Comment 147

Public Comment
Phase II Small MS4 General Permit
Deadline: 9/8/11 by 12:00 noon

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RECEIVED
9-7-11
SWRCB Clerk

Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000

RE: Draft NPDES Permit for Storm Water for Phase II Small MS4s

Dear Clerk of the Board:

We appreciate the opportunity to provide comments on the Draft General National Pollution Discharge Elimination System (NPDES) permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (Draft Permit). We submit these comments on behalf of Weiss Associates, a California-based environmental, engineering, science, and management firm founded in 1980. We have worked at over 1,000 remediation sites, including nine of the 31 Superfund Sites in the San Francisco Bay Area and are quite familiar with ground water protection and storm water runoff issues at a variety of sites.

We appreciate the level of effort that has gone into preparing the draft and respectfully submit the comments below for your review and consideration.

GENERAL COMMENT

147.1 → Weiss suggests that the State Water Resources Control Board (SWRCB) consider adding a "net-outflow" BMP provision for small MS4s. Permittees managing a "net outflow" BMP provision as part of their program would maintain a record of the storm water balance for the permitted watershed and sub-watersheds within their MS4 area. Under a "net outflow" provision, the Permittee could comply with the post-construction water quality runoff standards for new projects, in accordance with E.12.b.3, or could elect to upgrade an intra-watershed legacy storm water system to meet the water quality runoff standards for an equivalent volume as the new project. Similarly, the Permittee would receive credits for voluntary upgrades to legacy storm water systems that could be applied to offset post-construction requirements for new projects. The "net-outflow" BMP provision would be similar to the provision in the water quality runoff standards in E.12.b.3, where equivalent runoff volume can be treated at a separate area within the same watershed when the sub-watershed has a high rank for ground water recharge or discharge.

Weiss believes that a "net-outflow" BMP provision provides several benefits because it:

- Allows MS4s greater flexibility to design and build sustainable storm water runoff systems, and to base development and improvement of these systems on the attainment of maximum water quality improvements, rather than just where a new project "happens to be." We believe that in many cases, greater water quality benefits would be achieved by upgrades to existing storm water management systems, especially for Small MS4s that often have an aged drainage system. It does not appear that the Draft Permit provides incentive to upgrade these systems to the level required by the Water Quality Runoff Standards in E.12.b.3. A "net-outflow" BMP provision could provide such an incentive.
- Provides incentive for MS4s to develop centralized storm water runoff management site(s), which could be more easily maintained and monitored than any number of management sites that would be installed as each new project is constructed.

Weiss believes that a "net-outflow" BMP provision could decrease costs for small MS4s to comply with the Water Quality Runoff Standards in E.12.b.3 and encourages the SWRCB to evaluate the cost and benefits of such a provision.

SPECIFIC COMMENTS

146.2 → **1) COMMENT: E.4.a. Legal Authority**

E.4.a contains a discussion of legal mechanisms used in the implementation of a storm water management program.

DISCUSSION: Development of Contract Terms Creates a Burden for Some MS4s.

For Small Non-Traditional MS4s, particularly small school districts (K-12), developing contract language is very expensive.

RECOMMENDATION:

SWRCB could add sample language as an Appendix to the Order, providing typical flow-down clauses that would assist small non-traditional MS4s in complying with Section E.4.a.

146.3 → **2) COMMENT: E.9.d. Storm Water Pollution Prevention Plans**

Section E.9.d. requires the implementation of storm water pollution prevention plans (SWPPPs) for pollutant "hotspots." [...] For each pollutant "hotspot", the Permittee shall develop and implement a site-specific SWPPP that identifies a set of storm water BMPs (i.e., structural and

non-structural BMPs, and operational improvements) to be installed, implemented, and maintained to minimize the discharge of pollutants in storm water.

DISCUSSION: Is the pollutant "hotspot" SWPPP simply a list of BMPs? Is requirement potentially redundant with an SWPPP maintained by the owner of pollutant "hotspots"?

The language in this section suggests that the SWPPP only needs to contain a list of BMPs. Given that SWPPPs required under Water Quality Order 97-03-DWQ NPDES Permit No CAS00001, 1997 General Industrial Storm Water Permit (IGP) are required to contain much more information, the Permit should be more specific about in the content required in a pollutant "hotspot" SWPPP. It is not clear if additional information, such as roles, responsibilities, O&M instructions, inspection schedule, etc., is to be included in this SWPPP.

Also, there is a possibility that the "hotspots" will originate at facilities that are already permitted under the IGP and that maintain a SWPPP. It is not clear if it is the intent to apply BMPs outside of the boundary of facilities already regulated under the IGP. The Permit should be clear in its requirements for a pollutant "hotspot" SWPPP when an existing IGP SWPPP is in place.

RECOMMENDATION:

Specify the required contents of the pollutant "hotspot" SWPPP and how it relates to existing SWPPPs under the IGP.

146.4 → **3) COMMENT: E.9.h. Permittee Operations and Maintenance (O&M) Activities**

Subsection (d) Inspection of BMPs states that "[a]ll BMPs implemented during O&M activities shall be visually inspected quarterly."

DISCUSSION: Inspection schedule of BMPs implemented is too prescriptive.

It is likely that some BMPs that are implemented during O&M activities will not benefit from inspections on this frequency and could be inspected annually or semi-annually. It is also likely that O&M activities for which a BMP has been developed may not occur during each quarter.

RECOMMENDATION:

Change subsection (d) to allow for the BMP inspection frequency to be tailored to the type of BMP implemented.

146.5 → **4) COMMENT: E.11. INDUSTRIAL/COMMERCIAL FACILITY RUNOFF CONTROL PROGRAM**

DISCUSSION: Should industrial facilities within an MS4 be regulated by the SWRCB instead of the MS4?

It seems that the SWRCB is the more appropriate entity to inventory, permit, and regulate commercial and industrial facilities that are or are not currently regulated under the IGP or the federal NPDES program. The SWRCB has extensive experience in regulating such entities, has inspection programs in place, and would be more efficient and likely more effective in regulating such entities.

RECOMMENDATION:

Consider revising the approach to regulating industrial and commercial facilities from MS4 to SWRCB.

146.6 → **5) COMMENT: E.11.b. Industrial/Commercial Storm Water BMPs**

Section E.11.b. sets out BMP requirements for industrial facilities, including operating and closed landfills.

DISCUSSION: BMPs for Landfills Undergoing Closure or in Long-Term Monitoring Should be Coordinated with Overseeing Agency.

Landfills undergoing closure or closed landfills that are in a long-term monitoring program under oversight from a governmental agency (RWQCB or CalRecycle), are unique and differ from other commercial and industrial facilities in that all closure and monitoring activities must be evaluated for protectiveness of human health and the environment and documented in a closure plan approved by an overseeing agency. Any additional BMPs required by an MS4 should be consistent with the closure plan or long-term O&M plan approved by the lead agency.

RECOMMENDATION:

Implementation of BMPs at landfills undergoing closure, closed landfills, or sites undergoing active soil and ground water remediation subject to long-term monitoring with oversight from a governmental agency should be coordinated with the lead agency in charge of the closure.

146.7 → **6) COMMENT: E.12.b.3 Water Quality Standards**

Section E.12.b.3 states that new development or redevelopment, other development and redevelopment, and road projects shall be required to "capture, infiltrate, and evapotranspire the runoff from the 85th percentile storm event to the maximum extent practicable. Runoff from the 85th percentile storm that cannot be captured, infiltrated, and evapotranspired must be treated via a flow-

through device designed to treat runoff at a flow rate produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths."

a. Enhanced Ground Water Infiltration May Mobilize Anthropogenic and Geogenic Constituents and Impact Ground Water Resources

DISCUSSION:

Weiss submits that the proposed requirements to infiltrate storm water are too prescriptive and fail to adequately take into account the potential for ground water contamination that may result from infiltration under certain conditions.

In evaluating the potential for infiltration to cause ground water contamination, the EPA in 1994 determined that "site specific conditions must be evaluated when determining the most appropriate BMPs" (Potential Groundwater Contamination from Intentional and Non-Intentional Stormwater Infiltration, Report No. EPA/600/R-94/051, USEPA [1994]). Weiss agrees that site specific conditions must be evaluated to ensure enhanced infiltration does not negatively impact ground water resources.

In certain cases, storm water infiltration may mobilize anthropogenic contaminants and/or otherwise stable geogenic compounds present in the vadose zone. Investigation work performed at a California Superfund Site in the Central Valley suggests that naturally occurring chromium in soil is oxidizing trivalent chromium to the more toxic hexavalent form. The mechanism for this process is currently not well understood. Our analysis at this site suggests that infiltration of storm water runoff, particularly in areas with agricultural activities, may support the oxidation of trivalent chromium and facilitate the migration of hexavalent chromium to ground water. Geochemical changes induced by infiltration of storm water runoff that comes in contact with pollutants, such as organic material, fertilizers, or animal waste, are similarly expected to mobilize other geogenic metals, including arsenic, nickel, and iron, as well as anthropogenic contaminants, depending on site-specific conditions.

RECOMMENDATION:

Enhanced infiltration should only be implemented after completing an evaluation of site-specific conditions, including the potential for mobilizing soil contaminants or geogenic constituents into the ground water. In particular, the Watershed Analysis required in section E.12.b.1 should require evaluation of the presence of geogenic materials that may potential impact ground water quality if mobilized by the concentrated infiltration of storm water.

146.8 → b. Cap-in-Place Remedies at Remediation Sites Should be Explicitly Exempt from Infiltration

DISCUSSION:

Closure and remediation of landfills and other buried waste pits often includes the construction of a low permeability cap and drainage control measures to reduce leachate formation and the contamination of ground water. Some of these capped areas may be used as parking lots or other new developments. As parking lots and developments are included in the list of regulated special projects [E.12.b.3.i.(a)(1)], the infiltration requirement would apply. Storm water runoff quality from the capped area is usually high due to the import of clean soil for the cap and the construction of an engineered drainage system. However, the storm water runoff volumes will generally exceed the pre-construction baseline quantities.

RECOMMENDATION:

An exemption should be included in the MS4 permit for post-construction Water Quality Runoff Standards for engineered caps built at remediation sites under the direction of regulatory agencies duly authorized to direct cleanup of contaminated sites (e.g. Regional Water Boards, Cal EPA Department of Toxic Substance Control, or Local Oversight Programs administered in accordance with Cal EPA requirements.)

CLOSING

Weiss Associates appreciates the opportunity to submit these comments. We welcome the opportunity to discuss these comments with the Board or its staff and can be reached at 510-450-6000.

Sincerely,
Weiss Associates

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