

LOS ANGELES COUNTY MS4 PERMIT STATUS AND DEVELOPMENT

The Los Angeles County Municipal Separate Storm Sewer System (MS4) NPDES Permit (“LA County MS4 Permit” or “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 municipal separate storm sewer systems, covering the jurisdictional areas of 86 permittees.

The LA County MS4 Permit was last reissued in 2001. The Permit expired in 2006, but has been administratively extended pursuant to federal regulations. Permittees regulated by the 2001 LA County MS4 Permit include the Los Angeles County Flood Control District (“District”), Los Angeles County, and 84 incorporated cities within Los Angeles County.¹ The 2001 Permit was reopened by the Regional Board in 2006, 2007 and 2009 to incorporate provisions to implement three TMDLs. It was further amended in 2010 and 2011 pursuant to a peremptory writ of mandate. In accordance with the Board’s responsibility to update NPDES permits, Board staff plans to bring an updated permit for 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 US Environmental Protection Agency (US EPA). The updated MS4 permit will reflect technical progress in stormwater quality control best management practices (BMPs) and the evolution of stormwater management and regulation regionally and nationally over the past two decades.

This update focuses on several key elements of the MS4 permit, namely permit governance structure, core stormwater management program requirements, and incorporation of TMDLs. For these elements, staff has formulated conceptual approaches that it will present to the Board for discussion and feedback. In other areas that are not the focus of this update, staff continues to formulate approaches that will be presented to stakeholders and the Regional Board at future meetings.

This update is organized under the following topics: Status of Permit Development; Permit Structure; Stormwater Management Program (“Minimum Control Measures”); TMDL Implementation Provisions; and Additional Issues.

STATUS OF PERMIT DEVELOPMENT

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

¹ The City of Long Beach has had a separate MS4 permit since 1991.

provide feedback. Subsequent to the kick-off meeting, staff has held several individual meetings upon request to discuss specifics with permittees, consultants representing permittees, and environmental organizations.

At the May 25, 2011 kick-off meeting, Board staff requested input from the attendees on various permit structures. In order to solicit more focused input from permittees on alternative permit structures, and per suggestions at the kick-off meeting, Board staff developed and distributed an on-line survey to permittees using the on-line survey tool, SurveyMonkey®. (See Attachment A for the survey instrument.) The survey was distributed to all Los Angeles County MS4 Permittees on June 14, 2011 and responses were requested within two weeks. Fifty-two permittees responded using the on-line survey tool. The on-line survey sought input on several options for permit structure, 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. Survey results are discussed below under “Permit Structure.”

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.

PERMIT STRUCTURE

The existing 2001 Permit regulates the discharges of stormwater and non-stormwater runoff from 84 cities, Los Angeles County, and the Los Angeles County Flood Control District. In the 2001 Permit, the District is also named as the “Principal Permittee” with additional requirements for monitoring, reporting and coordination on behalf of all permittees.

One of the fundamental issues for the forthcoming permit was a reconsideration of the basic permit structure. The current 2001 Permit is a single permit under which all the permittees are assigned uniform requirements with additional requirements for the Principal Permittee. The federal Clean Water Act (CWA) section 402(p) and implementing regulations at Title 40, Code of Federal Regulations (40 CFR) section 122.26(a)(1)(v) provide flexibility to 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) identifies 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.

In reevaluating the structure for the new permit, Board staff considered a number of factors:

- The nature of the LA County MS4, which is a large interconnected system, controlled in large part by the Los Angeles County Flood Control District, among others, and used by multiple cities along with Los Angeles County. The discharges from these entities frequently commingle in the MS4 prior to discharge to receiving waters.
- The requirement to implement 28 largely watershed-based TMDLs in the new permit. (See Attachment B for a list of these TMDLs by Watershed Management Area (WMA), and Attachment C for a list of permittees by WMA.)
- The passage of Assembly Bill 2554 in 2010, which amended the Los Angeles County Flood Control Act. This statute allows the District 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. (See Attachment D for a draft list of permittees by “watershed authority group”.)
- Results of the on-line survey regarding permit structure. The results indicate that a majority of permittees support a single MS4 permit for Los Angeles County. A significant minority support multiple watershed-based permits. Overall, 85 percent of the permittees that responded to the on-line survey support either a single MS4 permit or several individual watershed-based permits. A small number of permittees support alternative groupings of adjacent municipalities instead of watershed-based groupings. Only four permittees expressed a preference for individual MS4 permits. (See Attachment E for a summary of the survey results.)
- 2006 and 2010 reports of waste discharge (ROWDs). Eight permittees submitted individual or small group ROWDs, including the cities of Signal Hill and Downey; five cities in the upper San Gabriel River watershed; and the Los Angeles County Flood Control District. The District has also requested that if the Board does not issue an individual permit to the District, that it is no longer designated as Principal Permittee and relieved of Principal Permittee responsibilities.

Staff Recommendation

Based on the considerations above, including the results of the on-line survey of Permittee preferences, Board staff plans to recommend 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 the CWA section 402(p) and its implementing regulations at 40 CFR section 122.26, subdivisions (a)(1)(v) and (a)(3)(ii).

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 District's funding initiative passed in AB 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 does not plan to recommend multiple permits or individual permits for Signal Hill, Downey, the five upper San Gabriel River cities, or the District. 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 District to be relieved of its responsibilities as Principal Permittee, staff agrees with this request. Staff does not intend to recommend any permittee as Principal Permittee in the updated Permit. Staff will continue to evaluate appropriate requirements for the District in the permit.

STORMWATER MANAGEMENT PROGRAM (“MINIMUM CONTROL MEASURES”)

MS4 permits include provisions to ensure effective implementation of 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;
- (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.

A brief description of each of these minimum control measures is provided below, while Attachment F provides more detail on current staff recommendations regarding permit requirements in each of these areas. Staff has also identified some key issues that are being evaluated by staff during permit development. Staff is also focusing on identifying

opportunities for customized initiatives, on a watershed or individual Permittee basis, in these areas in order to develop and assist Permittees in implementing the most cost-effective measures to minimize discharge of pollutants to the receiving water.

(1) Minimum Control Measures for Commercial Areas and Industrial Facilities

Municipalities are ultimately responsible for discharges from the MS4; therefore, it is important for the municipalities to implement an inspection and enforcement program to control the contribution of pollutants from industrial/commercial facilities within a municipality to the MS4 from all potential high risk sources. This entails the implementation of structural and non-structural BMPs to reduce pollutants from selected industrial/commercial facilities (or require industry to implement them); and the inspection and monitoring of industrial facilities discharging stormwater and non-stormwater to the municipal systems to ensure these facilities are taking appropriate measures to control pollutants in their discharges.

Key Issues Being Evaluated:

- Identification of target facilities
- Identification of appropriate BMPs
- Level of Permittee effort
- Demonstration of required effort

(2) Minimum Control Measures for Construction Activities

The need for proper erosion and sediment controls is very apparent during, and immediately after, rains that occur in the Los Angeles Region. The environmental effects of erosion are well documented. Erosion can be prevented or reduced with the proper planning and implementation of appropriate BMPs. Increased sediment transport also loads some pollutants to waterbodies. The permit should require the implementation of adequately engineered and implemented structural or non-structural BMPs to minimize or eliminate detrimental environmental effects.

Key Issues Being Evaluated:

- Identification of target sites
- Identification and implementation of appropriate BMPs
- Level of Permittee effort
- Demonstration of required effort

(3) Minimum Control Measures for Illicit Connections and Illicit Discharges Elimination (Non-stormwater Discharges Oversight)

During dry weather, much of the discharges to and from the MS4 originate from non-stormwater sources. A significant amount of such discharges may be from illicit discharges and/or illicit connections. Illicit discharges can occur either through direct connections, such as deliberate or mistaken piping, or through indirect connections, such

as dumping, spillage, subsurface infiltration, and washdowns. The objective of a municipality's illicit connection/illicit discharge (IC/ID) elimination program should be to effectively prohibit non-stormwater discharges that may contain and/or convey pollutants to the receiving waters.

Key Issues Being Evaluated:

- Mechanisms for identification of the source of non-stormwater discharges
- Evaluation of categorical exceptions to prohibition on non-stormwater discharges
- Characterization of dry weather flows
- Demonstration of required effort

(4) Minimum Control Measures for Public Agency Activities

Permittees provide services that ultimately result in the enhancement of the lives of the residents. Some of these services include but are not limited to: sewage system operations; public construction activities; vehicle maintenance; material storage; street and road maintenance; landscaping; recreational facility management; parking facility management; public industrial activities; and many other activities. The objective of a municipality's public agency activities program should be to conduct all public agency activities using appropriate controls to eliminate or minimize pollutants being discharged through the MS4.

Key Issues Being Evaluated:

- Identification of target activities
- Identification and implementation of appropriate BMPs
- Demonstration of required effort

(5) Minimum Control Measures for New Development and Redevelopment

Effective BMP requirements on new development and redevelopment offer a cost-effective strategy to reduce pollutant loads to surface waters. Recent efforts have focused on the implementation of “low impact” controls that not only provide pollutant reduction/elimination but also treat water as a resource by augmenting groundwater supplies and reusing captured rainfall. The objective of the New Development/Redevelopment program should be to implement low impact site design principles and appropriate structural controls as part of a construction project to minimize or eliminate pollutants being discharged in stormwater and non-stormwater from the completed project. 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 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. Staff also notes that the

Board approved a numeric criterion for low impact development (LID) in the 2010 Ventura County MS4 Permit.

Key Issues Being Evaluated:

- Volume capture metric for low impact development (LID) implementation
- Design storm event based on the 85th percentile, 24-hour rain event, as determined from the Los Angeles County 85th percentile precipitation isohyetal map, or 0.75 inch, *whichever is greater*.
- Hydromodification requirements
 - Matching pre- and post-development hydrographs
 - Capture of runoff generated from 95th percentile storm in natural systems (federal facility standard)
 - Demonstration of erosion potential of 1 or less
 - Identification of applicable project categories
 - Offsite mitigation requirements
 - Allowable technical infeasibility criteria

(6) Minimum Control Measures for Public Information and Participation Program (PIPP)

The purpose of the PIPP is to foster an informed and knowledgeable community by educating the public of the need to conduct everyday activities in a manner that reduces or prevents pollutants from being discharged in stormwater and non-stormwater, resulting in better compliance with the MS4 permit as a whole. The public should be educated about the personal responsibilities expected of them and others in the community, including the individual actions they can take, to protect or improve the quality of area waters where they live. Furthermore, the public can provide valuable input and assistance to a municipal stormwater management program.

Key Issues Being Evaluated:

- Target audience(s)
- Educational message(s) to be conveyed
- Level of Permittee effort
- Demonstration of required effort

TMDL IMPLEMENTATION PROVISIONS

Over the last decade, the Regional Board has adopted 28 TMDLs to remedy water quality impairments in various waterbodies within Los Angeles County. (See Attachment B for a list of TMDLs either in effect or undergoing the approval process by Watershed Management Area for 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 limits 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, Board staff will be developing numeric effluent 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 effluent limitations derived from the TMDL WLAs. Broadly, this means that the Regional Board may either require a demonstration that permittees comply with the numeric effluent limitations through monitoring (such as outfall monitoring) or, alternatively, allow permittees to develop and implement control measures to achieve the numeric effluent 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 effluent limitations.

The Regional Board has previously established numeric effluent limitations when it reopened the LA County MS4 Permit in 2009 to incorporate permit provisions 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 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. Staff is considering similar approaches for the 27 other TMDLs that have to be put into the permit, where appropriate.

ADDITIONAL ISSUES

Staff continues to work on the following key elements:

- Non-Stormwater Discharge Prohibition
- Receiving Water Limitations
- Water Quality Based Effluent Limitations

Non-stormwater Discharge Prohibition

As required by CWA section 402(p), the 2001 Permit, as well as all MS4 permits in California, contains a requirement for permittees to effectively prohibit discharges of non-stormwater into the MS4 and to watercourses. The 2001 Permit conditionally excepts certain types of discharges from the non-stormwater discharge prohibition, such as

natural flows, emergency firefighting flows, and flows incidental to urban activities so long as they are not a source of pollutants. However, the effect of individual and collective excepted discharges into the MS4 on the quality of non-stormwater discharged from the MS4 has not been well characterized. The 2001 Permit contains language that allows the Executive Officer to prohibit certain conditionally excepted non-stormwater discharges if they are deemed to be a source of pollutants or to comply with TMDL provisions. In addition to these conditionally excepted non-stormwater discharges to the MS4, the Regional Board has issued several general NPDES permits for site cleanup and potable water system testing, which allow discharges to the MS4. Unless the discharge meets all applicable water quality standards, these permits require treatment before discharge to the MS4.

Historically, the control measures required to achieve this effective prohibition have been those included in the illicit discharge/illicit connection elimination 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 from to the MS4 and watercourses continue, often resulting in exceedances of water quality standards. Staff continues to evaluate options to improve the effectiveness of this section of the Permit.

Receiving Water Limitations

Per 40 CFR section 122.44(d)(1), the Receiving Water Limitations section of the 2001 Permit, as well as all MS4 Permits in California, 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 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. 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 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 have 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 that will allow for an iterative process of SWMP and BMP implementation, while ensuring accountability for taking appropriate, timely, and effective actions toward achieving Receiving Water Limitations.

WQBELs

Water Quality Based Effluent Limitations (WQBELs) are effluent limitations established to achieve compliance with applicable water quality standards. Numeric WQBELs are derived from water quality standards, or WLAs established to achieve water quality standards. Numeric WQBELs are routinely used in NPDES permits for publicly owned treatment works (POTWs) and industrial facilities. To date, the Regional Board has only established numeric WQBELs to implement the Los Angeles River Watershed Trash TMDL WLAs. As discussed above under the TMDL Implementation Provisions section, NPDES permits must contain effluent limits consistent with the assumptions and requirements of all available WLAs. Since the WLAs are expressed numerically, numeric WQBELs in MS4 permits are appropriate. Recently, US EPA revised its guidance on this issue, recommending 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.” In discussions with several Permittees to date, there is no clear consensus on this issue, and staff continues to vet various options for regarding numeric WQBELs.

SUMMARY

In summary, Board staff has made meaningful progress on development of the updated Los Angeles County MS4 Permit. However, there are a number of areas in which staff has not fully identified and evaluated options for Board discussion at this workshop. With this workshop, staff intends to formally introduce key issues to the Board, and continue the dialogue among the Regional Board, Permittees and other stakeholders begun at the May 2011 kick-off meeting in order to meet a tentative schedule for Board consideration of the permit by May 2012. Additional staff level or Board workshops will be held prior to the Board’s consideration of the permit.