES permits must be "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by the EPA")); see also, City of Arcadia v. State Water Resources Control Board (2006) 135 Cal.App.4th 1392, 1404.) As a result, TMDL requirements such as monitoring must be included in the Permit, as all requirements are vital steps in ensuring that dischargers are on-track for ultimate compliance with a TMDL's waste load allocations.

The Draft Permit requires that TMDL responsible parties consult with the regional boards within six months of adoption to create a monitoring plan for those TMDLs not specified in Attachment G. It is concerning that there are entire regions and associated TMDLs absent from Attachment G, especially given the lengthy stakeholder process for this Permit. At a minimum, we urge the State Board to require that approved TMDL monitoring begin within one year from the adoption date of the Permit. Many of these TMDLs have been in effect for numerous years. Monitoring should have already started, and in cases where it has not been implemented, it should start as soon as possible.

e. Toxicity Monitoring

As seen on the map of impaired waterbodies from the 2010 Integrated Report — 303(d) Listed Waters for Toxicity,[26] waterbodies throughout the state are impaired by toxicity. In fact, toxicity has been observed in all nine regions according to a recent report released by SWAMP entitled *Summary of Toxicity in California Waters: 2001-2009*.[27] Of the 992 sites assessed by the SWAMP program, 473 sites (48%) had at least one sample where toxicity was observed and 129 sites (13%) were classified as highly toxic.[28]

Storm water often contains metals, oils, pesticides, and other contaminants that can be extremely toxic to aquatic life. SCCWRP and numerous local government monitoring programs have demonstrated that MS4 discharges are frequently toxic. Notwithstanding the California Toxics Rule and narrative water quality standards that address toxicity and with which stormwater dischargers must comply, there are numerous California waterways listed as impaired for aquatic toxicity on the CWA §303(d) list, and MS4 discharges are often a source of this impairment. Toxicity monitoring is the "safety net" of the NPDES monitoring program, as it may identify toxicity from pollutants that are not monitored or the synergistic impacts of pollutants. Again, we are disappointed that the proposed toxicity monitoring in the previous draft has been eliminated in the Draft Permit. The Draft Permit should include toxicity monitoring in the receiving water and outfalls, in order to evaluate if stormwater is causing or contributing to toxic impacts of aquatic life. This monitoring should be conducted at all monitoring locations at least on a *quarterly* basis, as toxicity can often be intermittent.

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[26] Available at, http://www.swrcb.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.
[27] State Water Resources Control Board, Surface Water Ambient Monitoring Program (November, 2010) *Summary of Toxicity in California Waters: 2001-2009*, available at http://www.swrcb.ca.gov/water_issues/programs/swamp/docs/reports/tox_rpt.pdf.
[28] *Id.*

f. Beach Monitoring

Stormwater runoff is a major source of beach bacteria pollution. The Permittees must be on hand to undertake beach water quality monitoring at stormwater impacted sites should the Health Department discontinue weekly monitoring, as this program is crucial to a major public health issue. We are disappointed to see the elimination of beach monitoring requirements in this current Draft Permit from the previous draft. Why was this eliminated? The Draft Permit should require that Permittees discharging to AB 411 beaches must comply with the Ocean Plan monitoring requirements. The monitoring program should include year-round monitoring at beach locations. Nuisance flows occur on a year-round basis and are a known source of bacteria to beaches. Specifically, the Ocean Plan requires weekly bacteria indicator samples from each site.[29] The Permit must additionally state clearly that monitoring be conducted in accordance with AB 411 procedures. Lastly, the Permit should specify that monitoring take place at the wave-wash directly in front of stormdrain and stream sources (point zero). This is necessary to ensure that the waters closest to the discharge are evaluated.

VIII. BMP Implementation Strategies Should Be Strengthened

One of the most significant shortcomings in previous stormwater permits is the lack of performance-based criteria for BMPs. As a result, BMPs are added as part of permit requirements or pollution abatement efforts without any focus on the quality of the water exiting the BMPs. An effective way to ensure the success of stormwater programs and the attainment of water quality standards is to assess BMPs based on performance. Flow-based design criteria are simply not adequate to ensure that water quality standards are consistently met because flow, and corresponding BMP size, is but one factor determining BMP effectiveness.

While we recognize that the Draft Permit includes "Program Effectiveness Assessment and Improvement" requirements[30], we believe that this section should be further strengthened. In order to ensure that BMPs are truly designed to the MEP and ensure that Permittees' discharges meets water quality standards, we recommend that the draft Permit require a performance evaluation for all structural (or engineered) best management practices used by the discharger to comply with the Permit, including retrofits and iterative requirements. Specifically, at least once per permit cycle, the Permittee should submit a report to the State Board or regional board that includes a BMP performance evaluation. The report should identify three selected structural BMPs for each targeted pollutant of concern, and then detail an analysis on the efficacy of those BMPs for removing the identified pollutants of concern, in terms of pollutant removal efficiency and effluent water quality. The Permittee would then select the best performing BMP of the three for each targeted pollutant. This evaluation will help determine the structural management practices that are truly the "best" management practices. This type of evaluation is also particularly necessary for discharges into impaired waters and ASBSs, for which BMP effectiveness is particularly critical. Finally, all BMPs installed should be designed to handle the 85th percentile storm, which is currently the mandate in SUSMP requirements. This process will help move Permittees further towards water quality standards attainment.

IX. The Draft Permit should Include Trash Reduction Requirements and Should be Consistent with the State Board's Pending Statewide Trash Policy

[29] California Ocean Plan, at Section III.D.1.
[30] Draft Permit at ¶ E.14.

The Draft Permit contains an extremely limited focus on trash pollution. Staff improperly removed the Trash Reduction Program that was proposed in the June 7, 2011 draft permit. At a minimum Staff should require a **mandatory** re-opener clause and trash reduction strategies in the Draft Permit. The Permit's first draft required "[a]ll Traditional Small MS4 Permittees with a population greater than 25,000 shall require at least 20 percent of the Permittee's jurisdiction zoned, commercial retail/wholesale, comply with a Trash Abatement Plan."[31] However, during recent Staff Workshops on the MS4 Phase II Permit, Staff indicated that the Trash Reduction Program will be removed from the current Draft Permit because of the development of a Trash Policy, expected to be adopted in the summer of 2013. Delaying Permittees' responsibility to reduce trash discharges into waters of the state does not meet MEP.

Trash is a ubiquitous pollution problem in California, and a delay in reducing the amount of trash in our waterways is unacceptable. The Draft Permit itself finds trash to be a "pervasive problem in California."[32] The Permit then goes on to state that "[c]ontrolling trash is one of the priorities in California not only because of trash discharge prohibitions required in certain Regional Water Board Basin Plans, but also because trash and litter cause particularly major impacts on our enjoyment of California waterways."[33] Thus, it is critical that the Permit address trash pollution in a comprehensive manner.

Further, it is inappropriate for Staff to rely on a Trash Policy to be adopted by mid-2013 as a reason for eliminating a Trash Reduction Program from the Draft Permit. Controversial State Water Board policies have been known to take years—even decades—to be enacted. For example, the Once-Through Cooling (OTC) Policy is stated to have begun in 2005, and was not adopted until 2010.

Thus, we request that Staff revisit the Trash Reduction Program, and insert minimum requirements to prevent the degradation of California's waterways due to trash pollution. Specifically, staff should re-insert a Trash Reduction Program that includes structural controls and baseline trash reduction requirements. Also, the Permit should explicitly provide a mandatory re-opener clause to insert the Trash Policy's requirements once enacted.

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For the aforementioned reasons, the Revised Draft Permit does not meet the legal standard of controlling pollutants to the MEP. We look forward to working with you and your staff to ensure the Final Permit will meet these requirements and serve to protect California's water resources.

Sincerely,

Kirsten James
Water Quality Director
Heal the Bay

Noah Garrison
Project Attorney
Natural Resources Defense Council

[31] Permit I, at 54.
[32] Draft Permit at 5.
[33] Draft Permit at 5.