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TO: Board Members
LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

FROM: Samuel Unger, P.E.
Executive Officer
LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

DATE: January 20, 2012

SUBJECT: **Key Issues Raised by Stakeholders Regarding the Reissuance of the Los Angeles County MS4 Permit**

In 2012, the Los Angeles Regional Water Quality Control Board (Regional Board or Board) will consider reissuing the Los Angeles County Municipal Separate Storm Sewer System permit (hereinafter, the LA County MS4 permit). The LA County MS4 permit is a federal National Pollutant Discharge Elimination System (NPDES) permit that regulates municipal separate storm sewer system (MS4)¹ discharges of stormwater and urban runoff. As with all NPDES permits, the LA County MS4 permit must comply with all applicable provisions of the federal Clean Water Act and implementing regulations. Discharges from the MS4 reach receiving waters in Los Angeles County including, but not limited to, Santa Monica Bay, Los Angeles and Long Beach Harbors, and the Los Angeles and San Gabriel Rivers and their tributaries.

The LA County MS4 permit was last reissued by the Regional Board in 2001, and has been amended three times in the past five years to incorporate provisions to implement total maximum daily loads (TMDLs) for bacteria and trash. However, since 2001, thirty-four TMDLs have been developed by either the Regional Board or US EPA that need to be implemented through an updated MS4 permit. It is also widely recognized that the LA County MS4 permit needs to be updated to reflect the best science and lessons learned in stormwater and urban

¹ According to 40 CFR section 122.26(b)(8), “[a] municipal separate storm sewer system (MS4) means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
- (ii) Designed or used for collecting or conveying storm water;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.”

runoff management over the past eleven years. An updated LA County MS4 permit will provide improvements and efficiencies in regulating discharges from the MS4 to improve water quality. Enhancements to water quality may also have a positive effect on local water supply for the Los Angeles Region.

This memorandum stems from the Regional Board's workshop on November 10, 2011 whereby Regional Board staff provided an update on the status and development of the LA County MS4 permit and permittees and stakeholders then presented comments and concerns regarding an updated permit. At the end of the workshop, several Regional Board members posed comments and/or questions to staff. At the close of the workshop, I offered to prepare a memorandum for the Regional Board summarizing the key issues brought forth by staff, permittees, stakeholders, and the Regional Board members prior to the Board's consideration of the updated MS4 permit. This memorandum does not provide responses to all of the issues raised. Since the permit is still being developed by staff, it is premature to provide responses to comments at this time. The Regional Board will be provided with an agenda binder, including responses to all comments raised, prior to the Board's consideration of the permit.

This memorandum is structured in five sections. For the benefit of the newer board members, the first three sections provide general background. Section I provides background on the regulatory framework for stormwater and urban runoff management. Section II provides a description of the Los Angeles County MS4. Section III provides an overview of the current LA County MS4 permit. Section IV provides a status of permit development. Lastly, Section V provides a description of key issues raised by stakeholders regarding the reissuance of the LA County MS4 Permit.

I. REGULATORY FRAMEWORK FOR STORMWATER AND URBAN RUNOFF MANAGEMENT

The regulatory framework for NPDES permits is provided by the federal Clean Water Act and its implementing regulations contained in Title 40 of the Code of Federal Regulations (40 CFR).

Under the NPDES program, all facilities that discharge pollutants from any point source² into waters of the United States are required to obtain an NPDES permit. The stated goals of the Clean Water Act are to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Another notable goal is that the discharge of pollutants into the nation's navigable waters be eliminated by 1985. While that goal was not realized, it remains a principle for establishing NPDES permit requirements.

In 1987, Congress amended the Clean Water Act to bring discharges from MS4s under the NPDES program. USEPA has identified stormwater and urban runoff as one of the most significant sources of water pollution in the country and a serious threat to aquatic life and habitat as well as to human health. Stormwater is precipitation that flows over streets, parking lots, and other developed parcels, and through commercial, industrial and residential sites, and is then collected in MS4s and conveyed to surface waters, which are waters of the United States and State of California. When stormwater flows over urban environs, it collects

² "The term 'point source' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharged and return from irrigated agriculture." (33 U.S.C. § 1362(14).)

suspended metals, sediments, nutrients (nitrogen and phosphorus), trash and debris, petroleum products, untreated sewage, pesticides, and other toxic pollutants, which are then discharged to creeks, rivers, estuaries and the Pacific Ocean. In addition to stormwater, the MS4 collects non-stormwater runoff from urban activities such as street washing, potable water system testing, and discharges from groundwater treatment programs. These non-stormwater discharges can also contain pollutants that impair the beneficial uses (e.g. recreation, habitat protection, etc.) of the region's water, including the recreational uses of the Pacific Ocean. While non-stormwater discharges are most obvious during dry periods and are seen as the water flowing in the gutters, they can and do occur year round.

Section 402(p) of the Clean Water Act states that permits for discharges from MS4s: (1) may be issued on a system-wide or jurisdiction-wide basis; (2) shall include a requirement to effectively prohibit non-stormwater discharges into the MS4; and (3) shall require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP), including management practices, control techniques and system, design, and engineering methods, and such other provisions as the Regional Board determines appropriate for the control of such pollutants. Congress established this flexible MEP standard, and gave permitting authorities discretion to include other provisions as necessary, so that administrative bodies would have the tools to meet the fundamental goals of the Clean Water Act in the context of stormwater pollution, especially as the field of stormwater management is constantly changing as new information and technologies become available.

MS4s are required to develop and implement a stormwater management program (SWMP). The required elements of a SWMP are described in 40 CFR section 122.26(d)(2)(iv). Historically, the SWMP has been the "bread and butter" of stormwater management programs. Permit provisions to implement a SWMP have been historically grouped into six categories of so-called "minimum control measures":

- (1) programs to monitor and control pollutants in stormwater discharges from commercial areas and industrial facilities;
- (2) a program to maintain structural and non-structural best management practices (BMPs) to reduce pollutants in stormwater runoff from construction sites;
- (3) programs to detect and remove illicit discharges and improper disposal into the MS4;
- (4) public agency activities to reduce the impact of MS4 discharges to receiving waters, including impacts from residential areas and flood management projects;
- (5) planning procedures to reduce pollutants from areas of new development and significant redevelopment; and
- (6) a public information and participation program (PIPP) related to the above five areas.

Implementing these minimum control measures typically requires the application of one or more structural or non-structural best management practices (BMPs). Pursuant to California Water Code section 13360, the Regional Board cannot specify the design, location, type of construction, or particular manner in which a permittee complies with its permit. As long as a permittee complies with the standard set (prohibition for non-stormwater discharges and MEP and other provisions as necessary for stormwater), then a permittee may comply in any lawful manner. It is important to recognize that there is site-specific, regional, and national variability associated with the selection of appropriate BMPs, as well as in the design constraints and pollution control effectiveness of practices. Thus, BMPs that work in one part of the state may not necessarily work in the Los Angeles region, and vice-versa.

Once pollutants are present in a waterbody, or after a receiving waterbody's physical structure and habitat have been altered, it is much more difficult and expensive to restore it to an unimpaired condition. Therefore, the use of BMPs that rely first on preventing degradation of receiving waters is recommended. BMPs under each of the minimum control measures generally focus on preventing pollutants from being discharged to the MS4 or the receiving water. For example, for non-stormwater discharges, many permittees have installed "low flow diversions" (LFDs), which are structural devices that re-route urban runoff discharged to the MS4 during dry weather conditions into the sanitary sewer system, where the polluted runoff then receives treatment before being discharged to a receiving water.

Over the last decade, the Regional Board and US EPA have developed approximately 50 total maximum daily loads (TMDLs) to remedy water quality impairments in various waterbodies within Los Angeles County. In most cases, these TMDLs identify MS4 discharges as a source of pollutants to these waterbodies and, as required, set wasteload allocations (WLAs) for MS4 discharges to reduce the amount of pollutants discharged to receiving waters. Federal regulations require that NPDES permits contain effluent limitations consistent with the assumptions and requirements of all available WLAs (40 CFR §122.44(d)(1)(vii)(B)). Therefore, as part of the update of the LA County MS4 Permit, staff will be developing numeric limitations and other provisions to implement the TMDL WLAs assigned to permittees regulated by the LA County MS4 Permit. The Regional Board has some flexibility when establishing permit provisions that are designed to determine compliance with the numeric limitations derived from the TMDL WLAs. Broadly, this means that the Regional Board may either require a demonstration that permittees comply with the numeric limitations through monitoring (such as outfall and/or receiving water monitoring) or, alternatively, allow permittees to develop and implement control measures to achieve the numeric limitations (referred to as an "action-based" compliance demonstration) where there is an adequate demonstration in the record that the selected control measures and schedule will achieve the numeric limitations. As described below, the manner in which the TMDLs will be incorporated in the forthcoming MS4 permit is one of the key comments that underlie much of the controversy in the development of the reissued MS4 permit.

Lastly, when an NPDES permit is renewed, reissued or modified, it generally must be at least as stringent as the prior permit. This is consistent with Congress' intent that state management programs evolve based on changing conditions from program development and implementation and corresponding improvements in water quality.

II. THE LOS ANGELES COUNTY MS4

The Los Angeles County MS4, like many MS4s in the nation, is based on regional floodwater management systems that use both natural and altered waterbodies to achieve flood management goals. The LA County MS4 is a large interconnected system, controlled in large part by the Los Angeles County Flood Control District (County FCD), among others, and used by multiple cities along with Los Angeles County. These systems convey stormwater and non-stormwater urban runoff across municipal boundaries where it is commingled within the MS4 and then discharged to a receiving waterbody.

The Los Angeles County Flood Control Act was passed in 1915. The original storm drain system was developed in the 1930s by the U.S. Army Corps of Engineers (ACOE). As Los

Angeles began to grow rapidly in the 1920s and 1930s, stormwater that was once absorbed by acres of undeveloped land began to run off the newly paved and developed areas, leading to an increased amount of water flowing into the region's rivers and local creeks. These waterways could not contain the increased amount of water and the region experienced extensive flooding. In response, the ACOE lined the Los Angeles River and Ballona Creek with concrete and initiated the development of an underground urban drainage system. As Los Angeles continued to grow, the complex drainage system we now know as the Los Angeles County MS4 developed.

Today, a total of approximately 120,000 catch basins, over 2,800 miles of underground pipes, and 500 miles of open channels comprise the Los Angeles County MS4. In total, runoff from approximately 1,060 square miles of developed land reach Santa Monica and San Pedro Bays through approximately 60 storm drain outfalls. Approximately 100 million gallons of urban runoff flow through Los Angeles County's MS4 on an average dry day. When it rains, the amount of water flowing through the channels can increase to 10 billion gallons, reaching speeds of 35 mph and depths of 25 feet. The chemical and hydrological variability of stormwater and urban runoff within the MS4 creates both technical and regulatory complexity. The treatment technologies for these discharges are not as well developed as those for sewage and industrial waste discharges and cannot be easily centralized. Issues of shared responsibility for compliance with TMDL wasteload allocations and receiving water limitations, and equity and fairness between multiple permittees are far more complex in an MS4 permit that regulates commingled discharges compared to an individual NPDES permit.

III. CURRENT LOS ANGELES COUNTY MS4 PERMIT

The LA County MS4 Permit is one of the most important permits issued and administered by the Regional Board. The permit regulates commingled discharges of stormwater and urban runoff from one of the nation's largest MS4s, covering the jurisdictional areas of 86 permittees. Permittees regulated by the LA County MS4 Permit include the County FCD as owner and operator of the MS4 infrastructure, Los Angeles County, and 84 incorporated cities³ within Los Angeles County.

The current LA County MS4 Permit was last reissued by the Regional Board in 2001. The permit expired in 2006, but has been administratively extended pursuant to federal regulations. Since 2006, the current permit has been reopened and amended three times to incorporate provisions to implement three TMDLs. It was further amended in 2010 and 2011 pursuant to a peremptory writ of mandate.

The current LA County MS4 Permit is organized under the following seven parts and includes several attachments. The description below summarizes key permit parts and attachments:

Part 1 – Discharge Prohibitions

As required by section 402(p) of the Clean Water Act, Part 1 requires permittees to “effectively prohibit non-storm water discharges into the MS4 and watercourses, except where such discharges” are covered by a separate MS4 permit or fall within one of thirteen categories of flows that are conditionally exempted from the discharge prohibition. These exempted flows fall under the general categories of natural flows, firefighting flows, and flows incidental to urban activities (i.e. landscape irrigation, sidewalk rinsing). These non-stormwater flows may be

³ With the exception of the City of Long Beach, who has had a separate MS4 permit since 1991.

exempted so long as (i) they are not a source of pollutants, (ii) their effective prohibition is not necessary to comply with TMDL provisions, and (iii) they do not violate antidegradation policies.

Part 1 also authorizes the Executive Officer to impose conditions on these types of discharges and to add or remove categories of conditionally exempted non-stormwater discharges based on their potential to contribute pollutants to receiving waters.

Part 2 – Receiving Water Limitations

As required by 40 CFR section 122.44(d)(1), Part 2 prohibits discharges from the MS4 that cause or contribute to the violation of Water Quality Standards or water quality objectives. In addition, discharges from the MS4 of stormwater or non-stormwater, for which a Permittee is responsible, may not cause or contribute to a condition of nuisance. Part 2.3 states that permittees shall comply with these prohibitions “through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with [the Los Angeles Stormwater Quality Management Program (SQMP)] and its components and other requirements of [the LA County MS4 Permit].” Part 2.3 establishes an “iterative process” whereby certain actions are required when exceedances of water quality standards or objectives occur. This iterative process includes submitting a Receiving Water Limitations Compliance Report; revising the SWMP and its components to include modified BMPs, an implementation schedule and additional monitoring to address the exceedances; and implementing the revised SWMP.

Part 2 also includes provisions relating to the Marina del Rey Harbor Mothers’ Beach and Back Basins Bacteria TMDL (summer dry weather provisions only). During summer dry weather, Part 2.6 prohibits discharges of bacteria from MS4s into Marina del Rey Harbor Basins D, E, or F, including Mothers’ Beach that cause or contribute to exceedance of the applicable bacteria objectives.

Part 2 had also included similar TMDL provisions relating to the Santa Monica Bay summer dry weather bacteria TMDL. However, as a result of a legal challenge by Los Angeles County and the County FCD, the Regional Board was required to void and set aside those provisions, which the Regional Board did in 2011.

Part 3 – Stormwater Quality Management Program (SQMP) Implementation

Under Part 3, each permittee shall, at a minimum, implement the SQMP, which is an enforceable element of the LA County MS4 Permit. The SQMP, at a minimum, shall also comply with the applicable stormwater program requirements of 40 CFR 122.26(d)(2), which includes the minimum control measures outlined above. The SQMP and its components shall be implemented so as to reduce the discharges of pollutants in stormwater to the MEP and effectively prohibit non-stormwater discharges to the MS4. Each permittee shall also implement additional controls, where necessary, to reduce the discharge of pollutants from the MS4. Permittees shall revise the SQMP at the direction of the Regional Board Executive Officer to comply with regional, watershed specific requirements, and/or TMDL wasteload allocations.

Part 3 also sets forth specific responsibilities of the Principal Permittee, which under the 2001 permit is the County FCD, and co-permittees. In addition, Part 3 sets forth requirements for Watershed Management Committees (WMCs) which, among other tasks, prioritize pollution control efforts and evaluate the effectiveness of and recommend changes to the SQMP and its components. Each Permittee must also have the necessary legal authority to prohibit non-stormwater discharges to the MS4, as well as possess adequate legal authority to develop and

enforce stormwater and non-stormwater ordinances for its jurisdiction.

Part 4 – Special Provisions

Part 4 sets forth provisions for public information and participation, industrial/commercial facilities control program, development planning, development construction, public agency activities, and illicit connections and illicit discharges elimination. These programs are termed “minimum control measures” and have been in place since the inception of the stormwater program.

Part 5 – Definitions

Part 5 includes definitions for terms used within the LA County MS4 Permit.

Part 6 – Standard Provisions

Part 6 includes standard provisions relating to implementation of the programs required by the permit. Such provisions include the duty to comply, the duty to mitigate, inspection and entry requirements, proper operation and maintenance requirements, and the duty to provide information. Most of these provisions are required by 40 CFR section 122.41 and apply to all NPDES permits.

Part 7 – TMDL Provisions

In 2009, the permit was amended to include provisions that are consistent with the assumptions and requirements of wasteload allocations from the Los Angeles River Trash TMDL. Appendix 7-1 identifies the permittees subject to the Los Angeles River Trash TMDL and sets forth the interim and final numeric effluent limitations for trash that the permittees must comply with. Part 7 also sets forth how permittees can demonstrate compliance with the numeric effluent limitations. Permittees have the option to employ three general compliance strategies to achieve the numeric effluent limitations. Depending on the strategy selected, the Permittee may demonstrate compliance either by documenting the percentage of its area addressed by full capture systems (“action-based” demonstration) or by calculating its annual trash discharge to the MS4 and comparing that to its effluent limitation. This approach allows the Permittee the flexibility to comply with the numeric effluent limitations using any lawful means, and establishes appropriate and enforceable compliance metrics depending on the method of compliance and level of assurance provided by the Permittee that the selected method will achieve the numeric effluent limitations derived from the TMDL WLAs.

Attachment U – Monitoring and Reporting Program

The LA County MS4 Permit has both self-monitoring and public reporting requirements, which include: (1) monitoring of “mass emissions” at seven mass emission monitoring stations; (2) Water Column Toxicity Monitoring; (3) Tributary Monitoring; (4) Shoreline Monitoring; (5) Trash Monitoring; (6) Estuary Sampling; (7) Bioassessment; and (8) Special Studies. The purpose of mass emissions monitoring is to: (1) estimate the mass emissions from the MS4; (2) assess trends in the mass emissions over time; and (3) determine if the MS4 is contributing to exceedances of Water Quality Standards or objectives by comparing results to the applicable standards and objectives in the Basin Plan. The permit establishes that the Principal Permittee shall monitor the mass emissions stations. The permit requires that mass emission sampling is conducted five times per year for the Watershed Rivers.

IV. STATUS OF PERMIT DEVELOPMENT

Regional Board staff plans to bring an updated permit for the Board's consideration in late spring 2012. Updating the LA County MS4 Permit is one of the highest priorities of the Board. Board staff in the Stormwater Permitting Unit is being assisted by staff from other programs, as well as by contractor support provided by the U.S. Environmental Protection Agency (US EPA).

Staff held a kick-off meeting on May 25, 2011 to discuss the preliminary schedule for permit development; identify potential alternative permit structures; and outline some of the major technical and policy aspects of permit development. All LA County MS4 Permittees, as well as other known interested stakeholders, were invited to attend. Ninety-five individuals attended the meeting, representing most of the permittees as well as environmental organizations. After a presentation by Board staff, Permittees and interested persons had an initial opportunity to ask questions of staff, raise concerns, and provide feedback.

Since the kick-off meeting, staff has held numerous meetings upon request to discuss specifics with permittees, consultants representing permittees, and environmental organizations. In addition, staff has also been conducting inspections of several program areas, including municipal oversight of construction and post-construction stormwater controls and control measures to detect and eliminate illicit discharges and illicit connections to the MS4. The results of these inspections will help inform permit development and determine areas of possible customization on a watershed or individual Permittee basis.

On November 10, 2011, the Board held a public workshop on the issuance of the new LA County MS4 Permit. Staff made a presentation on the status of permit development and key elements of the permit. Permittees and other stakeholders also had an opportunity to address the Board to make comments and raise concerns.

Since the November 10, 2011 Board workshop, staff has continued working on a draft permit with the assistance of US EPA, as well as hold meetings with stakeholders to discuss various aspects of permit development.

A staff-level workshop with a focused discussion on incorporation of TMDLs and monitoring requirements is scheduled for January 23, 2012.

V. KEY ISSUES RAISED BY STAKEHOLDERS

The remainder of this memorandum summarizes the key issues that stakeholders have raised during the current effort to develop a draft LA County MS4 Permit for the Regional Board's consideration in late Spring 2012. The issues identified below have been raised during staff-level meetings and workshops, as well as the Regional Board workshop held on November 10, 2011. For many of these issues, staff has formulated conceptual approaches. However, in other areas, staff continues to formulate approaches that will be presented to stakeholders and the Regional Board at future meetings. As stated above, the purpose of this memorandum is to summarize the key issues raised to date, and not to provide responses to all concerns raised. Doing so at this time would be premature. Staff will provide responses to all comments received after a draft permit is released for public review and comment.

The Ventura County MS4 Permit issued by this Board is one of many recent MS4 permits that have been issued nationwide and within southern California. While the Ventura County MS4 permit provides guidance for developing an MS4 permit in southern California, there are a number of technical and policy aspects that are unique in Los Angeles County that staff is considering when drafting the LA County MS4 Permit for Board consideration. The following key issues are addressed in this memorandum:

Permit Structure

The current 2001 Permit is a single permit whereby all 86 permittees are assigned uniform requirements with additional requirements for the Principal Permittee.

One of the fundamental issues for the forthcoming permit was a reconsideration of the basic permit structure. The structure of an updated MS4 permit and the relationship among the permittees has been an issue raised by multiple permittees for several years. In 2006, the Cities of Downey and Signal Hill each submitted an individual Report of Waste Discharge (ROWD), which serves as an application for an individual MS4 permit. Also in 2006, five cities in the upper San Gabriel River watershed submitted a ROWD for a small group MS4 permit. In 2010, the County FCD submitted a ROWD also requesting an individual MS4 permit. The County FCD's ROWD asserted that there is a fundamental difference in their activities relative to the other municipalities and the unincorporated areas of the County of Los Angeles, in that the County FCD does not own or control land areas where pollutants originate. The County FCD also requested that if an individual MS4 permit was not issued to them, that it no longer be designated as the Principal Permittee and that it is relieved of Principal Permittee responsibilities. Regional Board staff evaluated these ROWDs and found them to be inadequate.

The federal Clean Water Act (CWA) section 402(p) and implementing regulations at 40 CFR section 122.26(a)(1)(v) allows the permitting authority to issue permits for MS4 discharges on a system-wide or jurisdiction-wide basis taking into consideration a variety of factors. Such factors include the location of the discharge with respect to waters of the United States, the size of the discharge, the quantity and nature of the pollutants discharged to waters of the United States, and other relevant factors. Federal regulations at 40 CFR section 122.26(a)(3)(ii) identify a variety of possible permitting structures, including one system-wide permit covering all MS4 discharges or distinct permits for appropriate categories of MS4 discharges including, but not limited to, all discharges owned or operated by the same municipality, located within the same jurisdiction, all discharges within a system that discharge to the same watershed, discharges within a MS4 system that are similar in nature, or for individual discharges from MS4s.

At the May 25, 2011 kick-off meeting, Board staff requested input from the attendees on various permit structures. The permittees in attendance brought forth several key considerations, such as:

- The passage of Assembly Bill 2554 in 2010, which amended the Los Angeles County Flood Control Act. This statute allows the County FCD to assess a parcel tax for stormwater and clean water programs. Funding is subject to voter approval in accordance with Proposition 218. Fifty percent of funding is allocated to nine "watershed authority groups" to implement collaborative water quality improvement plans; and

- The Regional Board and US EPA have developed 34 TMDLs that need to be incorporated into the LA County MS4 permit, and permittees have set up jurisdictional groups on a watershed or subwatershed basis for TMDL implementation.

In addition, a shared comment from many stakeholders is that they would like the LA County MS4 permit to provide flexibility to allow them to pool resources to implement stormwater BMPs and address TMDL requirements on a watershed scale in the reissued MS4 permit. Board staff was motivated to set up a MS4 permit structure that would allow governance and compliance either through a watershed based group, or individually.

In response to a suggestion from permittees at the kick-off meeting, staff developed and distributed an online survey to permittees in order to solicit input regarding alternative permit structures, including an individual permit for each municipality, a single permit for all permittees (i.e., the existing permit structure), and a single or multiple watershed-based permits. Fifty-two permittees responded to the survey. The results of the survey showed that a majority of the permittees preferred a single MS4 permit for all municipalities and the County entities. A significant minority supported multiple watershed-based permits. Overall, 85 percent of the permittees that responded to the survey supported either a single MS4 permit or several individual watershed-based permits. A small number of permittees supported alternative groupings of adjacent municipalities instead of watershed-based groupings. Only four permittees expressed a preference for individual MS4 permits.

The issue of permit structure was a key subject for the Regional Board workshop on November 10, 2011. At that workshop, Board staff recommended a single permit with some sections devoted to universal requirements for all permittees and others devoted to requirements specific to each major Watershed Management Area (WMA), which would include TMDL implementation provisions. This structure is supported by section 402(p) of the Clean Water Act and 40 CFR section 122.26, subdivisions (a)(1)(v) and (a)(3)(ii). Staff explained that a single permit will ensure consistency and equitability in regulatory requirements within the county, while watershed-based sections within the single permit will provide flexibility to tailor permit provisions to address distinct watershed characteristics and water quality issues. Additionally, an internal watershed-based structure comports with the Regional Board's watershed-based TMDL requirements and the County FCD's funding initiative passed in Assembly Bill 2554. Watershed-based sections will help promote watershed-wide solutions to address water quality problems, which in many cases are the most efficient and cost-effective means to address stormwater and urban runoff pollution. Further, watershed-based sections may encourage collaboration among permittees to implement regional integrated water resources approaches such as stormwater capture and re-use to achieve multiple benefits.

Staff also explained that it did not plan to recommend multiple permits or individual permits for Signal Hill, Downey, the five upper San Gabriel River cities, or the County FCD. The information presented in the ROWDs does not reflect evolved program elements that have emerged over the past decade. Further, individually tailored permittee requirements can be provided in a single permit, where appropriate. In response to the request from the County FCD to be relieved of its responsibilities as Principal Permittee, staff agreed with this request. Staff explained that it did not intend to recommend any permittee as Principal Permittee in the updated permit and staff would continue to evaluate appropriate requirements for the County FCD in the permit.

While the Board did not take any formal action at the November 10, 2011 workshop, the Board supported staff's recommendation of structuring a single permit with a combination of universal requirements for all permittees and specific watershed-based requirements.

Incorporation of TMDLs

As part of the updated LA County MS4 Permit, the Regional Board must include provisions implementing 34 TMDLs into the permit. As explained above, NPDES permits are required by federal regulations to include numeric limitations consistent with the assumptions and requirements of all available TMDL wasteload allocations. These WLAs regulate the mass or concentration of constituents discharged into receiving waters. How the Regional Board translates WLAs into numeric limitations has garnered significant debate among the stakeholder community.

Recent US EPA guidance on this subject indicates that WLAs can be included in the permit either as numeric water quality based effluent limits (WQBELs) or as BMPs that have reasonable assurance to meet WLAs. Staff believes that since the WLAs are expressed numerically, numeric limitations in MS4 permits are appropriate. Many Permittees, on the other hand, have asserted that TMDL WLAs do not need to be interpreted as numeric limits, but can be implemented as BMPs that can achieve water quality objectives. On this subject, US EPA recommends that, "NPDES permitting authorities use numeric effluent limitations where feasible as these types of effluent limitations create objective and accountable means for controlling stormwater discharges."

To date, the Regional Board has only established numeric WQBELs to implement the Los Angeles River Watershed Trash TMDL WLAs. In that case, Permittees have the option to employ three general compliance strategies to achieve the numeric WQBELs. Depending on the strategy selected, the Permittee may demonstrate compliance either by documenting the percentage of its area addressed by full capture systems ("action-based" demonstration) or by calculating its annual trash discharge to the MS4 and comparing that to its effluent limitation. This approach allows the Permittee the flexibility to comply with the numeric effluent limitations using any lawful means, and establishes appropriate and enforceable compliance metrics depending on the method of compliance and level of assurance provided by the Permittee that the selected method will achieve the numeric effluent limitations derived from the TMDL WLAs. Staff is considering similar approaches for the other TMDLs that have to be put into the permit, where appropriate. In addition, many of the permittees have asked that such an option is included in the reissued LA County MS4 Permit.

Another key issue raised by stakeholders is how the numeric limitations and associated implementation schedules derived from TMDLs will interact with other permit provisions. Many of the TMDLs that need to be incorporated have implementation periods that exceed the 5-year NPDES permit term and include performance based interim WLAs. Options under consideration by staff include acknowledgement in the permit provisions that if a permittee is in full compliance with the interim numeric limitations derived from the TMDL per an approved implementation plan/program, then although there may be exceedances of water quality standards in the receiving water, this would not represent a violation of the permit's Receiving Water Limitations.

Non-Stormwater Discharge Prohibition

As noted above, Part 1 of the 2001 Permit contains a requirement for permittees to effectively prohibit discharges of non-stormwater into the MS4 and to watercourses, except where such discharges are covered by a separate MS4 permit or fall within one of thirteen categories of flows that are conditionally exempted from the discharge prohibition.

Some permittees assert that the language in Part 1 of the current permit is inconsistent with federal requirements. These permittees assert that under the Clean Water Act, the MS4 permit is only required to prohibit non-stormwater discharges into, and not out of, the MS4. Staff and legal counsel do not agree with these permittees' interpretation of the Clean Water Act as the federal requirement to prohibit non-stormwater discharges into the MS4 is necessary to prevent non-stormwater discharges from the MS4 to the receiving water. This is consistent with Congress' intent to ultimately to control MS4 discharges to receiving waters.

Further, some permittees comment that some of the flows that are exempted from the non-storm water prohibition may contain pollutants that can cause violations of other provisions of the permit such as receiving water limitations. As noted above, the 2001 Permit conditionally exempts certain non-stormwater flows so long as they are not a source of pollutants. However, the effect of individual and collective exempted discharges into the MS4 on the quality of non-stormwater discharged from the MS4 has not been well characterized. Historically, the control measures required to achieve this effective prohibition have been those included in the illicit discharges/illicit connections elimination (IC/IDE) program of the SWMP. However, recent inspections of Permittees' IC/IDE program have indicated that while Permittees have conducted screening of their MS4 as required by the permit, non-stormwater discharges to the MS4 and watercourses continue, often resulting in exceedances of water quality standards. Staff is considering bringing some of the currently conditionally exempted flows, such as municipal water system line flushing, under individual NPDES permits, if appropriate.

Staff continues to evaluate options to improve the effectiveness of this section of the Permit through the use of dry weather outfall screening along with non-stormwater action levels.

Receiving Water Limitations

As noted above, Part 2 of the 2001 Permit contains a requirement that prohibits discharges from the MS4 that cause or contribute to violations of Water Quality Objectives or Standards. This section of the 2001 Permit also contains provisions that establish an "iterative process" whereby certain actions are required when exceedances of Water Quality Objectives or Standards occur. This iterative process includes submitting a Receiving Water Limitations Compliance Report; revising the SWMP and its components to include modified BMPs, an implementation schedule and additional monitoring to address the exceedances; and implementing the revised SWMP.

Many permittees have expressed concern regarding compliance with receiving water limitations, because they claim a lack of clarity as to whether compliance with the iterative process in Part 2.3 deems them in compliance with the discharge prohibitions in Parts 2.1 and 2.2. Many Permittees believe that if they fully comply with the iterative process in response to exceedances of Water Quality Objectives or Standards, then those Permittees should not be in violation, and thus not be subject to enforcement, of the discharge prohibitions in the Receiving Water Limitations section of the permit.

Permittees have commented that improvement to water quality will be realized through implementation of additional BMPs or source control, that such BMPs will take time to implement, and that if permittees are found to be in non-compliance, it will deter them from investing in additional BMPs.

The Regional Board has held that compliance with the iterative process as outlined in the 2001 Permit is not a “safe harbor” for compliance with Water Quality Standards or Objectives, and that the discharge prohibitions are independently and separately enforceable provisions of the 2001 Permit. The Regional Board’s interpretation was recently upheld in July 2011 by the United States Court of Appeal for the Ninth Circuit in the *Natural Resources Defense Council (NRDC) v. County of Los Angeles* case. The Court ruled that the discharge prohibitions are independently enforceable requirements, separate and distinct from the iterative process requirements.

In evaluating the iterative process for the updated permit, staff has looked to see how other regional boards are dealing with this issue. Some regional boards have issued permits that contain not just receiving water monitoring, but also outfall monitoring paired with “action levels” that, if exceeded, trigger requirements to submit and implement a plan to enhance or implement additional BMPs to eliminate the exceedances of Water Quality Objectives or Standards. In the Regional Board’s deliberations on the Ventura County MS4 Permit, the Regional Board supported outfall monitoring, but rejected the use of action levels as proposed. Staff continues to evaluate options and tools that will acknowledge the iterative process of SWMP and BMP implementation, while ensuring accountability for taking appropriate, timely, and effective actions toward achieving Receiving Water Limitations.

Low Impact Development

Research over the past decade has shown the effectiveness of low impact development⁴ (LID) in reducing storm water discharges and improving receiving water quality. Effective BMP requirements on new development and redevelopment also offer a cost effective strategy to reduce pollutant loads to surface waters. These controls not only provide pollutant reduction/elimination but also treat water as a resource by augmenting groundwater supplies and reusing captured rainfall.

Recent MS4 permits issued across the nation and within California have included requirements for low impact development. In the 2010 Ventura County MS4 permit issued by this Board, LID requirements were required for certain developments throughout Ventura County. In Los Angeles County, several municipalities, including the Cities of Los Angeles and Santa Monica, have adopted LID ordinances and implemented LID programs.

Key issues with LID involve prioritization of BMPs, such as retention, over other treatment technologies, and provisions for offsite mitigation when onsite retention is not feasible. In addition, the American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) have recommended a numerical BMP design standard for stormwater that is derived from a mathematical equation to maximize treatment of runoff volume for water quality

⁴ Low Impact Development (LID) is a stormwater management approach. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, store, evaporate, filter, and detain runoff close to its source. Techniques are based on the premise that stormwater management should not be seen as stormwater disposal. Instead of conveying and managing / treating stormwater in large, end-of-pipe facilities located at the bottom of drainage areas, LID addresses stormwater through small, cost-effective landscape features located at the lot level.

based on rainfall/runoff statistics and which is economically sound. The maximized treatment volume is cut-off at the point of diminishing returns for rainfall/runoff frequency. The ASCE and WEF's recommendation was incorporated in the water quality storm sizing for the Standard Urban Stormwater Mitigation Plan (SUSMP) in the 2001 LA County MS4 Permit. The Board also approved a numeric criterion for LID in the 2010 Ventura County MS4 Permit.

Many areas within the Los Angeles County are densely developed and there may be less opportunity for infiltration than areas covered by other MS4 permits. Because the growth rate in Los Angeles County has slowed and is projected to stay low, the effectiveness and controversy surrounding LID requirements is not as intense as during the Ventura County MS4 permit adoption. However, Staff is considering proposing language to require permittees to ensure that new and re-development projects implement LID similar to the Ventura County MS4 Permit requirements, including an emphasis on onsite retention, with offsite mitigation as an alternative where onsite retention is infeasible. Staff is also considering provisions to encourage adoption of local LID ordinances, and where LID ordinances are in place an option to demonstrate compliance with the new and redevelopment provisions of the permit through implementation of a local LID ordinance if reasonable assurance is provided that the LID ordinance will provide equivalent water quality benefit as that anticipated from the permit provisions.

Water Conservation

Some stakeholders have commented that the LA County MS4 permit should incentivize water conservation by requiring or incentivizing infiltration⁵ over other BMPs. There has been significant work accomplished by Los Angeles County Department of Public Works, City of Los Angeles and numerous water purveyors that have studied and mapped areas where stormwater can be effectively infiltrated. Further, Board staff is working with many stakeholders to develop salt and nutrient management plans to preserve our groundwater basins as viable resources for future water resources in Los Angeles County. However, there is no direct authority in the Clean Water Act or the California Water Code for the Regional Board to require that a given amount or percentage of stormwater be infiltrated. Nonetheless, staff understands the importance of increased water conservation as an important priority for our region.

Monitoring

The monitoring and reporting program in the current LA County MS4 Permit focuses on mass emission station and receiving water monitoring. This monitoring evaluates water quality in the receiving water rather than directly evaluating the nature of the stormwater and urban runoff that is discharged from the LA County MS4. There is a growing consensus regarding the need for outfall, or end-of-pipe, monitoring, which may provide more insightful information on the effectiveness of BMPs in reducing pollutant loads than mass emission monitoring. Outfall monitoring is necessary to determine compliance with numeric effluent limitations and may also provide information on which permittees are implementing more effective BMPs and which are not.

One of the key difficulties in implementing outfall monitoring is that there are thousands of MS4 outfalls that drain to receiving waters in Los Angeles County. Clearly, monitoring each outfall is neither cost effective nor practical. In the Ventura County MS4 Permit, each permittee is responsible for monitoring one "representative" outfall pipe in addition to the mass emission

⁵ Practices that capture and temporarily store stormwater before allowing it to infiltrate into the soil over a period of time.

monitoring. During the Ventura County MS4 permit development, these representative drains were proposed by the City of Ventura and reviewed by Regional Board staff. Specific drains were approved with requirements to monitor during both wet and dry seasons. Other methods were also considered such as rotating monitoring stations, watershed based monitoring, and monitoring on a less frequent than annual basis.

Staff has concluded that outfall monitoring is necessary and will provide key information for the LA County MS4 Permit, but has not yet determined a plan for the monitoring.

Compliance Determination

Permittees are understandably concerned about how compliance with the various provisions of the updated LA County MS4 Permit will be determined. This concern is due not only to potential enforcement actions that may be taken by the Regional Board, but also by citizen suits that may be initiated by third parties. For permittees, this concern was realized when the environmental groups Natural Resources Defense Council and Santa Monica Baykeeper brought citizen suits against the County of Los Angeles, the County FCD, and the City of Malibu for violations of the current permit. As discussed in more detail above, staff is considering development of a multifaceted approach to clarify compliance requirements in the updated permit. Elements that staff is considering include the use of action levels for non-stormwater discharges and WQBELs and/or implementation of BMPs that have a reasonable assurance of achieving WQBELs derived from TMDL WLAs.

Another issue raised by stakeholders is whether the updated permit will address whether permittees are jointly responsible for complying with permit provisions. In the 2006 amendment to the current LA County MS4 Permit to incorporate the Santa Monica Bay dry weather bacteria TMDL, the Board included a footnote stating that permittees were jointly responsible for complying with the TMDL provisions. This language was taken directly from the TMDL itself. Several permittees believe that assigning joint responsibility is unlawful, and request that such language not be reinstated in the updated MS4 permit. Staff believes that since MS4 discharges from multiple Permittees commingle prior to discharge to a receiving water, compliance with certain permit provisions, such as receiving water limitations, is the joint responsibility of all those Permittees who discharge to that receiving water.

While staff continues to evaluate options concerning compliance determination, it is clear that the updated permit needs to include language clearly describing how the Board intends to determine compliance with the various permit provisions.

VI. CONCLUSION

Staff has made substantial progress on some key issues concerning the reissuance of the Los Angeles County MS4 permit. However, there are a number of areas in which staff has not fully identified and evaluated options. Staff intends to continue the dialogue among the permittees and other stakeholders in order to meet a tentative schedule for Board consideration of the permit by late Spring 2012. Overall, staff feels there is an opportunity for the Board to issue an updated LA County MS4 Permit that can greatly improve water quality and potentially increase water resources in Los Angeles County.