



September 19, 2011

Charles Hoppin, Chair and Board Members
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

VIA ELECTRONIC MAIL: commentletters@waterboards.ca.gov

Re: Comment Letter – Caltrans MS4 Permit

Dear Chair Hoppin and Board Members:

On behalf of Heal the Bay, California Coastkeeper Alliance and the Natural Resources Defense Council, we welcome the opportunity to submit these comments on the “Draft Statewide National Pollutant Discharge Elimination System (NPDES) Permit for the Discharge of Storm Water Runoff from the California Department of Transportation’s (Department) Municipal Separate Storm Sewer System (MS4)” dated August 18, 2011 (“Permit” or “Draft Permit”). Our organizations have been actively involved throughout California in ensuring the control of stormwater pollution generally, and Caltrans’ pollution in particular, for many years. We have significant interest in the development, adoption, implementation and enforcement of this Draft Permit, and will work closely with you and your staff to ensure its effectiveness in reducing the ongoing pollution of the waters of the state.

We commend the State Water Board for several improvements to the Draft Permit. For example, the Low Impact Development (LID) requirements have been strengthened and additional Total Maximum Daily Load (TMDL) wasteload allocations (WLAs) have been included. However, many of the concerns outlined in our March 14, 2011 letter remain unaddressed. Since the Public Notice for the Draft Permit only solicits comments on changes from the last version, we limit our comments below to these modifications and attach our previous letter for reference. We do have a number of concerns with the modifications to the Draft Permit and offer recommendations below to ensure that the Draft Permit is consistent with both the letter and intent of the law, and that it effectively protects the health of the state’s invaluable waterways. As described in more detail below, our key comments and recommendations include the following:

- infeasibility of onsite retention should be demonstrated;
- the flow-through option for onsite retention should be eliminated;

- both acute and chronic toxicity monitoring should be conducted at every site;
- any monitoring sites that exceed water quality objectives during a sampling event should remain on the monitoring list;
- discharge and receiving water quality monitoring should occur concurrently to better understand if a discharge is causing and contributing to a water quality standard exceedance;
- remove the provision that Caltrans need not analyze constituents in Attachment II where the Regional Water Board finds there is little chance the constituent is present in the discharge;
- work with the regional boards to ensure that Appendix IV is complete;
- the Draft Permit needs to clarify that agricultural runoff is not an exempted pollutant from the prohibition against non-stormwater discharges;
- the Draft Permit needs to be improved to ensure that non-storm water runoff – including landscape irrigation and agricultural irrigation – is “*effectively prohibited*.”

I. Post-Construction Storm Water Treatment Controls

The Draft Permit requires that “Treatment control BMPs constructed for Department and Non Department projects shall be designed to infiltrate, harvest and re-use, or evapotranspire the storm water runoff volume from an 85th percentile 24-hour storm event.”¹ We strongly support this revised provision. Mandating a certain volume of onsite stormwater retention prevents all pollution in that volume of retained stormwater from being discharged to receiving waters. This requirement is consistent with other MS4 permits, ordinances, and regulations around the country. For example, the Regional Water Quality Control Boards for the Los Angeles, Santa Ana, and San Diego Regions have all recently adopted MS4 permits that effectively require new and redevelopment projects to retain onsite the 85th percentile storm through use of LID practices that infiltrate, harvest and reuse, or evapotranspire stormwater runoff unless technically infeasible to do so.²

The modified post-construction requirements also state that “[t]he Department shall use Low Impact Develop (LID) principles with the goal of mimicking *pre-project* hydrology.”³ 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. 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 post construction and hydromodification criteria. The Draft Permit should also clearly state that “pre-development” refers not to the condition of a site prior to

¹ Draft Permit at 39.

² See Los Angeles Regional Water Quality Control Board, Order No R4-2010-0108 (July 8, 2010) (Ventura County MS4 Permit) (through use of an Effective Impervious Area limitation, the Permit effectively requires retention of 95 percent of the 85th percentile storm); Santa Ana Regional Water Quality Control Board, Order No. RB8-2009-0030 (May 22, 2009) (North Orange County MS4 Permit); San Diego Regional Water Quality Control Board, Order No. R9-2009-0002 (December 16, 2009) (South Orange County MS4 Permit).

³ Draft permit at 39, emphasis added.

construction of the particular project under review, but rather the condition of a site in its undeveloped state.

The Draft Permit allows for alternative compliance of onsite retention if infeasibility is demonstrated. While we agree that an “off-ramp” for infeasibility is appropriate, the Draft Permit is not clear on how infeasibility is demonstrated. The Draft Permit also includes a flow-through option, which is an unacceptable alternative. Specifically, the Draft Permit states that:

In the event the entire runoff volume from an 85th percentile 24-hour storm event cannot be infiltrated, harvested and re-used, or evapotranspired, the excess volume may be treated by a flow-through treatment system. The release of the excess volume shall be designed for a maximum rate equal to the runoff flow produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area (Excess Volumetric Rate).⁴

The Permit must outline how infeasibility will be demonstrated. To utilize alternative compliance measures, Caltrans must demonstrate that compliance with the applicable post-construction requirements would be technically infeasible by submitting a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect. This will ensure that stormwater will be kept onsite to the maximum extent.

Further, we do not support flow-through treatment systems as an alternative to traditional LID practices (infiltration, reuse or evapotranspiration). These requirements fail to meet the Clean Water Act requirements that the Draft Permit “shall require controls to reduce the discharge of pollutants to the maximum extent practicable.” Flow-through systems do not provide the same water quality and water supply benefits of LID approaches. Retaining the 85th percentile storm runoff volume onsite would prevent 100 percent of the runoff from the 85th percentile storm, and therefore, 100 percent of the pollutants in that runoff, from ever reaching receiving waters. Even at two times the rainfall intensity of the 85th percentile storm, this type of device will fail to reduce pollutants in stormwater to nearly the same level as will onsite retention.⁵ Thus, the flow-through option should be eliminated, and instead, the “off-ramp” should include only nearby offsite LID projects with a 1.5 volume multiplier to incentivize creativity to retain the water onsite. Specifically, we urge the State Board to modify the “Alternative Compliance with Treatment Sizing Criteria” provision as follows:

“... the Department may satisfy outstanding treatment requirements by meeting one or more of the following requirements, in order of preference:

- (1) Upon approval by the applicable Regional Water Board, installing ~~Equivalent Offsite Treatment~~ infiltration, reuse and/or evapotranspiration projects that retain 1.5 times the volume of the 85th percentile 24-hour storm generated onsite, at an offsite location in the same watershed and ensuring the provision of long-term maintenance of any applicable treatment measures; or

⁴ Draft Permit at 40.

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

(2) Upon approval by the applicable Regional Water Board, contributing Equivalent Funds payment in lieu to fund a Regional Board-approved Regional Project that retain, through infiltration, reuse and/or evapotranspiration, 1.5 times the amount of stormwater generated onsite."

We additionally support the requirement for Caltrans to conduct a minimum of 36 pilot LID retrofit projects statewide.⁶ It is critical that "retrofit" becomes part of the dialogue when managing stormwater pollution. However, the Permit should include critical retrofit project details, such as: performance criteria, sizing criteria and the size of the area to be treated.

II. Monitoring

Toxicity Monitoring

The Draft Permit states that a chronic toxicity analysis is only required for non-storm water sites, while acute toxicity tests are required at all sites.⁷ Instead, both acute *and* chronic toxicity monitoring should be conducted at *every* site. As the Draft Permit states, this is especially important because the "Department's discharges indicate a need to monitor acute and chronic toxicity according to U.S. EPA protocol."⁸ Toxicity testing is also no longer required by the Draft Permit if the first samples do not indicate toxicity. With so much variability from storm-to-storm and year-to-year, it is critical to continue toxicity monitoring. Since Caltrans applies pesticides, herbicides and fungicides at different times of the year, it is important to understand toxicity impacts year-round.

Action Levels

There are several issues with the Water Quality Action Levels (Table 1) as newly proposed. First, the Draft Permit allows Caltrans to discontinue monitoring at a site when no exceedances of the "action levels" are found. There is so much variability from storm-to-storm and year-to-year that only locations with zero exceedances should be discontinued and changed to new sites. Without an adequate sample size over time, the state will be unable to adequately track progress and implement enhanced controls as needed. It is important to observe trends over time, especially when there are any noted exceedances, to inform current and new actions to control pollution. Any monitoring sites that exceed water quality objectives during any sampling event should remain on the monitoring list. Additionally, we suggest selecting at least 25 fixed sites to be monitored consistently each year throughout the permit cycle.

The Draft Permit also calls for receiving water monitoring to begin and discharge monitoring to end when a discharge exceedance is found. Instead, discharge and receiving water monitoring should occur concurrently to better understand if a discharge is causing and contributing to a water quality standard exceedance.

Finally for clarification purposes, what is the time period for the Action Level Exceedances? We assume that this evaluation takes place every year, but this section is unclear.

⁶ Draft Permit at 53.

⁷ Draft Permit at 27.

⁸ Draft Permit at 12-13.

Attachment II Constituents

The Draft Permit states that “[o]n a site specific basis, the Department need not analyze for constituents in Attachment II where the Regional Water Board finds that there is little chance that they are present in the discharge.”⁹ We urge the State Water Board to remove this provision. Attachment II contains a fairly basic list of pollutants, which already specifies certain types of projects needing to monitor for only a subset of pollutants. Due to variability in stormwater and the wide variety of pesticides, herbicides fungicides and fertilizers that Caltrans applies, it is inappropriate to deem a pollutant as having “little chance” of being present. Monitoring is necessary to confirm this is an accurate statement. At a minimum, Caltrans should monitor for all constituents in Attachment II for the first two years to ensure that these pollutants are not present in the discharge.

III. TMDL Compliance

In our March 14, 2011 comments, we noted that Appendix IV (TMDL Implementation Requirements) was incomplete for Region IV. Given the numerous discrepancies for that region alone, it is likely that other regions have errors that must also be addressed. We are pleased that most of the errors in Region IV have been corrected in the Draft Permit, except several adopted TMDLs are still missing in their entirety (Colorado Lagoon Toxics, Los Cerritos Metals, Santa Clara Chloride and San Gabriel River Metals and Selenium). While we appreciate that the Draft Permit requires that “...the Department shall comply with all applicable TMDL-related requirements even if not included in Attachment IV,”¹⁰ the Draft Permit must include all WLAs, milestones and requirements from the applicable TMDLs in order to demonstrate that the Permit’s provisions will ensure that Caltrans achieves the TMDLs’ goals. “[O]nce a TMDL is developed, effluent limitations in NPDES permits must be consistent with the WLA’s in the TMDL.”¹¹ Thus, we urge the State Water Board to work with regional boards to ensure that Appendix IV is complete.

Attachment V includes “region specific requirements.” While we strongly support the provision requiring compliance with both single sample and geometric mean bacteria objectives, it is unclear why the Santa Monica Bay and Marine Del Rey Harbor Bacteria TMDLs are the only requirements for Region 4 listed in this section. Please clarify the difference between Attachment V and Attachment IV.

IV. Agricultural Irrigation Runoff

Federal law requires that MS4 permits “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.”¹² The Draft Permit enumerates certain non-

⁹ Draft Permit at 27.

¹⁰ Draft Permit at 63.

¹¹ *Communities for a Better Environment, supra*, 132 Cal.App.4th at p. 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 (quoting *Communities for a Better Environment, supra*, 132 Cal. App.4th at p. 1322; *Dioxin/Organochloride Center v. Clarke* (9th Cir. 1995) 57 F.3d 1517, 1520 (“When a TMDL and specific wasteload allocations for point sources have been established, any NPDES permits issued to a point source must be consistent with the terms of the TMDL and WLA”).

¹² 33 U.S.C. § 1342(p)(3)(B)(ii) (emphasis added).

stormwater discharges that “are conditionally exempt from [the] prohibition” against non-stormwater discharges into the MS4 system.¹³ However, federal regulations under the Clean Water Act are clear that sources of pollution cannot be exempted from the prohibition against non-stormwater discharges.¹⁴ As discussed in our March 14, 2011 comments, agricultural runoff is a significant source of pollution in and around Caltrans’ stormwater systems. Accordingly, agricultural runoff cannot be exempted from the prohibition against non-stormwater discharges.

While the Board has deleted the phrase “including agricultural irrigation water” from the list of exempted discharges and the accompanying footnote stating that agricultural irrigation water remains conditionally exempt only if “regulated by WDRs or conditional waivers of WDRs” and if the Department provides reasonable support to the monitoring activities of the regulated discharger,¹⁵ the Permit still includes the broader term “irrigation water” on the list of exempted discharges, which could be read to include agricultural irrigation water. In order to effectively prohibit the discharge of agricultural runoff, the State Water Board should clarify that agricultural runoff is not a type of exempted irrigation water (eg. “irrigation water, not including agricultural runoff.”).

Even with the above clarification, the revised Permit still fails to meet the legal standard of effectively prohibiting non-stormwater discharges. Instead of effectively prohibiting agricultural runoff, the State Water Board takes the requirements of a conditionally exempt pollutant, and turns it into a Best Management Practice (BMP).¹⁶ “Facilitating monitoring activities” does not effectively prohibit agricultural runoff from entering Caltrans’s MS4 system, and thus does not meet the legal standard under Clean Water Act Section 402(p)(3)(B)(ii). Since a BMP requiring the same obligation as a condition for an exempt pollutant accomplishes nothing and does not meet the legal standard of effectively prohibiting agricultural runoff, we ask the State Water Board to re-visit the BMPs for “Non-storm water Activities/Discharges.”

BMPs for non-stormwater activities must effectively and clearly prohibit the discharge of agricultural runoff in Caltrans’ MS4, and must include specific requirements that will ensure that Caltrans demonstrates that it is actually achieving this prohibition. The Permit should also include monitoring and reporting requirements by which Caltrans demonstrates progress toward “detecting and removing” such illegal discharges, consistent with federal law. Such requirements are particularly important in those regions where there is no region-wide conditional waiver or

¹³ Draft Permit at 19.

¹⁴ 40 C.F.R. § 122.26(d)(2)(iv)(B)(1). We note that Section 402(p)(3)(B)(ii) of the CWA requires that permits for discharge from municipal sewers “effectively prohibit non-stormwater discharges,” and does not create *any* authorization for exemption of such discharges. The Clean Water Act’s implementing regulations under 40 C.F.R. § 122.26(d)(2)(iv)(B)(1) set forth the circumstances under which the co-permittee must specifically design a program to “to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer” of specified non-storm water discharges or flows identified by the municipality as sources of pollutants. Yet, the requirement of an enforcement program to “detect and remove . . . illicit discharges,” does not support the construction, seemingly implemented by the Tentative Order, that certain specified categories of non-stormwater discharges are “*exempt . . . unless*” they are identified as a source of pollution. Tentative Order, p. 18 (emphasis added).

¹⁵ Draft Permit at 19.

¹⁶ See Draft Permit at 60. The Department shall provide reasonable support to the monitoring activities of agricultural dischargers whose runoff enters the MS4. Reasonable support includes facilitating monitoring activities, providing necessary access to monitoring sites, and cooperating with monitoring efforts as needed. It does not include actively conducting monitoring or providing funding.

WDRs for irrigated agriculture at all (Regions 1, 2 and 6 and 7). Again, this is also the case where the State or Regional Boards, Caltrans, or others have information showing that other non-stormwater discharges (such as landscape irrigation) cause pollution in and around Caltrans' stormwater systems.¹⁷

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In the 12 years that have passed since adoption of the current Caltrans stormwater permit, we have learned much about the constituents, fate, transport, impacts and control of stormwater pollution. While the proposed Draft Permit incorporates some of these "lessons learned," additional direction must be given to ensure that the Permit complies with the letter and intent of the law and protects the health of California's invaluable waterways.

Thank you for your attention to these comments. We look forward to working with you and your staff to ensure the swift adoption of a protective Caltrans stormwater permit.

Best regards,



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¹⁷ Water Quality Ordinances Update: Hearing Before the Board of Supervisors and Orange County Flood Control District, (2011), available at http://cams.ocgov.com/Web_Publisher/Agenda02_01_2011_files/images/A10-001604.HTM.