August 31, 2015

Via electronic mail

Mr. Sam Unger
Executive Officer and Members of the Board
California Regional Water Quality Control Board, Los Angeles Region
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Re: Comments on Draft Enhanced Watershed Management Programs Pursuant to the Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit), NPDES Permit No. CAS004001, Order No. R4-2012-0175

Dear Mr. Unger:

On behalf of the Natural Resources Defense Council, Los Angeles Waterkeeper, and Heal the Bay (collectively, Environmental Groups), we are writing with regard to the draft Enhanced Watershed Management Programs (EWMPs) submitted by the Permittees pursuant to the Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit, NPDES Permit No. CAS004001, Order No. R4-2012-0175 (2012 Permit or Permit). This comment letter addresses, in general, draft EWMPs for the following watershed groups: Upper Los Angeles River (ULAR),[1] Upper San Gabriel River (USGR),[2] North Santa Monica Bay Coastal Watersheds (NSMBCW),[3] and Beach Cities.[4]

[1] Permittees include Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Canada Flintridge, Los Angeles, Montebello, Monterey Park, Pasadena, Rosemead, San Gabriel, San Marino, South Pasadena, Temple City, Los Angeles County, and the Los Angeles County Flood Control District.
[2] Permittees include Baldwin Park, Covina, Glendora, Industry, La Puente, Los Angeles County, and the Los Angeles County Flood Control District.
[3] Permittees include Malibu, Los Angeles County, and the Los Angeles County Flood Control District.
[4] Permittees include Hermosa Beach, Manhattan Beach, Redondo Beach, Torrance, and the Los Angeles County Flood Control District.

We appreciate the opportunity to submit these comments to the Los Angeles Regional Water Quality Control Board (Regional Board). Given the large volume of material submitted by the Permittees, Environmental Groups were unable to review in detail all of the draft EWMPs. The lack of particular comments on a specific EWMP, however, should not be taken as indication of our agreement with the sufficiency or legality of those documents. In many cases, our specific examples are representative of deficiencies in all of the submitted draft EWMPs. As a result, we urge the Regional Board to review all 12 submitted management programs in light of our comments here.

I. Introduction

As an initial matter, Environmental Groups' comments on the draft EWMPs submitted by the Permittees should not be construed as approval or acceptance of the 2012 Permit terms. We continue to maintain that several provisions of the Permit are in violation of the federal Clean Water Act (CWA) and California Porter-Cologne Water Quality Control Act. Environmental Groups filed a petition for review of the 2012 Permit with the State Water Resources Control Board (State Board), which discusses, in detail, the ways in which the Permit violates both federal and state law. After making certain changes to the Permit and its accompanying Fact Sheet (none of which affected the provisions Environmental Groups contest as illegal), the State Board upheld the Permit on June 16, 2015. As a result, on July 24, 2015, Environmental Groups filed a petition for writ of mandate in a California Superior Court to challenge the State Board's decision to uphold the Permit with all of its illegal provisions. The Court has yet to make a determination on our petition.

Due to the deficiencies in the submitted draft EWMPs, many of which are detailed below, the programs do not ensure that discharges from the Permittees' MS4 systems will not "cause or contribute" to exceedances of Receiving Water Limitations (RWLs), including Total Maximum Daily Loads (TMDLs) in the 2012 Permit, and thus are in violation of Permit requirements. This letter is not intended to exhaust the reasons why the submitted draft EWMPs fail to meet Permit requirements and why the EWMPs will not ensure ultimate compliance with water quality standards.

II. Summary of Comments

Several of the draft EWMPs reflect significant effort on the part of the Permittees, mainly with respect to the level of specificity that is provided regarding the set of Best Management Practices (BMPs) proposed for reaching compliance. However, the submitted EWMPs, in numerous aspects, fail to meet the requirements of the 2012 Permit or are otherwise inadequate to control pollution and control the region's water quality. The Regional Board should not approve these programs until such deficiencies are corrected. Common issues with the submitted draft EWMPs include:

1. The proposed financial strategies are inadequate;

2. Proposed compliance schedules are in violation of state or federal law or are otherwise unreasonably long;

3. Permittees' use of the Exceedance Volume approach is flawed;

4. The implementation strategy relies too heavily on the adaptive management process, which itself relies on flawed and inadequate monitoring programs;

5. There is insufficient analysis to back up the claims about what can be achieved through green streets implementation and regional BMPs implemented on privately owned lands;

6. The EWMPs lack sufficient detail to achieve load reductions assumed from institutional BMPs;

7. In at least two instances, the RAA's model calibration regularly diverges from observed values at higher stream flows;

8. The analysis for LID BMPs is limited to the consideration of only two approaches: biofiltration and bioretention;

9. The assumptions regarding redevelopment are inadequate;

10. In at least two instances, there are several potential sources of error associated with the data underlying the model calibration;

11. The margins for error in reaching TLRs as a result of BMP implementation are extremely small;

12. In at least two instances, Permittees fail to consider the possible intermingling of privately owned stormwater infrastructure within the full MS4 system;

13. In at least one instance, no analysis of standards applicable to discharges to ASBS are included, and existing data for discharges to ASBS are not included in the modeling exercise or the EWMP;

14. There is insufficient data to demonstrate reasonable assurance of compliance with applicable dry weather Permit limits;

15. In at least two instances, there is very little to no discussion on how trash reduction requirements will be met; and

16. The claims about removal efficiencies by catch basin inserts are questionable.

III. Common Deficiencies Identified in Draft EWMPs

The 2012 Permit allows for Permittees to "develop Watershed Management Programs to implement the requirements of [the Permit] on a watershed scale through customized strategies, control measures, and BMPs." (2012 Permit, at VI.C.1.a.) Permittees that elect to participate in an EWMP must develop a plan that:

> comprehensively evaluates opportunities, within the participating Permittees' collective jurisdictional area in a Watershed Management Area, for collaboration among Permittees and other partners on multi-benefit regional projects that, wherever feasible, retain (i) all non-storm water runoff and (ii) all storm water runoff from the 85th percentile, 24-hour storm event for the drainage areas tributary to the projects, while also achieving other benefits including flood control and water supply, among others.

(Id. at VI.C.1.g.) In areas of the Permittees' jurisdictions where retention of the 85th percentile, 24-hour storm event is not technically feasible, the EWMP "must include other watershed control measures to ensure that MS4 discharges achieve compliance with all interim and final WQBELs set forth in Part VI.E… and [] ensure that MS4 discharges do not cause or contribute to exceedances of receiving water limitations in Part V.A." (Id. at VI.C.1.g.v.) EWMPs are additionally required, among other provisions, to:

- identify water quality priorities through conducting a water quality characterization of the watershed, classifying water-body pollutant combinations (WBPCs), conducting a pollutant source assessment, and prioritizing pollution issues to be addressed (Id. at VI.C.5.a.);
- select watershed control measures, including identifying specific "strategies, control measures, and BMPs to implement their individual storm water management programs, and collectively on a watershed scale" (Id. at VI.C.5.b.);
- conduct a Reasonable Assurance Analysis (RAA) for each WBPC addressed by the EWMP, in drainage areas where retention of the 85th percentile, 24-hour storm event is not technically feasible (Id. at VI.C.5.b.iv(5), VI.C.1.g.v.);
- establish compliance schedules and interim milestones for achieving pollutant reduction goals (Id. at VI.C.5.c.);
- except where Permittees demonstrate technical infeasibility, "include multi-benefit regional projects to ensure that MS4 discharges achieve compliance with all final WQBELs set forth in Part VI.E. and do not cause or contribute to exceedances of receiving water limitations in Part V.A. by retaining through infiltration or capture and reuse the storm water volume from the 85th percentile, 24-hour storm for the drainage areas tributary to the multi-benefit regional projects" (Id. at VI.C.1.g.iv.); and
- ensure that a financial strategy is in place to fund the implementation of identified control measures and projects.

In numerous regards, and as detailed further below, the Permittees appear to be proceeding with plans that fail to meet the above-referenced or other legal requirements.

A. The Proposed Financial Strategies are Inadequate

The 2012 Permit requires that Permittees participating in an EWMP maximize the effectiveness of funding, and "[e]nsure that a financial strategy is in place" to implement the pollution control measures identified by the RAA and EWMP process. (2012 Permit, at VI.C.1.g.vi., VI.C.1.g.ix.) This Permit provision underpins the State Board's rationale for approving the EWMP process. In its Final Order upholding the 2012 Permit including its EWMP provisions, the State Board concluded that "the WMP/EWMP approach is a clearly defined, implementable, and enforceable alternative to the receiving water limitations provisions… and that the alternative provides Permittees an ambitious, yet achievable, path forward for steady and efficient progress toward achievement of those limitations while remaining in compliance with the terms of the permit."[5] However, without an adequate financial strategy to properly execute the BMPs proposed by the EWMPs, compliance with RWLs and TMDL-specific limitations will *not* be ensured. Failure to demonstrate a real financial commitment for implementing the EWMP, therefore, goes against the State Board's clearly stated goal of the EWMP approach – that is, to achieve compliance with water quality standards.[6]

In all of the four EWMPs that Environmental Groups reviewed, Permittees' cost estimates for implementing the EWMP are substantial and orders of magnitude higher than have previously been committed by the agencies to their MS4 programs. For example, for the ULAR EWMP Group, the capital costs to address Water Quality Priorities by 2037 is estimated at over $6.0 billion, with total operations and maintenance costs exceeding $210 million per year once fully implemented.[7] For the USGR EWMP Group, the total cost for implementation of the EWMP through 2040, including operation and maintenance, is approximately $2.14 billion.[8] For the NSMBCW EWMP Group, the estimated total capital and operation and maintenance costs for proposed structural BMPs over 20 years are $54.2 million.[9] Lastly, for the Beach Cities EWMP Group, the total 20-year life-cycle costs to implement each structural BMP plus the associated annual operation and maintenance costs over 20 years are $150 million.[10] Currently, none of these four watershed groups have sufficient funds or dedicated funding streams to construct the projects proposed in their EWMPs; thus, all four EWMP Groups must pursue additional stormwater funding from multiple sources in order to ensure that the *additional* costs of compliance with the 2012 Permit as a result of EWMP implementation can be covered.

Unfortunately, none of the EWMPs that Environmental Groups reviewed provides a funding roadmap, let alone demonstrates a commitment to securing funds, to implement the proposed control measures as required for achieving Permit compliance. While the EWMPs identify, to varying degrees, the potential funding sources/projects needed to achieve compliance

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[5] State Water Resources Control Board, Order WQ 2015-0075 (June 16, 2015), at 51 (Final Order).
[6] Id. at 14.
[7] Upper Los Angeles River EWMP, at ES-9.
[8] Upper San Gabriel River EWMP, at 111.
[9] North Santa Monica Beach Coastal Watersheds EWMP, at 138.
[10] Beach Cities EWMP, at 6-18.

with RWLs and TMDL-specific limitations, without an actual step-by-step *plan or strategy* to carry out the identified financial projects, however, the EWMPs are merely paper exercises. For example, the potential funding sources identified in the EWMPs generally included grants, bonds, State Revolving Funds, interagency partnerships, local funding opportunities, legislative or policy changes, and public private partnerships. A couple of the EWMPs also discuss, in general terms, barriers associated with some of the funding sources and ways those barriers might be overcome. However, all of the Financial Strategy sections reviewed end at the identification of these sources and barriers. To the extent any type of "strategy" is actually discussed, the draft EWMPs recognize the need for interagency collaboration and a coordinated, regional approach, but this need is merely described in a vague, cursory manner and again, with no specific details on how to accomplish the necessary interagency and regional collaboration.

Mere identification of potential funding sources, with no details whatsoever regarding the specific action steps that Permittees will need to take in order to carry out some of the funding strategies proposed, does *not* constitute a sound financial strategy sufficient to meet the Permit requirement. In order for Permittees to provide the level of assurance that the EWMPs will ultimately achieve compliance with water quality standards as required by the State Board, the Financial Strategy element of the programs must *actually* be "in place" before the Regional Board can approve the EWMPs. At a minimum, the Financial Strategy section must describe in detail the following elements:

1) Selection and prioritization of the multiple financial approaches identified;
2) Identification of current funding streams, for each of the EWMP Group Members, sufficient to implement existing stormwater projects;
3) An articulation of the relative financial responsibility and contribution of each of the EWMP Group Members to EWMP implementation, and the Memorandum of Understandings or other legal documents memorializing this organization;
4) An identification of the available grants, application timelines and requirements, and the lead EWMP Group Member(s) that will undertake and coordinate the grant-writing efforts;
5) Model legislation or ordinance, and a timeline for seeking municipal stormwater fees, if any;
6) A funding schedule, based on the interim and final compliance deadlines in the 2012 Permit, which sets forth the timeline for securing grants, loans, stormwater fees, or other funding mechanisms that will ensure funding is in place to timely implement the EWMP measures; and
7) A demonstration that the collective mix of funding sources identified in the Financial Strategy is sufficient to implement all of the proposed control measures in the EWMPs and consistent with the schedules established in the EWMPs.

The funding strategy aspect of the EWMP is one of, if not, *the most* important piece of the program because without an adequate financial strategy and commitment in place, it will be impossible for Permittees to successfully implement their EWMPs and thus the entire program development process would be a futile exercise and would only result in the delay of achieving ultimate compliance with water quality standards.

B. Proposed Compliance Schedules are in Violation of State or Federal Law or are Otherwise Unreasonably Long

i. Pollutants Subject to an Established TMDL

In several instances, Permittees incorrectly incorporate interim milestones and final compliance deadlines for certain WBPCs addressed by TMDLs. For WBPCs addressed by TMDLs, the 2012 Permit requires the Permittees to incorporate the compliance schedules found in Attachments L through R of the Permit into the EWMP, and where necessary, develop interim milestones and dates for their achievement. (2012 Permit, at VI.C.5.c.) A Permittee participating in an EWMP that does not thereafter comply with the compliance schedule must instead demonstrate compliance with its interim water quality-based effluent limitations (WQBELs) and/or RWLs of the Permit. (Id. at VI.E.2.d.i(4)(c).)

The ULAR EWMP sets interim and final compliance dates for the LAR Metals TMDL and Harbors Toxics TMDL based on their pre-established implementation schedules.[11] The pollutants addressed by these TMDLs, however, are regulated by the California Toxics Rule (CTR), which establishes water quality standards for priority toxic pollutants in California's inland surface waters and enclosed bays and estuaries.[12] The CTR also states that the compliance schedules for the regulated pollutants cannot extend for more than five years from the date of permit issuance; however, the provisions authorizing compliance schedules in the CTR expired on May 18, 2005.[13] This means that permits issued after that date may not incorporate compliance schedules for pollutants regulated by the CTR. As a result, EWMPs pursuant to the 2012 Permit may not incorporate compliance schedules for CTR-regulated pollutants, therefore the interim and final compliance deadlines for LAR Metals TMDL and Harbor Toxics TMDLs established by the ULAR EWMP are illegal because they violate the CTR. Permittees of the ULAR EWMP Group must instead demonstrate immediate compliance with the pollutants addressed by these TMDLs.

For the USGR EMWP, the same situation exists. The USGR EWMP illegally incorporates interim and final compliance deadlines for SGR Metals and Impaired Tributaries Metals and Selenium TMDL and DC and Greater LA and LB Harbor Water Toxic Pollutants TMDL[14] because the pollutants covered by these TMDLs are governed by the CTR. Because these TMDLs were established based on CTR criteria, the USGR EWMP (which is being developed pursuant to a permit issued *after* May 18, 2005) may not incorporate their implementation schedules, and instead, the Permittees must demonstrate immediate compliance with these CTR-regulated pollutants.

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[11] Upper Los Angeles River EWMP, Table 3-1 at 3-2.
[12] See 40 C.F.R. § 131.38.
[13] Id. at § 131.38(e)(6), (e)(8).
[14] Upper San Gabriel River EWMP, Table 2-3 at 22.

In the Beach Cities EWMP, for the Dominguez Channel (DC) watershed, toxicity, copper, lead, and zinc are all addressed by a Regional Board-established TMDL and therefore their corresponding compliance schedules are incorporated into EWMP.[15] However, copper, lead, and zinc are pollutants covered by the CTR, therefore their compliance schedules are illegal.

ii. Pollutants in the Same Class as Those Addressed in a TMDL

In several instances, Permittees establish incorrect milestones and final compliance dates for WBPCs not addressed by a TMDL, but where the relevant pollutant is in the same class as a TMDL pollutant and for which the water body is identified as impaired on the State Board's CWA section 303(d) List. For these types of pollutants, the Permit requires the EWMP to incorporate a schedule consistent with the TMDL schedule for a pollutant of the same class. (Id. at Part VI.C.a.i.)

The ULAR EWMP lists the following pollutants as Category 2 WBPCs: dioxin, total mercury, copper, total thallium, and daizinon.[16] The ULAR EWMP defines Category 2 pollutants as those "pollutants on the State Water Resources Control Board 2010 Clean Water Act Section 303(d) List of Impaired Water Bodies or those constituents that have sufficient exceedances to be listed."[17] Table 3-5 indicates that the interim and final schedule milestones for dioxin are based on the dry and wet weather schedule for the LAR Bacteria TMDL. However, the LAR Bacteria TMDL is an incorrect compliance schedule source to use for dioxin because dioxin is not in the same pollutant class as bacteria. According to the Permit, pollutants are considered to be in the same class "if they have similar fate and transport mechanisms, can be addressed via the same types of control measures, and within the same timeline…" (Id. at fn 21). Dioxins do not have similar fate and transport mechanisms as bacteria and cannot be addressed by all the same control measures as bacteria. Although retention BMPs would treat for both, the ULAR EWMP does not commit to specific BMP types. Design of flow-through BMPs would likely be very different if the target pollutant is bacteria versus bacteria and dioxins.

In the Beach Cities EWMP, indicator bacteria has been defined as a Category 2 WMPC for the DC watershed. The 2012 Permit defines Category 2 pollutants as those "[p]ollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy) and for which MS4 discharges may be causing or contributing to the impairment." (Id. at VI.C.5.a.ii(2).) The final compliance date for dry weather bacteria (year 2025) was selected to be consistent with the draft TMDL for indicator bacteria in the SGR Estuary and Tributaries, and the final compliance date for wet weather bacteria (year 2032) was selected to be consistent with the DC and Greater LA and Long Beach Harbor Toxic Pollutants TMDL.[18] However, selecting compliance schedules from TMDLs from other watersheds, or for

[15] Beach Cities EWMP, Table 4-2 at 4-3.
[16] Upper Los Angeles River EWMP, Table 3-5 at 3-10.
[17] Id. at ES-2.
[18] Beach Cities EWMP, Table 4-2 at 4-3 – 4-4.

pollutants of different classes, is inconsistent with the requirements of the Permit. The DC watershed discharges to Los Angeles Harbor, impacting the inner channel, and the San Pedro and Long Beach area beaches. Thus, a more appropriate bacteria TMDL compliance schedule for consideration in the DC watershed is the implementation schedule for the Los Angeles Harbor Bacteria TMDL, the Long Beach City Beaches and Los Angeles River Estuary Bacteria TMDL, and/or the Santa Monica Bay Beaches Bacteria TMDL.

iii. Pollutants Not in the Same Class as Those Addressed in a TMDL

In at least one instance, Permittees establish an incorrect compliance schedule for WBPCs not addressed by a TMDL, and not in the same class as a TMDL pollutant but for which the water body is identified as impaired on the State Board's CWA section 303(d) List. For these types of pollutants, if retention of the 85th percentile, 24-hour storm event is not feasible, the EWMP must either have a final compliance deadline within the 5-year permit term or Permittees are expected to initiate development of a stakeholder-proposed TMDL and incorporate a compliance schedule consistent with the TMDL. (Id. at VI.C.2.a.ii(5).)

The USGR EWMP states that indicator organisms (bacteria) are the sole Group B WBPC. The USGR EWMP defines Group B pollutants as those "pollutants that are not in the same class as those addressed in a TMDL for the watershed, but for which the water body is identified as impaired on the 303(d) List as of December 28, 2012."[19] The USGR EWMP then proposes a 25-year schedule for bacteria compliance in order to mimic the scheduling adopted in TMDLs developed for other areas of the Basin, namely the Los Angeles River Bacteria TMDL.[20] However, according to Permit requirements, the USGR EWMP Group must either propose a final compliance date within the 5-year term of the Permit, or initiate a stakeholder-proposed TMDL and incorporate the implementation schedule for that TMDL. Because the Regional Board recently approved a bacteria TMDL covering the SGR Watershed,[21] at a minimum, the USGR EWMP schedule for bacteria should be consistent with the Regional Board-adopted TMDL, which proposes a 20-year schedule for compliance, as opposed to the currently proposed schedule of 25 years from the Los Angeles River Bacteria TMDL.

iv. Exceedances of RWLs Not Addressed by a TMDL

Lastly, for exceedances of RWLs not addressed by a TMDL, the EWMP must include milestones based on measurable criteria or indicators and a schedule for achieving the milestones, and demonstrate that the RWLs will be achieved "as soon as possible." (Id. at VI.C. 5.c. iii.) The time between interim dates shall not exceed one year. Milestones shall relate to a specific water quality endpoint and dates shall relate to taking a specific action or meeting a milestone. (Id. at VI.C.2.a.iii(2)(c).)

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[19] Upper San Gabriel River EWMP, at 17.
[20] Id. at 20.
[21] See TMDL for Indicator Bacteria in the San Gabriel River, Estuary and Tributaries, available at http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/tmdl_list.shtml.

For the ULAR EWMP, interim and final wet weather Category 3 WBPCs milestones are January 11, 2024 and January 11, 2028, respectively.[22] The ULAR EWMP defines Category 3 pollutants are defined as those "pollutants with observed exceedances that are too infrequent to be listed, and parameters that are not considered typical pollutants."[23] Permittees of the ULAR EWMP do not provide any explanation for why and how this schedule meets the "as soon as possible" standard; at the very least, some level of analysis should be provided to show how Permittees arrived at this schedule. Furthermore, Permittees fail to provide interim milestones, in violation of Permit requirements.

The USGR EWMP concludes that most of the WBPCs in Group C are of the same class as the SGR Metals TMDL WBPCs, therefore it is proposed that the Group C WBPCs be linked to compliance schedules established in the SGR Metals TMDL Implementation Plan.[24] The final compliance deadline for SGR Metals TMDL is 2032. The USGR EWMP defines Group C pollutants as those "pollutants for which there are exceedances of RWLs, but for which the water body is not identified as impaired on the 303(d) List as of December 28, 2012."[25] The Group C pollutants identified by the USGR EWMP are: sulfate, chloride, alpha-endosulfan, MBAS, and lindane.[26] However, fate and transport characteristics of these pollutants are different from that of metals, and potential control measures may be different, therefore these should not be categorized as being in the same class of pollutants as those addressed in the SGR Metals TMDL. Therefore, Permittees' reliance on the implementation schedule for the SGR Metals TMDL for Group C pollutants is misplaced.

C. Permittees' Use of the Exceedance Volume Approach is Flawed

For the ULAR and USGR EWMPs, Permittees use a concept called "Exceedance Volume"[27] to establish targets based on BMP capacity rather than strictly BMP load reduction. The Exceedance Volume was chosen based on an analysis of the 90th percentile 24-hour storm volume over a 10-year analysis period. The Exceedance Volume is the portion of the storm volume associated with concentrations exceeding WQBELs. Environmental Groups acknowledge that there are benefits to the Exceedance Volume metric, in particular with bacteria where concentrations are known to vary widely; however, this approach is nevertheless problematic for several reasons detailed below.

First, in parts of the EWMPs, for example for the interim targets, load reductions are used as a measure of progress. It is assumed that these load reductions are based on the load produced from the Exceedance Volume, but this is problematic because as the EWMPs acknowledge,

[22] Upper Los Angeles River EWMP, at 3-9.
[23] Id. at ES-2.
[24] Upper San Gabriel River EWMP, at 21.
[25] Id. at 17.
[26] Id., Table 2-4, at 25.
[27] Upper Los Angeles River EWMP, at 6-12; Upper San Gabriel River EWMP, at 70.

concentrations of pollutants may vary significantly from one storm to another.[28] In other words, the 90th percentile storm volume may not represent the 90th percentile load.

This issue is of particular concern since the EWMPs define the compliance strategy in terms of volumes of stormwater and non-stormwater to be managed rather than by specific project lists, and thus allow for a tremendous amount of flexibility with regards to project location and project type. As the two EWMPs note, "the identified BMPs (and BMP preferences) will likely evolve over the course of adaptive management…."[29] The EWMPs note that as projects change, the EWMP Groups will demonstrate equivalency between projects. While demonstrating this equivalency is critical to the success of the Exceedance Volume approach, the EWMPs fall short of providing precise details on how this will be accomplished. Of particular concern are situations where the actual BMP type is switched, for instance, from a retention-type BMP to a flow-through BMP. Establishing equivalency in this case necessitates some translation from volume managed to actual load reduced, but as noted above, it is not clear how this would be accomplished and whether the load associated with the Exceedance Volume is appropriate.

Further, and importantly, the Exceedance Volume approach fails to take into account differences in loading from different land uses – load reductions from BMPs tributary to primarily low density residential areas will not be equivalent to load reductions from BMPs tributary to primarily industrial land uses, for instance, regardless of whether their actual volumetric capacities are identical. If specific projects in specific locations were outlined in the EWMPs, this may not be an issue; however, as noted above, both EWMPs instead set targets of Exceedance Volume managed rather than specific project lists. Finally, because the EWMPs use the Exceedance Volume approach to set metrics for compliance rather than detailing specific projects, it is impossible to evaluate error in the proposed compliance strategy and thereby establish the degree of confidence in the proposed plans to achieve compliance with water quality standards.

D. The Implementation Strategy Relies Too Heavily on the Adaptive Management Process, Which Itself Relies on Flawed and Inadequate Monitoring Programs

Due to the fact that the ULAR and USGR EWMPs use the Exceedance Volume approach to establish a "recipe for compliance"[30] rather than name specific projects that will be implemented, the robustness of the adaptive management process is critical to success of the approach. As noted in the previous section, a detailed methodology must be developed to establish equivalency between projects selected and volume targets, particularly in cases where flow-through, rather than retention BMPs are proposed. The adaptive management sections in both EWMPs, however, do not come close to providing the level of detail necessary to achieve

[28] Upper Los Angeles River EWMP, fn 25 at 6-12; Upper San Gabriel River EWMP, fn 12 at 70.
[29] Upper Los Angeles River EWMP, at 7-2; Upper San Gabriel River EWMP, at 90.
[30] Upper Los Angeles River EWMP, at -24; Upper San Gabriel River EWMP, at 84.

these goals. These sections merely describe the need to show equivalency,[31] while failing to actually describe how this would be accomplished.

Another issue that is significantly related to the adaptive management process and critical to its success is the strength and adequacy of the Coordinated Integrated Monitoring Programs (CIMPs). In addition to the EWMPs, Permittees also develop CIMPs to collect water quality data and measure the effectiveness of the EWMPs. The CIMPs, therefore, is the ultimate driver for Permittees' decisions regarding future adaptive management of their EWMPs. However, as Environmental Groups have pointed out previously, the draft CIMPs developed by the EWMP Groups suffered from a litany of flaws.[32] Unfortunately, Permittees' revised CIMPs failed to address most of the Environmental Groups' concerns.[33] Despite the deficiencies that remain in the revised CIMPs, the Regional Board Executive Officer recently conditionally approved all of the revised monitoring programs; however, the conditions are themselves insufficient because they fail to address all of the CIMP inadequacies.[34]

While Environmental Groups have not seen the final draft CIMPs that were submitted by the EWMP Groups pursuant to the conditional approval letters (and we reserve the right to comment on those final CIMPs once they are issued to the public), the current state of the revised CIMPs is alarming because without an adequate CIMP in place, Permittees cannot engage in a meaningful adaptive management process. The State Board has stated that the adaptive management provisions of the 2012 Permit is one of the main reasons the EWMP process can ensure the necessary rigor and accountability to effectively and timely achieve water quality standards.[35] However, the success of the adaptive management process depends on the effectiveness of the CIMPs, therefore, at a minimum, the CIMPs must meet the substantive requirements of the Permit in order to ensure that Permittees can appropriately adapt the EWMP in response to monitoring results and make modifications only when necessary.

E. There is Insufficient Analysis to Back up the Claims About What can be Achieved Through Green Streets Implementation and Regional BMPs Implemented on Privately Owned Lands

The ULAR and USGR EWMPs rely on a tremendous amount of green streets implementation for compliance. While Environmental Groups are in favor of distributed projects conceptually, practically speaking, it is unclear whether the degree of implementation proposed is achievable. We do, however, commend the EWMP Groups for discussing the need for streamlining the process of green infrastructure project implementation, but more analysis is

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[31] Upper Los Angeles River EWMP, at 8-6; Upper San Gabriel River EWMP, at 108.
[32] See Environmental Groups' Comments on Enhanced Watershed Management Program Work Plans and Monitoring Plans Pursuant to Requirements under the Los Angeles County Municipal Separate Storm Sewer System Permit, NPDES Permit No. CAS004001, Order No. R4-2012-0175, including attached Exhibits A-K (September 16, 2014).
[33] See Appendix A to this letter: Environmental Groups' Table of CIMP Deficiencies.
[34] Id.
[35] Final Order, at 38.

needed to demonstrate that the amount of proposed green street projects are actually feasible and achievable. In addition, the EWMPs also rely heavily on regional BMPs implemented on privately owned lands to achieve compliance, with this portion of the "recipe" accounting for around 30% of the total capacity. However, due to the uncertainty around the ability to acquire such lands as well as the associated costs of land acquisition, the practicality and achievability of this goal is questionable.

F. The EWMPs Lack Sufficient Detail to Achieve Load Reductions Assumed From Institutional BMPs

In all of the EWMPs reviewed by Environmental Groups, institutional BMPs are assumed to account for between 5% and 10% of the load reduction with no data to support these assumptions. These goals may be achievable but require a structure dedicated to their attainment. However, there is little evidence of the development of an institutional framework and programs to reach these levels, either in the EWMPs or, apparently, anywhere else in the jurisdiction's organizations. The mechanisms are straightforward technologically but much more complex institutionally. Applying them successfully relies on a host of actions broadly spread through the affected communities, the participation of various jurisdictional agencies and numerous agency personnel, and cooperation by many private citizens. Lacking a structure to implement them makes the assumptions questionable and requires evaluation of the consequences of not meeting the goals.

Further, the ULAR EWMP suggests that institutional controls will be sufficient to achieve compliance with Category 2 and 3 dry weather metals WBPCs,[36] while the USGR EWMP states that these will be sufficient to control all dry weather metals.[37] As stated above, there is little data and little structure built into the EWMPs to provide assurance that these load reductions will be achievable through these programs. In addition, it is not clear how it was determined that a 5% or 10% reduction would be what is required to achieve compliance with a number of the metals WBPCs since zinc, copper, and lead were the only metals that were modeled. The EWMPs state that this assumption is made in part due to the infrequency of dry weather metals exceedances,[38] but it seems that the ability for minimum control measures to address these exceedances should be more dependent on the actual magnitude of the exceedances rather than their frequency.

G. In at Least Two Instances, the RAA's Model Calibration Regularly Diverges From Observed Values at Higher Stream Flows

For the ULAR and USGR EWMPs, although the model calibration met the parameters specified in the RAA Guidelines,[39] it seems to regularly diverge from observed values at higher

[36] Upper Los Angeles River EWMP, at 6-15.
[37] Upper San Gabriel River EWMP, at 77.
[38] Upper Los Angeles River EWMP, at 6-15; Upper San Gabriel River EWMP, at 77.
[39] Los Angeles Regional Water Quality Control Board, *Guidelines for Conducting Reasonable Assurance Analysis in a Watershed Management Program, Including an Enhanced Watershed*

stream flows.[40] Both the ULAR and USGR EWMPs are designed around a relatively extreme condition (i.e., the 90th percentile storm), yet it is not clear whether an analysis was conducted to determine how the model would perform specifically at the stream flows expected from such a storm.

H. The Analysis for LID BMPs is Limited to the Consideration of Only Two Approaches: Biofiltration and Bioretention

In all of the draft EWMPs that Environmental Groups reviewed, the analyses assume low impact development (LID) BMPs would be a 50/50 split between biofiltration (underdrained) and bioretention (not underdrained). First, these two practices are not the only LID BMPs that might be chosen for the applications, yet others received zero consideration. Second, their capabilities differ considerably. Open-draining bioretention can infiltrate and evaporate a large fraction, even all, of the influent runoff, thus greatly or even fully diminishing pollutant loadings. The best evidence is that underdrained biofiltration, as normally constructed, is limited to withholding through evaporation roughly 30% of the runoff received.[41] Load reductions also benefit from pollutant concentration decreases but generally do not approach those achieved with open-draining bioretention.

Furthermore, there was no examination in the EWMPs of the feasibility of reaching 50% bioretention capability, or, alternatively, of surpassing it and doing better with load reduction. While the best procedure would be to conduct that examination, as well as to consider other LID BMPs, a substitute in the absence of these steps is to conduct a sensitivity analysis to examine the implications of other arrangements (e.g., a 70/30 or 30/ 70 split) and see how the results change. The purpose in this case would be to add assurance that the LID BMPs proposed would actually reach the target load reductions (TLRs) if field conditions ultimately dictate a different scenario than represented by the primary model assumption.

I. The Assumptions Regarding Redevelopment are Inadequate

For the NSMBCW and Beach Cities EWMPs, achieving TLRs further relies on BMP installation during redevelopment: (1) from 2003 to the present – as prescribed by the 2001 MS4 Permit's Standard Urban Stormwater Management Program (SUSMP) provisions; and (2) from

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Management Program (March 25, 2014), available at http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/watershed_management/docs/RevisedRAAModelingCriteriaFinal-withAtts.pdf.

[40] See Upper Los Angeles River EWMP, Figures A-10, A-12, and A-16; see also Upper San Gabriel River EWMP, Figures C-1-6, C-1-13, C-1-17, and C-1-19.

[41] Horner, R.R., Section 4-2, Protection and Restoration Strategies for Watersheds and Tributaries; Chapter 4: A Science-Based Review of Ecosystem Protection and Restoration Strategies for Puget Sound and Its Watersheds; Puget Sound Science Update., Puget Sound Partnership (2010)

the present forward – according to the 2012 Permit's LID requirements.[42] However, the Permittees did not conduct an examination of actual achievements of stormwater treatment BMPs in the past. For various reasons, regulatory requirements are usually not completely fulfilled. Furthermore, there was no particular attention given to an enhanced institutional framework and programs to advance application of the present Permit requirements. As with the assumptions regarding programmatic BMPs and residential incentives, lacking verification of historical performance and a solid structure to advance future implementation makes the assumptions uncertain and requires appraisal of the repercussions of that uncertainty.

Moreover, Permittees' reliance on the redevelopment rates used in the EWMPs lacks justification. For example, in the Beach Cities EWMP, BMPs added through redevelopment, in the past and projected in the future, were based on redevelopment rate data from the Cities of Hermosa Beach and Manhattan Beach and, otherwise, from the Los Angeles region.[43] There is little explanation of how the specific city rates were obtained, and no explanation at all for the regional ones. On the presumption that they are statistical means over some period, they have some statistical variance, particularly because the period over which they were likely to be derived experienced substantial economic fluctuations inevitably affecting redevelopment. This variance is one more source lending uncertainty to predictions that should be quantified and incorporated in the overall potential error analysis. For the other three EWMPs that Environmental Groups reviewed, BMPs added through redevelopment, in the past and projected in the future, were based on redevelopment rate data from the Los Angeles region.[44] Again, there is no explanation of how these rates were obtained, and as explained above, the statistic variance is problematic.

J. In at Least Two Instances, There are Several Potential Sources of Error Associated with the Data Underlying the Model Calibration

In the NSMBCW and Beach Cities EWMPs, there are several potential sources of error associated with the data underlying modeling, with no quantitative analysis of these sources and the associated level of certainty in the forecasts of load reductions and BMPs needed to accomplish them. Potential error sources include:

- For the NSMBCW EWMP, the model flow calibration was rated as "very good" according to the Regional Board's RAA Guidance, but still has associated potential error, as evident in the deviation of points from the diagonal line in Figure 10.[45] The same data was used in the model flow calibration in the Beach Cities EWMP, and the calibration was also rated as "very good" according to the Regional Board's RAA guidance, but similar to the calibration in NSMBCW's EWMP, has associated potential error, as

[42] North Santa Monica Beach Coastal Watersheds EWMP, at ES-5 – ES-6; Beach Cities EWMP, at ES-10.
[43] Beach Cities EWMP, at 2-45 – 2-46, 3-28.
[44] North Santa Monica Beach Coastal Watersheds EWMP, at 90; Los Angeles River EWMP, Table 6-7, at 6-21; Upper San Gabriel River EWMP, at 49.
[45] North Santa Monica Beach Coastal Watersheds EWMP, at 69.

evident in the deviation of points from the diagonal line in Figure 2-9 for the Santa Monica Bay (SMB) watershed and Figure 3-4 for the DC watershed.[46] These dispersions should be quantified (in terms of confidence limits or some other statistical measure of the excursion of model predictions from measured data) and taken into account in an overall analysis of the level of certainty in the model predictions and compliance demonstration.

- For the NSMBCW EWMP, the model water quality calibration is not as "good" as the flow calibration. Environmental Groups do not agree with the EWMP's conclusion that Figure 11 portrays "very good" agreement.[47] The distributions of modeled versus measured fecal coliform measurements actually deviate fairly substantially, especially in the higher portion of the data range. Again, this dispersion should be quantified and included in the overall certainty analysis.
- In Beach Cities' EWMP, there was no model water quality calibration for the SMB watershed because of lack of data for the relevant WBPC (fecal coliforms). The EWMP mentions possible calibration when CIMP data accumulate, but it should firmly commit to doing so. For the DC watershed, water quality calibrations were performed for fecal coliforms and total zinc, portrayed in Figures 3-5 and 3-6.[48] The fecal coliform calibration is fairly good, but the zinc calibration is not. Especially for zinc, this dispersion should be quantified and included in the overall certainty analysis.
- Neither EWMP directly models expected compliance with the bacteria exceedance day limits in the TMDL. Instead, a relationship was developed between fecal coliform loadings[49] and exceedance days, so that the latter can be estimated from a model prediction of the former variable. Figure 12 and Figure 2-10 present the relationship, a statistical regression equation, for the NSMBWC and Beach Cities EWMPs, respectively.[50] The R^2 value presented on the graphs indicates that loading explains 83% of the variance in exceedance days. While this represents a good relationship, it is not perfect and has potential error associated with it. It is also a product of only seven data points, and a relatively small data set itself spreads the confidence interval associated

[46] Beach Cities EWMP, at 2-28, 3-20.
[47] North Santa Monica Beach Coastal Watersheds EWMP, at 61.
[48] Beach Cities EWMP, at 20, 23.
[49] The entire subject of computing a loading for bacteria is questionable, which itself is a potential source of error. The questionable nature arises from the need to take only grab samples, and not flow-weighted composite samples, for bacteria, because of potential contamination and sample holding time considerations. Loading, being the multiplication product of concentration and flow volume, is most legitimately calculated with concentration measurements performed on a flow-weighted composite sample. However, unlike the other potential error sources discussed in this section, the error introduced by this procedure is not quantifiable. The best that can be done, short of a radical revision of procedure, is a judicious qualitative consideration of how it may affect the ultimate compliance demonstration after the quantifiable potential error sources are taken into account. Of course, the EWMP does neither.
[50] North Santa Monica Beach Coastal Watersheds EWMP, at 73; Beach Cities EWMP, at 2-30.

with a predictive relationship. As with the other potential error sources discussed, this one too should be quantified and brought into the overall certainty analysis.

- When it was necessary to convert *Escherichia coli* (*E. coli*) measurements to fecal coliforms (FC), a ratio of *E. coli*/FC = 0.85 was assumed.[51] A U.S. Geological Survey study found substantial variation in the ratio and quantified confidence limits.[52] This is an additional potential source of error that should be taken into account in forecasting load reductions and specifying BMPs sufficient to provide a low risk of not meeting target reductions.

K. The Margins for Error in Reaching TLRs as a Result of BMP Implementation are Extremely Small

As explained above, for the NSMBCW and Beach Cities EWMPs in particular, there are a number of assumptions and potential error sources embedded in the analyses that create uncertainty in the predictions of load reductions achievable with the BMPs thought to be in place and proposed for future implementation.

For NSMBCW, the Permittees did not make any attempt to quantify these uncertainties and their effects on the demonstration of compliance. Table 27 summarizes that demonstration.[53] Its last two columns show cumulative fecal coliform load reductions (resulting from all BMPs) and TLRs. Comparison of the data in these two columns shows very small margins for error in reaching the TLRs forecast to result from their implementation. For non-zero TLRs, the difference between load reduction provided and TLRs for the various analysis regions averages only 1.98%. As discussed above and shown in the table, substantial contributions to load reductions are from assumed 5% accruing from programmatic BMPs, 10% participation in home downspout disconnection, and BMPs already installed during redevelopment. The fifth column of Table 27 shows the load reductions estimated to occur as a result of downspout disconnection and redevelopment BMPs. The overall average is 4.91%. Thus, the unexamined assumptions together are credited for about 10% loading reduction. From the perspective of averages, if they fall short by just 2%, the very small 1.98% compliance margin will vanish.

Similarly, for Beach Cities, the Permittees made no attempt to quantify the uncertainties created by the EWMP's assumptions and potential error sources and their effects on the wet weather RAA demonstration of compliance. Tables 2-16 and 3-12 summarize that demonstration for the SMB watershed and DC watershed, respectively.[54] Columns toward the right side of each table show cumulative pollutant load reductions (resulting from all BMPs) and TLRs. Only two of 18 SMB watershed analysis regions were modeled to have fecal coliform TLRs. Comparison

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[51] North Santa Monica Beach Coastal Watersheds EWMP, Table 13 at 59; fn 14 at 70; Beach Cities EWMP, Table I-1, fn e at I-2.

[52] Francy, D.S., D.N. Myers, and K.D. Metzker. *Escherichia coli* and Fecal Coliform Bacteria as Indicators of Recreational Water Quality, Water-Resources Investigations Report 93-4083, U.S. Geological Survey (1993), available at http://pubs.usgs.gov/wri/1993/4083/report.pdf.

[53] North Santa Monica Beach Coastal Watersheds EWMP, Table 27 at 108.

[54] Beach Cities EWMP, at 2-66, 3-42.

of the data for these two regions in Table 2-16 shows very small margins for error in reaching the TLRs forecast to result from BMP implementation – only 1% in one case and 4% in the other.[55] As discussed above and shown in the table, substantial, and questionable, contributions to loading reductions are from assumptions: (1) 5% accruing from programmatic BMPs, (2) 10% participation in home downspout disconnection, (3) BMPs already installed during redevelopment, and (4) assumptions that Caltrans and industrial areas will achieve their permit requirements. In the case with only 1% margin between load reduction (46% of base load) and TLR (45% of base load), these highly uncertain sources of reduced pollutant loadings are assumed to account in total for 11% of the 46%. In the case with 4% margin between loading reduction (50% of base load) and TLR (46% of base load), these highly uncertain sources of reduced pollutant loadings are again assumed to account in total for 11% of the 50%.

The DC watershed has zinc, copper, and fecal coliform WBPCs.[56] Only the Redondo Beach and Manhattan Beach portions of the watershed were modeled for the wet weather RAA. The Torrance part was not appropriately modeled or subjected to an adequate RAA, because beyond some non-structural measures, Torrance has committed only to catch basin inserts in a fraction (less than one-third) of its drain inlets. Because estimated load reductions are associated only with individual inserts, the estimates cannot be applied to the entire analysis region.[57] Failure to perform an adequate RAA for a significant part of the watershed is a violation of Permit requirements, and undermines the validity of the RAA and the EWMP.

For the Redondo Beach and Manhattan Beach portions of the DC watershed, Table 3-12 indicates the final copper and fecal coliform TLRs to be met handily, but the final zinc and interim fecal coliform TLR achievements to be marginal (0-0.1% difference in estimated load reduction and the respective TLRs for interim fecal coliforms and 3% for zinc).[58] The questionable assumptions regarding programmatic BMPs, home downspout disconnection, BMPs already installed during redevelopment, and the Caltrans and industrial permit compliance are credited for 20% of the 79% loading reduction forecast for zinc (against a TLR of 76%), with 6% from the latter exceptionably doubtful assumption. Thus, there is no real margin, the situation also existing for the interim fecal coliform requirements. The healthy margin for copper (23%) is heavily influenced by brake pad reduction, which is thus crucial to achieve. The margin for the final fecal coliform TLR is much greater (41%) and accounted for in large measure by new regional and distributed BMPs, the completion of which is thus also crucial.

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[55] Id. at 2-66.

[56] The EWMP did not model or complete a RAA for DC watershed medium-priority WBPCs (cyanide, pH, selenium, mercury, and cadmium), on the grounds of no evidence supporting linkage between the MS4 and exceedances of numeric limits for these pollutants. As a general matter, all have been detected in urban stormwater, particularly from industrial land uses. Cadmium is the fourth most commonly detected regulated metal in urban stormwater, after zinc, copper, and lead.

[57] See discussion of the inadequacy of catch basin inserts below.

[58] Beach Cities EWMP, at 3-42.

The larger point underlying all of the discussion in this section is that, as pointed out above, there are more potential sources of error (beyond the assumptions Environmental Groups have pointed out thus far). In the face of all this uncertainty, it is highly unlikely that the generally extremely slim margins allowed will lead to compliance. The responsible and essential procedure is to quantify all of these potential sources and determine what BMPs are necessary to give some set level of assurance (e.g., 90%) of achieving compliance.

L. In at Least Two Instances, Permittees Fail to Consider the Possible Intermingling of Privately Owned Stormwater Infrastructure Within the Full MS4 System

The analyses in the NSMBCW and Beach Cities EWMPs were based entirely on publically owned drainage outfalls, without consideration of intermingling of privately owned stormwater infrastructure with the MS4 system. The MS4 system is defined by the federal regulations as "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains)… [o]wned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created to or pursuant to state law) including special districts under state law such as a sewer district, flood control district or drainage district…"[59] Comingled "public" and "private" stormwater, therefore, is regulated by the Permit, and is the responsibility of the municipal Permittees. Thus, the NSMBCW and Beach Cities EWMPs illegally exclude the analysis of a significant source of pollutant loads to receiving waters, and thereby limit the analysis of reductions required on that basis. Without inclusion of all MS4 discharges, the EWMPs cannot ensure compliance with RWLs or TMDL-specific limitations, and therefore do not comply with the requirements of the 2012 Permit.

M. In at Least One Instance, No Analysis of Standards Applicable to Discharges to ASBS are Included, and Existing Data for Discharges to ASBS are Not Included in the Modeling Exercise or the EWMP

Beyond referencing the draft Compliance Plan and draft Pollution Prevention Plan (ASBS Plans), the NSMBCW EWMP ignores the standards applicable to the receiving waters, designated as Areas of Special Biological Significance (ASBS), as well as the data collected in the receiving waters pursuant to the State Board's ASBS program. The NSMBCW EWMP's approach to ASBS discharges is inadequate for at least two reasons:

1) The draft ASBS Plans are inadequate and do not meet the requirement of either the ASBS Exception[60] or the 2012 Permit;
2) The EWMP applies the wrong water quality standards, and ignores extensive available sampling data, rendering its analysis incomplete and inconsistent with Permit requirements.

[59] 40 C.F.R. §122.26(b)(8).
[60] State Water Board Resolution No. 2012-0012, as amended by 2012-0031 (ASBS Exception).

NRDC and Los Angeles Waterkeeper submitted comments on the draft ASBS Plans detailing their inadequacies in January 2015.[61] In summary:

- The ASBS Plans fail to address non-stormwater discharges, which are strictly prohibited into the ASBS. Dry weather discharges were observed by Permittees 73 times in 2012 and 2013, even with reconnaissance on only eight dates; yet, the ASBS Plans propose nothing beyond existing outreach and education programs.
- The ASBS Plans improperly exempt pipes smaller than 18 inches diameter from meaningful pollution control. This arbitrary and illegal definition eliminates dozens of MS4 discharge pipes from control.
- Receiving water sampling conducted pursuant to ASBS requirements demonstrate alteration of natural water quality concerning selenium, total polyaromatic hydrocarbon, and mercury. Although end-of-pipe sampling demonstrates exceedances of Ocean Plan[62] Instantaneous Maximum limits for ammonia and a number of metals, the ASBS Plans neither acknowledge these exceedances, nor propose to meet compliance, either by meeting Ocean Plan limits or reducing baseline pollutant discharges by at least 90%.

Rather than relying on these flawed plans, the NSMBCW EWMP must conduct its own RAA, based on all available data, and the applicable standards. Because the ASBS was the focus of regulatory attention at the State Board level for a number of years, considerable data is available. The State Board collected outfall and receiving water data in developing the ASBS Exception.Under the terms of the Exception, Los Angeles County and Malibu collected outfall and receiving water data beginning in 2013. However, the NSMBCW EWMP nowhere references this data – data collected by the municipalities conducting the EWMP analysis – and apparently failed to include the data in the modeling exercise. Further, the ASBS Exception requires that dischargers develop plans to achieve either: 1) Ocean Plan Instantaneous Maximum limits at all discharges points, or 2) 90% reduction in pollutant loads based on an articulated baseline calculation.[63] Compliance is required within six years, or 2019.[64] Again, the NSMBCW EWMP fails completely to consider these applicable standards, or the compliance deadline, as set out in the ASBS Exception.

Because the NSMBCW EWMP effectively eliminates consideration of ASBS data, or ASBS regulatory requirements, it fails to comply with state and federal law, and the requirements of the 2012 Permit.

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[61] See Appendix B to this letter: NRDC and LA Waterkeeper Comments on ASBS 24 Draft Los Angeles County Compliance Plan and Pollution Prevention Plan (January 13, 2015).
[62] State Water Resources Control Board, Water Quality Control Plan: Ocean Waters of California (2012), available at http://www.swrcb.ca.gov/water_issues/programs/ocean/docs/cop2012.pdf.
[63] ASBS Exception, Attachment B, at I.A.2.d.
[64] Id. at Att.B, at I.A.3.e.

N. There is Insufficient Data to Demonstrate Reasonable Assurance of Compliance with Applicable Dry Weather Permit Limits

For NSMBCW, the EWMP assumes reasonable assurance is demonstrated for a compliance monitoring location (CML) if any one of four criteria is met, namely:

- Diversion or infiltration eliminates all dry weather discharge, or disinfection is provided and is effective (claimed for two CMLs);
- There are no jurisdictionally owned MS4 outfalls (claimed for eight CMLs);
- If all bacteria exceedance day requirements are met in four of the past five years and in the last two years (claimed for one CML); and/or
- If dry weather discharges have been eliminated (claimed for 18 CMLs).[65]

Two of these claims are very questionable. Given the EWMP's failure to consider the interrelationship between private and public drainage, the second criterion and the claims asserted regarding it are problematic. Concerning the fourth criterion and the extensive claims associated with it, outfalls were screened on only eight dates in 2014 and 2015 for the EWMP effort. There is no detail on the observations, only the inclusion of a note to Table 29 stating that the associated column entry of "yes" indicates that no dry weather flows were present. However, the data collected in the ASBS assessment and summarized above shows extensive dry weather discharges occurring in the ASBS portion of the study area.

For the SMB watershed, the Beach Cities EWMP assumes reasonable assurance is demonstrated for a CML if any one of three criteria is met, namely:

- Diversion or infiltration eliminates all dry weather discharge, or disinfection is provided and is effective (claimed for eight CMLs);
- There are no jurisdictionally owned MS4 outfalls (claimed for two CMLs); and/or
- If dry weather discharges have been eliminated (not determined).[66]

The claim relative to the second criterion is questionable due to the EWMP's lack of consideration of the interrelationship between private and public drainage. Additionally, no screening has been conducted to apply the third criterion. As a result, the dry weather RAA could not be completed for three of 12 CMLs. An incomplete RAA is a violation of Permit requirements.

The DC watershed did not receive even this level of attention. The analysis is brief, qualitative, and unconvincing. Its primary basis is "… education, enforcement, and behavioral modification …"[67] in Torrance and, in each city, water conservation regulations. The only substantive provision is building two regional BMPs in Redondo Beach and Manhattan Beach,

[65] North Santa Monica Beach Coastal Watersheds EWMP, at 46-47.
[66] Beach Cities EWMP, at 2-19.
[67] Id. at 3-43.

installed primarily for wet weather control but also available for dry weather service. This single feature does not constitute a full RAA.

O. In at Least Two Instances, There is Very Little to No Discussion on How Trash Reduction Requirements will be Met

Both the NSMBCW and Beach Cities EWMPs are very weak on specifying how trash reduction requirements will be met. The plans say no more than there will be phased catch basin retrofits to meet the 20% per year reduction targets.[68] Moreover, the plans give no information, or any sign of thinking about, such subjects as: (1) what trash source controls might be brought to bear on the problem, (2) the equipment that will be used in the retrofits, (3) the rate at which it must be installed to meet the targets, (4) where and when it can be most strategically placed, and (5) what options there are if targets are not met.

P. The Claims About Removal Efficiencies by Catch Basin Inserts are Questionable

Appendix B of the Beach Cities EWMP covers the RAA for the DC watershed within the city of Torrance. The central feature of Torrance's proposed contribution to meeting TLRs is the installation of inserts in less than one-third of the catch basins in the subwatershed. The appendix cites insert manufacturers' literature, an unreliable gauge of performance without independent verification, and a few studies to claim questionably high catch basin insert removal efficiencies for the pollutants of interest.

Appendix B presents what it terms a "literature review" in its own Appendix B. However, this latter appendix omits some studies cited in the text and contains only some manufacturers' "fact sheets" and one very long report of a study completely concerned with removal of oil and grease, not one of the WBPCs. The items are just pasted into the appendix with no assessment of their contents and no development and justification of conclusions used in the RAA. It is thus not a literature review at all. The review also omits studies not supporting its claims. A particular example is the Caltrans BMP Retrofit Pilot Program.[69] This study found two different inserts to provide only 0-7% mass loading reduction efficiencies for copper, lead, and zinc. The inserts also needed substantial maintenance attention, including during storms; i.e., they did not operate passively and unattended. With this experience, Caltrans did not adopt inserts as an accepted BMP.

An additional weakness of the Torrance RAA coverage of drain inlet inserts is citing performance in terms of pollutant concentration reduction efficiency, instead of mass loading reduction efficiency as used by Caltrans. As has been widely discussed in the literature, percentage concentration reduction efficiency is a misleading concept. This measure can be manipulated by feeding high concentrations into the unit and measuring a respectable percentage reductions but still having relatively high concentrations in the effluent.

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[68] North Santa Monica Beach Coastal Watersheds EWMP, at 131; Beach Cities EWMP, Table ES-12, at ES-25.

[69] California Department of Transportation, *BMP Retrofit Pilot Program Final Report* (January 2004), available at http://www.dot.ca.gov/hq/oppd/stormwtr/Studies/BMP-Retro-fit-Report.pdf.

IV. Conclusion

Based on the deficiencies noted above, the draft EWMPs are not in compliance with the program development requirements pursuant to the 2012 Permit. The Regional Board should review all of the submitted EWMPs in light of our comments here, and should not approve any EWMPs that are in violation of Permit requirements. Environmental Groups appreciate this opportunity to comment on the draft EWMPs. Please feel free to contact us with any questions or concerns you may have.

Sincerely,

Becky Hayat
Staff Attorney
Natural Resources Defense Council

Rita Kampalath
Science and Policy Director
Heal the Bay

Daniel Cooper
Los Angeles Waterkeeper

APPENDIX A

ENVIRONMENTAL GROUPS' TABLE OF CIMP DEFICIENCIES

Table of CIMP Deficiencies

Environmental Groups' Comments from September 16, 2014	Analysis of Revised CIMPs	Conditional Approval Requirements
Upper Los Angeles River		
Forgoes sensitive species screening for toxicity and defers *C. dubia*	No correction made in revised CIMP	No requirements to address deficiency
No maps showing land use in monitoring location drainage areas, and no full map of storm drains and outfalls	No correction made in revised CIMP	No requirements to address deficiency
Proposes process for modifying CIMP in certain cases without Regional Board approval on an annual rather than biannual basis	No correction made in revised CIMP	No requirements to address deficiency
Upper San Gabriel River		
Proposes discontinuation of some monitoring sites or constituents based on results of monitoring	No correction made in revised CIMP	No requirements to address deficiency
Only includes one monitoring outfall per jurisdiction rather than one per jurisdiction per HUC-12	No correction made in revised CIMP	No requirements to address deficiency
North Santa Monica Bay Coastal Watersheds		
Scale of map makes review of adequacy of monitoring locations impossible	No correction made in revised CIMP	No requirements to address deficiency
Receiving water monitoring locations do not cover full watershed management area	No correction made in revised CIMP	No requirements to address deficiency
Only includes two outfall monitoring locations	No correction made in revised CIMP	No requirements to address deficiency
Legacy Park receiving water site only sampled when outfall is discharging	No correction made in revised CIMP	No requirements to address deficiency
Beach Cities		
Rotating, biannual sampling schedule is inappropriate	No correction made in revised CIMP	No requirements to address deficiency
Definition of significant non-stormwater discharge should not be based solely on surface flow	No correction made in revised CIMP	No requirements to address deficiency

APPENDIX B

NRDC AND LA WATERKEEPER COMMENTS ON ASBS 24 DRAFT LOS ANGELES COUNTY COMPLIANCE PLAN AND POLLUTION PREVENTION PLAN (JANUARY 13, 2015)

Dr. Maria de la Paz Carpio-Obeso
Chief, Standards Unit
California State Water Resources Control Board
Division of Water Quality
Watersheds, Oceans, and Wetlands Unit
P.O. Box 100
Sacramento, CA, 95812-0100
MarielaPaz.Carpio-Obeso@waterboards.ca.gov

Re: Los Angeles Waterkeeper and
Natural Resources Defense Council Comments;
ASBS 24 Draft Los Angeles County Compliance Plan,
Pollution Prevention Plan

Dear Dr. Carpio-Obeso,

In September of 2014, consistent with a one-year extension granted by State Board staff, Los Angeles County ("County") and the Los Angeles County Flood Control District ("Flood District") submitted a draft Compliance Plan ("CP") and a draft Pollution Prevention Plan ("PPP") pursuant to the requirements of the ASBS Exception, Resolution Number 2012-0012 as amended by 2012-0031 ("Exception").

Los Angeles Waterkeeper ("Waterkeeper") and Natural Resources Defense Council ("NRDC") have had an opportunity to review the draft plans. Unfortunately, the plans fail to comply with the requirements of the Exception in numerous basic ways that prevent them from providing a means of eliminating the discharge of Waste to the ASBS. In summary, while the plans identify 1) non-stormwater discharges to the ASBS; 2) alterations of natural water quality caused by storm water discharges; and 3) storm water discharges above Ocean Plan objectives, the plans fail to propose measures to address them.

Given these failures, the plans do not comply with the requirements of the Exception and cannot serve as a basis for the County and the Flood District's implementation of the Exception's other substantive provisions. Waterkeeper and NRDC request that the State Board reject the draft plans, with direction to the County and Flood District to correct the plans' deficiencies. Given that a Final CP is due in September of 2015 at the latest, Waterkeeper and NRDC request that State Board Staff act on this request promptly.

Waterkeeper and NRDC's detailed comments follow.

I. The CP and PPP Fail to Address Non-Stormwater Discharges

The Exception allows the discharge of Waste to the ASBS only when in compliance with the terms and conditions of the Exception. Exception Att. B at I.A.1.a-d. Further, the Exception does not cover non-stormwater discharges, except for six limited categories of dry weather discharges:

(a) Discharges associated with emergency fire fighting operations.
(b) Foundation and footing drains.
(c) Water from crawl space or basement pumps.
(d) Hillside dewatering.
(e) Naturally occurring groundwater seepage via a storm drain.
(f) Non-anthropogenic flows from naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

Exception Att. B at I.A.1.e. And in all events these authorized non-stormwater discharges cannot cause or contribute to violations of Ocean Plan objectives or contribute to alterations of natural water quality. Id.

Pursuant to the Exception requirements, a Compliance Plan must "describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated." Id. at I.A.2.b. The County and the Flood District's CP reports dry weather outfall inspections during January, February, March and April of 2012, and February, March, May and July of 2013. CP at 50-51, Table 3-3 and 3-4. The County observed dry weather discharges on 73[1] occasions on these inspections, many of them repeat observations. Some of these discharges are characterized as "Hillside dewatering," or "Natural stream," but the plan provides no data to support these characterizations, nor does it categorize any of the discharges as permitted or unpermitted. The CP also distinguishes, without basis, between discharges that land on the beach in the ASBS, and those that flow to the surf line. CP at 49. The CP proposes no measures beyond existing outreach programs to address these continuing violations of the Exception and Ocean Plan standards—particularly the numerous dry weather flows that the plan reports as not reaching the "surf."

The PPP reports no dry weather inspections, and as with the CP, proposes no additional measures to address non-storm water discharges.

Given the unabated dry weather discharges from the County and Flood District's outfalls to the ASBS, continuing the existing failed outreach and education programs will not achieve compliance with the Exception, the LA County MS4 Permit, and the Clean Water Act. The County must propose in the CP and PPP, and immediately implement, appropriate structural BMPs, such as infiltration swales, trenches, or basins, to stop dry weather discharges.

[1] This total includes non-stormwater discharges from 10 outfalls that the CP identifies as "ownership unknown." CP at 19.

II. The CP and PPP Fail to Address the County and Flood District's Contribution to Alteration of Natural Water Quality

The Exception prohibits discharges that alter natural water quality in an ASBS. Exception Att. B. at I.A.1.b; I.A.1.e.3. The Exception provides 6 years to achieve compliance with these prohibitions. Exception Att. B. at I.A.3.e. However, the draft CP must include a strategy to comply with all special conditions, including maintaining natural water quality. Exception Att. B. at I.A.3.b; *id.* at I.A.2, 2.d., and 2.g. The draft CP must describe a time schedule to implement structural controls to meet the special conditions, and ultimately be included in the County and Flood Districts' SWMP submitted pursuant to the County MS4 Permit. Id. at I.A.3.b.

Further, where receiving water monitoring indicates that storm water runoff is causing or contributing to alteration of natural water quality, the County and Flood District are required to submit an additional report within 30 days of receiving the results. Exception Att. B. at I.A.2.h. The report must:

1) identify the constituents in storm water altering natural water quality and the source of the constituents;
2) describe BMPs in place, proposed in SWMPs for future implementation, and any additional BMPs to prevent alteration of natural water quality; and
3) provide an implementation schedule. Id.

Based on safety limitations and lack of discharge to receiving waters, the CP and PPP report receiving water sampling primarily at one location, S02, at a 36 inch storm drain at Escondido Beach. A single sample was collected at S01, a 60 inch storm drain at Zuma Beach. S02 was sampled during storm events on 19 February and 8 March 2013, and 28 February 2014. S01 was also sampled on 28 February 2014. CP at 61-70.[2]

Using the analysis required by the Exception, the CP reports that stormwater discharges from S01 and S02 contributed to alteration of natural water quality for selenium, total PAH, and mercury. CP at 67-69.

Despite this admission by the County and the Flood District that discharges from their outfalls are causing or contributing to alteration of natural water quality, neither the CP nor the PPP propose any strategy to address this violation, let alone a time schedule to implement structural controls identified by that strategy, in violation of the Exception. Exception Att. B at I.A.1.b, I.A.2, I.A.3.b and e. The CP and PPP fail to address in any way this core requirement of the Exception. The County and Flood District seem to conflate two independent requirements of the Exception. One is not to alter natural water quality. *See id.* Another is to implement BMPs to

[2] This sampling scheme itself violates the Exception's monitoring requirement that three samples must be collected during "each storm season." *See* Exception Att. B. at IV.B.2.b. February 2013 and February 2014 are different storm seasons.

achieve Ocean Plan limits or a 90% pollutant load reduction. *See id.* at I.A.2.d. The County and Flood District instead assume that *if* natural water quality is exceeded, then *only* the constituents that exceed natural water quality must achieve Ocean Plan limits. *See* CP at 71, 76-77. That is a misreading of the Exception.

Further, information currently available to Waterkeeper and NRDC indicates that the County and Flood District have failed to submit to the State Board the report required by Exception section I.A.2.h, due within 30 days of receiving results indicating the alteration of natural water quality. At the latest the County and Flood District received the S01 and S02 sampling results 30 days after the February 2014 sampling event, or March of 2014. All documents relating to ASBS Exception compliance for the County and Flood District in the possession of the State Board were produced to Waterkeeper in September 2014 and no such report was included. Therefore the County and Flood District have not complied with this additional reporting requirement.

III. The CP and PPP Fail to Propose BMPs to Achieve Either Ocean Plan Limits or 90% Pollutant Reduction

The Exception requires that the CP include:

> BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm [that] shall be designed to achieve on average the following target levels:
>
> 1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
> 2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

Exception Att. B at I.A.2.d. The County and the Flood District conducted end of pipe monitoring in 2013 and early 2014 at between 17 and 21 outfalls to the ASBS, with smaller outfall samples analyzed for a limited range of constituents. CP at 71-75. In these samples the County and the Flood District report repeated exceedances of Ocean Plan Instantaneous Maximum limits, including ammonia, cadmium, chromium, copper, lead, nickel, zinc, and high concentrations of PAH, pyrethroids, and TSS. Id. The County had previously reported elevated concentrations of copper, chromium, and PAH in its exception application, and the State Board documented exceedances of Ocean Plan standards of these parameters, as well as acute and chronic toxicity, in County discharges to the ASBS. *See Program Final Environmental Impact Report, Exception to the California Ocean Plan for ASBS Discharge Prohibition for Storm Water and Non-Point Source Discharges, with Special Protections* (SWRCB, 21 Feb 2012) at 212-228.

Despite reporting sampling results documenting ongoing and alarming levels of toxic and conventional pollutants discharging to the ASBS, the CP and PPP propose no strategy either to

reduce baseline pollutant loads by 90%, or to meet Ocean Plan limits. Instead, the CP argues that because discharges from S01 and S02, the only two of the County's 57 outfalls to ASBS 24 analyzed, were determined to contribute to alteration of natural water quality for selenium, total PAH, and mercury, only those pollutants need to be addressed by comparing them to Ocean Plan limits. CP at 77. This cramped and erroneous interpretation is contrary to the plain language of the Exception, which makes no link between the design standard for BMPs in the CP, and the parameters identified in the natural water quality analysis.

Because the CP and PPP fail to include a BMP strategy designed to comply with the requirements of Section I.A.2.d of the Exception, they are inadequate and must be revised.

IV. The CP and PPP Attempt to Exempt Pipes Less than 18 Inches from NPDES Permit Requirements

Under the heading *Pollution Prevention Plan Objective and Scope,* the PPP states:

> This Plan focuses on source discharges not regulated under the National Pollutant Discharge Elimination System (NPDES) permit (SWRCB, 2012a). The Parties have prepared a Compliance Plan, under a separate cover, to evaluate sources regulated under the NPDES permit that include outfalls that have associated storm networks that drain significant areas and entirely or partially maintained by an agency. These NPDES permit regulated sources coincide with conveyances that are equal to or greater than 18 inches in size that discharge directly to the ASBS shoreline.

PPP at 1. The CP contains a similar statement. CP at 1 ("point sources identified in this document coincide with conveyances that are equal to or greater than 18 inches in size").

Based on this novel definition of point source discharge and an MS4 system under the Clean Water Act, the PPP includes storm water pipes or other man made conveyances (point sources) (see, e.g., PPP at 35)—a plan limited under the terms of the Exception to Nonpoint Source Discharges. Exception at Att. B at I.B.2.

Neither the LA County MS4 Permit (NPDES Permit No. CAS004001), nor the Clean Water Act definition of Point Source Discharges include an exemption for storm water pipes of 18 inches or less, or that drain "insignificant areas." *See* MS4 Permit, Attachment A (Definitions); 40 CFR 122.2; 40 CFR 122.26(b)(8)-(9). In fact 18 inch storm water pipes discharging to the Pacific Ocean are without question man made conveyances discharging to waters of the United States, and MS4 pipes covered by the LA County MS4 Permit. Similarly, gutters and drains are man-made conveyances of storm water. Further, any point source discharges not covered by the MS4 Permit are not eligible for coverage under the Exception. *See* Exception Att. B at I.A.1.a(1).

Because the PPP improperly includes point source discharges in a planning document limited to non-point source discharges, and the CP improperly excludes certain point source discharges, both the CP and the PPP are inconsistent with the requirements of the Exception.

V. Conclusion

The County and Flood District's draft Exception compliance documents are inconsistent with the requirements of the Exception, and as a result fail to achieve compliance with the immediate requirement for elimination of non-storm water discharges, and will fail to prevent alteration of natural water quality within the timeline set out in the Exception compliance schedule. Therefore Waterkeeper and NRDC request that State Board staff reject the plans, and direct the County and Flood District to redraft the plans to include:

1) An immediate plan to implement a comprehensive inspection program to identify all County and Flood District non-storm water discharges to ASBS 24;
2) An immediate plan to implement structural BMPs to eliminate non-storm water discharges to ASBS 24, including an implementation schedule not to exceed 12 months;
3) A plan to implement structural BMPs, including an implementation schedule, to achieve natural ocean water quality by 2018;
4) Submission of reports in accordance with Exception Att. B at I.A.2.h;
5) A plan to implement structural BMPs, including an implementation schedule, to achieve either compliance with Ocean Plan Objectives, or 90% reduction from baseline, on or before 2018, from *all* outfalls to the ASBS and for *all* parameters;
6) Proper inclusion of all point source discharges that are part of the County/Flood District MS4 in the CP, with only non-point source discharges in the PPP;
7) All revisions to be submitted within 120 days, to ensure approval of a compliance Final CP and PPP by September 2015.

Thank you again for your anticipated attention to this matter. Please call Liz Crosson, Executive Director of Los Angeles Waterkeeper at (310) 394-6162 x100 with questions about any of the above.

Regards,

Liz Crosson
Los Angeles Waterkeeper