

## Public Works Memorandum re Post-Construction Best Management Practices

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**Issue:** Whether the City of Lincoln is required by federal and state law to *implement* a Post-Construction BMP program.

**Short Answer:** Pursuant to the 2008 MS4 Permit, the City is required to “finalize recommendations” for post-construction best management practices by August 2012. The NDEQ has expressed that in the next permit cycle (2012-2017), the City will be required to “implement and enforce” a post-construction program.

**Rules:** Federal Clean Water Act, 33 U.S.C. §1251 *et seq.* (as amended); 40 C.F.R. §122.26 regulating storm water discharges (applicable to State NPDES programs); Nebraska Environmental Protection Act, Neb. Rev. Stat. § 81- 1501 *et seq.* (as amended); Nebraska Administrative Code, Title 119 (as amended).

**Analysis:** The Federal Clean Water Act (CWA) provides that the discharge of any pollutant by any person shall be unlawful without a permit. 33 USC §1311(a). As such, 33 USC §1342(p) requires municipal separate storm sewers systems (MS4s) to be permitted under the National Pollutant Discharge Elimination System (NPDES) of the CWA.

33 USC § 1342(p)(3)(B) states in pertinent part:

Permits for discharges from municipal storm sewers . . . (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and (iii) shall require controls to reduce the discharge of pollutants *to the maximum extent practicable*, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

See *also*, 40 CFR §122.26(a)(3) (specifying that NPDES permits must be obtained for all discharges from a municipal separate storm sewer).

The CWA defines an MS4 to mean “a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (i) owned or operated by a [city] having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes . . . (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 POTW.” Section 122.26(b)(8). In addition to requiring that the City obtain an NPDES permit for discharges *from* the MS4, the CWA also mandates that the City regulate discharges *into* the MS4, such as discharges associated with construction activity. Section 122.26 (b)(14)(x).

At the state level, the Nebraska Environmental Protection Act and Title 119 of the Nebraska Administrative Code govern all discharges from the City’s MS4 system to waters of the State, “including any MS4 discharges that may reach waters of the State through intermediate drainage ways or conduits.” See Attached NPDES Permit No. NE0133671 dated June 16, 2008. Part I.B.3 of the Permit authorizes point-source discharges from the MS4 that are associated with construction activity, as defined in 40 CFR §122.26(b)(14)(x), as long as such activity is authorized under a separate and

distinct NPDES permit. Both the Federal Regulations and State Permit require the City to control the contribution of pollutants and the quality of stormwater discharged to the MS4 from sites of industrial and construction activity by statute, ordinance or contract. 40 CFR §122.26(d)(ii); NPDES MS4 Permit, Part II.A. Legal Authority, p. 4. Federal and state law also specify that the City: (1) control discharge of spills, dumping or disposal of materials other than stormwater into the MS4; (2) require compliance with conditions in ordinances, permits, contracts or orders; (3) carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with the conditions of the permit; and (4) enforce compliance as necessary. *Id.*

As part of the EPA's Stormwater Final Rule, the City was required to implement six minimum measures to manage stormwater discharges and incorporate such measures into its MS4 Permit. Those measures are: (1) Public Education and Outreach; (2) Public Participation and Involvement; (3) Illicit Discharge Detection and Elimination; (4) Construction Site Runoff Control; (5) Post-Construction Runoff Control; and (6) Pollution Prevention and Good Housekeeping. At that time, the Watershed Management Division of Public Works (Watershed) had already accomplished goals (1), (2) and (6), but was lacking a robust and institutionalized Illicit Discharge Program, Construction Site Runoff Control Program and Post-Construction Runoff Control Program. Therefore, Watershed formed a work group that consisted of interested stakeholders from the community (builders, developers, environmentalists) to formulate an ordinance for the Regulation of Stormwater that entered the City's MS4 System. Lincoln Municipal Code Title 28 – *Stormwater Quality and Erosion and Sediment Control*, which includes Chapter 28.01 – *Regulations for Construction Site Discharges*

and Chapter 28.02 *Regulations for Illicit Discharges*, was successfully adopted by the City Council in 2007.

However, with respect to meeting the Post-Construction Runoff Control measure, the State allowed the City additional time to “finalize recommendations” regarding post-construction Best Management Practices (BMPs). The 2008 MS4 permit stipulated that the City accomplish this goal by Year 5 of the permit period, or August 2012. However, in a 2007 email from EPA to the NDEQ, Mark Matthews of EPA Region VII commented that the City needed “to follow the language of the regulations” to actually *implement and enforce* a post-construction program; not just finalize recommendations for post-construction. Watershed anticipates that in the City’s next permit cycle (2012-2017), EPA and NDEQ will require the City to utilize the 2012 recommendations to establish a post-construction program that includes compliance and enforcement.

A Post-Construction Program must aim to reduce pollutants in post-construction runoff to the City’s MS4 from new development and redevelopment projects. EPA guidance specifies that an MS4 operator must: “(1) develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs); (2) have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law; (3) ensure adequate long-term operation and maintenance of controls; and (4) determine the appropriate best management practices and measurable goals for this minimum control measure.” Stormwater Phase II Final Rule, Fact Sheet 2.7, January 2000 (revised December 2005).

The EPA Final Rule also articulates the importance of regulating post-construction runoff entering the storm drain system.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in stormwater runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g. nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces (e.g. parking lots, driveways and rooftops) interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

Stormwater Phase II Final Rule, Fact Sheet 2.7, January 2000 (revised December 2005).

The types of Post-Construction Best Management Practices encouraged by EPA include, but are not limited to: (1) planning procedures in master plans, comprehensive plans, and zoning ordinances that promote improved water quality and guide the growth of a community away from sensitive areas to areas that can better support development without compromising water quality; (2) site-based BMPs such as buffer strip and riparian zone preservation, conservation easements, and minimizing disturbance and imperviousness of open space; (3) stormwater retention and/or detention BMPs that collect runoff in wet ponds, dry basins, or multi-chamber catch basins and slowly releases it to receiving waters or drainage systems; (4) infiltration BMPs designed to facilitate the percolation of

runoff through the soil to groundwater such as infiltration basins and trenches, dry wells, and porous pavement; (5) vegetative BMPs or landscaping features that maintain natural site hydrology, promote healthier habitats, and increase aesthetic appeal such as, bio-swales, filter strips, artificial wetlands and rain gardens. These are examples of “softer” stormwater conveyance systems and approaches that aim to increase infiltration, decrease volume and velocity of runoff, as well as, decrease pollutant loads into the City’s MS4. *Id.*

**Conclusion:** The federal and state regulations governing stormwater discharges clearly require that the City adopt and enforce a Post-Construction Program as part of its MS4 operations. The current permit states that the City must “finalize recommendations” for post-construction best management practices by August 2012. Inevitably, EPA and the NDEQ will require the City to take the next logical step under the law to *implement and enforce* a post-construction program based on such recommendations.