

Re: Expectations for Municipal Separate Storm Sewer System permits

Dear [State Water Director]:

The U.S. Environmental Protection Agency (EPA) has recently finalized the “MS4 Permit Improvement Guide” (Guide) which is available on our website at: www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf. The Guide underscores the importance of permit requirements that are clear, specific, measurable, and enforceable, and it includes examples of permit provisions as well as sample language for supporting rationale. As described in my letter to your office dated November 24, 2009, EPA Region 4 expects Municipal Separate Storm Sewer (MS4) permit requirements and performance standards to reflect a level of detail and specificity similar to that of the examples in the Guide. I would also like to take this opportunity to further describe EPA Region 4’s expectations for MS4 National Pollutant Discharge Elimination System (NPDES) permits submitted for our review, and to identify aspects of the permits that are particular areas of focus when we conduct our review.

The Region will be taking a closer look at future MS4 permits for clear, specific and measurable performance standards sufficient to ensure the implementation of controls to reduce the discharge of pollutants to the maximum extent practicable, as required under Section 402(p)(3)(B) of the Clean Water Act. Our expectation is based on the principle that it is the permit writer’s obligation to determine performance standards that are consistent with the maximum extent practicable (MEP) requirement, and the development of appropriate performance standards should not be left to the permittee. Our expectation for more effective requirements also serves to help gauge progress and delineate accountability, and it applies to all sections of the permit. As such, permits should specify minimum requirements, with schedules, for the establishment and maintenance of a MS4’s stormwater management program. For example, specific obligations and timeframes should be included in the public education and outreach/public involvement and pollution prevention/good housekeeping components of the permit. Where applicable (primarily Phase I MS4s), permits should include measurable performance standards for inventorying and inspecting industrial and other high-risk stormwater systems, as well as specific conditions for monitoring activities (*e.g.*, monitoring type, frequency, location, protocol, etc.). EPA also expects MS4 permits to require that the permittee operate its system and any structural controls in a manner to reduce the discharge of pollutants, and to that

end permits should include enforceable and effective system inspection and maintenance requirements.

Although the specific performance standards and required actions may vary depending on the specific MS4 and its programs, future MS4 permits should be explicit in what MEP-level controls are required. It is not EPA's intention to prescribe specific thresholds of performance necessary for an MS4 to reduce pollutants from stormwater to the MEP. Instead, we are looking to States to determine appropriate MEP-levels of control on a case-by-case basis and to write clear and enforceable performance standards and required actions that reflects this level of control. Such specificity will be especially important with the following permit elements, of which Region 4 has identified as an area of focus: (1) Total Maximum Daily Load (TMDL) implementation, (2) stormwater controls for construction activities, (3) stormwater controls for new development and redevelopment (post-construction), and (4) illicit discharge detection and elimination. Our expectation for each permit area is described in further detail below.

Implementation of TMDLs

Pursuant to 40 CFR §122.44(d)(1)(vii)(B), NPDES permits must contain conditions that are consistent with the assumptions and requirements of wasteload allocations (WLAs) in applicable TMDLs. Accordingly, for MS4s subject to a TMDL approved or established by EPA, we expect permit requirements regarding TMDL implementation to be clear, specific and measurable in terms of required actions or achievement of specific performance standards. First, individual permits should identify all applicable TMDLs. Phase II MS4 general permits should contain provisions that require MS4s to determine the applicability and details of any EPA-approved or established TMDL to their discharge, unless the State affirms in the permit that it is responsible for notifying the permittee of such information.

Second, permits should include clear and specific requirements related to the identification, evaluation, and implementation of appropriate water quality controls, with attached timeframes and/or milestones, which are necessary to address any applicable WLA. Given that WLAs for MS4s are typically implemented through non-numeric requirements in the permits, effective TMDL implementation for an MS4 often depends on selecting the appropriate combination of control measures to achieve progress towards addressing the WLA, coupled with monitoring to support the determination of when additional or enhanced control measures are necessary. Some approaches to having clear and specific requirements in terms of control measures could include: requiring MS4s to develop a TMDL implementation plan that identifies enhanced control measures the MS4 will implement and explains how measures implemented by the MS4 will address the WLA; the identification of specific best management practices (BMPs) or a menu of potential BMPs in the permit for MS4s to evaluate and select; reference to BMP performance standards; benchmarks that trigger adaptive management requirements; or requiring MS4s to review existing BMPs and select additional control measures to achieve progress towards addressing the WLA. Whether States choose to identify specific BMPs or rely on MS4s to do the evaluation and selection on their own, EPA expects permits to include language that clearly describes the specific actions required on the part of the permittee, including requirements for adaptive management if initial implementation plans are not demonstrating adequate progress towards achieving the WLA.

Permits should also address the monitoring and assessment of MS4 pollutant load contributions - either at the outfalls and/or in the receiving waters. The permit could include specific provisions for monitoring and assessment activities to first establish a baseline that characterizes the relative pollutant load contributions from the areas of the MS4 that discharge to waters subject to a TMDL. Pursuant to 40 CFR §122.44(i), NPDES permits must also specify the monitoring necessary to determine compliance with effluent limitations, including effluent limits that are specified as BMPs. For example, the permit could require monitoring of BMP performance to assess if the expected load reductions attributed to BMP implementation are achieved and to determine if additional BMPs are necessary to address any applicable WLAs. To better gauge BMP effectiveness and quantifiable improvements to water quality, permits should be clear and specific on what elements, such as monitoring frequency, locations, duration, etc., must be included in a MS4's monitoring plan.

The Guide does not explicitly include or address the implementation of TMDLs in MS4 permits largely due to the fact that EPA is currently developing a policy document that will address many of these issues. The "TMDLs to Stormwater Permit Handbook," which will be released in the coming months, provides information on approaches for translating TMDL WLAs and implementation recommendations into NPDES stormwater permit requirements. Upon its release, we encourage you to consider it as another resource. Additionally, our office is in the process of drafting example language for TMDL implementation for MS4s, which we are hopeful will be useful to States in developing permit limits for applicable TMDLs. It is our intention to share a draft version with your staff in the coming month for your feedback and consideration. If you have any suggestions or recommendations regarding this matter, we welcome you to share those with us as we proceed in this effort.

Construction

Section 402(p)(3)(B)(iii) provides that MS4 permits must require controls, "including management practices, control techniques and . . . such other provisions" determined appropriate to reduce the discharge of pollutants from MS4s to the MEP. One area in which MS4s must develop and implement MEP-level controls is in the control of pollution in runoff from construction sites (see Phase I MS4 regulations at 40 CFR §122.26(d)(2)(iv)(D) and Phase II MS4 regulations at 40 CFR §122.34(b)(4)(ii)), including requirements for construction site plan reviews and a construction site inspection and enforcement program.

Permits should require MS4s to implement a process for site plan review to ensure that to the maximum extent practicable, construction plans are reviewed prior to commencement of construction activities to ensure that adequate measures will be implemented to protect water quality, and that any water quality-related requirements of the MS4's construction program are followed. Regulations for Phase II MS4s require "procedures for site plan review which incorporate considerations of water quality impacts." Similarly, Phase I regulations require "procedures for site planning." Accordingly, permits should clearly specify the minimum stormwater requirements concerning erosion and sediment control, pollution prevention, and other State regulations or local ordinances, and a review procedure should be outlined in the permit as well. A schedule for review and the conditions for approval for construction occurring

within the MS4 should also be included in the permit in order to provide a mechanism to track construction activities and enforce control standards. Site plan review requirements for Phase I MS4s should be at least as stringent as the Phase II requirements, as Phase I MS4s have had more time for, and typically have more resources for, stormwater management program development. Further, impacts from construction activity tend to be greater in Phase I communities.

As part of a construction site inspection and enforcement program, permits should establish a minimum inspection frequency or other measurable level of effort requirement for inspecting construction sites. The absence of a measurable requirement for construction site inspections undermines the enforceability of the permits with respect to the permittees' construction program. The inclusion of such requirement would help to ensure that the permittees will reduce pollutants in stormwater entering the MS4 from construction sites to the maximum extent practicable, as required by the Section 402(p)(3)(B)(iii).

States may choose an inspection frequency that is appropriate for each MS4, provided that the inspection frequency reflects an MEP-level of control for the MS4 and it is measurable and enforceable. The inspection obligation could be expressed as a minimum time interval for inspecting active sites, which could vary for categories of sites with different priority levels. Alternatively, the permit could establish a minimum percentage of inspection sites that must be inspected within specified time intervals. The frequency could also be tied to significant rainfall events, and States might choose to require an initial inspection prior to or soon after the commencement of land disturbance. The permit could also require the development and implementation of a prioritization scheme for addressing more significant sites based on criteria laid out in the permit (*e.g.*, nature and extent of construction activity, slope of the site, proximity and/or water quality status of receiving water, etc.). EPA does not seek to dictate a particular rate of inspection, and expects that permitting authority judgment and discretion will be applied to establish an appropriate frequency. To the extent that such requirements are already imposed through non-Clean Water Act requirements utilizing processes outside of the NPDES program, such requirements could be referenced as a relevant minimum requirement that MS4's could incorporate and implement in their own construction program. However, EPA does expect that the inspection obligation will be defined in a way that is effective, measurable, and enforceable.

Post-Construction Requirements

As noted above, Section 402(p)(3)(B)(iii) provides that MS4 permits must require controls to reduce the discharge of pollutants to MEP and contain such other provisions as the Administrator or State determines appropriate for the control of such pollutants. Another area in which MS4 permittees must develop and implement MEP-level controls is in the control of pollution from residential and commercial areas, including "controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment." (see Phase I MS4 regulations at 40 CFR §122.26(d)(2)(iv)(A)(2)). The requirement for a program to control pollution from new development and significant redevelopment must "address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed." *Id.* Similarly, regulations for Phase II MS4s require the development and implementation of "a

program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre.” (see Phase II MS4 regulations at 40 CFR §122.34(b)(5)).

Permits should include specific, enforceable language that require MS4s to establish and enforce minimum requirements, such as flow control standards or requirements to infiltrate, evapotranspire, harvest or re-use stormwater from new and redeveloped sites after construction is completed, when such controls represent control of discharges to the maximum extent practicable. For example, the permit could require enactment and enforcement of an ordinance that requires that post-construction flow be consistent with pre-development characteristics, or that precipitation from a rain event of a particular size be managed to prevent off-site stormwater discharges. Low-impact development approaches such as infiltration, reuse and evapotranspiration should be utilized to the maximum extent practicable. As with the construction site inspection section, above, EPA is not seeking to dictate a particular post-construction standard for these permits. EPA expects States to use their judgment and discretion to arrive at enforceable permit requirements to control pollutants in stormwater discharges entering the MS4 from new development and redevelopment sites that are appropriate for States and the permittees. To the extent that such requirements are already imposed through non-Clean Water Act requirements imposed under processes outside of the NPDES program, such requirements could be referenced as a relevant minimum requirement that MS4's could incorporate and implement in their own post-construction program. However, EPA expects any post-construction requirement to be defined in a way that is effective, measurable, and enforceable. In addition, permits should include enforceable requirements that MS4 post-construction programs include site plan review procedures, ordinances requiring long-term operation and maintenance of post-construction BMPs and including inspection and enforcement authorities, development and maintenance of an inventory of post-construction controls, and minimum inspection frequencies.

On a related matter, in December 2009 EPA issued a document entitled, “*Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*” (see http://www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf). The Energy Independence and Security Act Section 438 was enacted with the intention of maintaining and restoring pre-development site hydrology during the development or redevelopment process in order to protect and preserve both the water resources onsite and those downstream. This guidance was prepared to provide technical guidance and background information to assist federal agencies in achieving, measuring, and evaluating their compliance with Section 438. It describes two approaches to establishing the Section 438 performance objectives through the design, construction, and maintenance of stormwater management practices that manage rainfall onsite. The first option involves the prevention of the off-site discharge of precipitation from all rainfall events less than or equal to the 95th percentile rainfall event to the maximum extent technically feasible. The second option allows the designer to conduct a site-specific hydrologic analysis to determine the pre-development runoff conditions and quantify the post-development runoff volume and peak flow discharges that are equivalent to pre-development conditions. Included in the document are several case studies of sites with stormwater management systems that retain the 95th percentile storm onsite.

The Section 438 Guidance reflects EPA's perspective that retaining all storms up to and including the 95th percentile storm event is analogous to maintaining or restoring the pre-development hydrology with respect to the volume, flow rate, and duration and temperature of the runoff for most sites. This 95th percentile approach was identified and recommended because this storm size represents the volume that appears to best represent the volume that is fully infiltrated in a natural condition and thus should be managed onsite to achieve the objectives of Section 438.

Although the performance standards and practices discussed in this guidance were developed to apply to federal development and redevelopment projects, they can serve as a useful guide for municipal systems as well. We encourage States to replicate similar green infrastructure and quantifiable objectives in their MS4 permits, or at least develop a plan on working towards comparable requirements. We also recognize that some MS4s may not be equipped to achieve a 95th percentile storm event, but Region 4 does expect States to use their judgment to identify in MS4 permits an alternatively appropriate, specific, and measurable threshold that maximizes the practice of infiltration, evapotranspiration, and/or rainwater harvesting and use. The concepts and principals included in this guidance document are among those being evaluated and considered as part of EPA's stormwater rulemaking effort, which was initiated in October 2009. The rule is intended to address, at a minimum, stormwater from development and redevelopment sites and is expected to be completed by November 2012.

Illicit Discharge Detection and Elimination Program

Another area in which MS4 permittees must develop and implement MEP-level controls is in the development and implementation of a program to detect and eliminate illicit discharges and improper disposal into the MS4. See Phase I MS4 regulations at 40 CFR §122.26(d)(2)(iv)(B) and Phase II MS4 regulations at §122.34(b)(3). Such a program should include, among other requirements, inspections, on-going field screening activities, investigation when field screening or other information indicates reasonable potential of illicit discharge, and procedures for removal of identified illicit discharges and improper disposal. 40 CFR §122.34(b)(3)(iv). To ensure that a permittee's illicit discharge detection and elimination (IDDE) program controls pollution discharges to the MEP, permits should include measurable and enforceable requirements for conducting field screenings, conducting inspections, initiating and completing investigations of suspected illicit discharges, and taking action to eliminate identified illicit discharges as soon as practicable. The inspection requirements for the industrial and high-risk program may overlap with inspections conducted to support the IDDE program.

Letter sent to State Water Directors in Region 4 on April 15, 2010

EPA may object to permits provided to our office per the NPDES Memorandum of Agreement that do not meet the expectations in this letter. As appropriate, we encourage you to engage your regulated MS4 community and utilize the available data and information when establishing clear, specific and measurable performance standards that reflect an MEP-level of control for their permits. It is our intention to work constructively with your office to resolve any potential issues or challenges concerning this, and we are pleased to provide any assistance in this regard. If you have any questions, please feel free to contact me at (404) 562-9345, or have your staff contact Mr. Thomas McGill at (404) 562-9243 or [primary EPA NPDES stormwater contact for your State].

Sincerely,

/s/

James D. Giattina
Director
Water Protection Division