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COMMERCIAL REAL ESTATE
DEVELOPMENT ASSOCIATION
NEW JERSEY CHAPTER

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Via e-mail (sean.moriarty@dep.nj.gov)

Re: New Jersey Stormwater Management Rules, N.J.A.C. 7:8
PETITION FOR RULEMAKING

Dear Mr. Moriarty:

NAIOP New Jersey, the Commercial Real Estate Development Association, represents the interests of the commercial and industrial real estate community in New Jersey. Our 830 members support thousands of jobs throughout the State and are committed to environmentally sustainable and responsible development. That being said, the Department of Environmental Protection has adopted regulations at N.J.A.C. 7:8 (commonly known as the "Green Infrastructure" or "GI" requirements) which, although well intended, are having unintended consequences and are, in some cases, not well crafted. Because the Department has not yet responded to the comments and concerns of the regulated community, we are filing this Petition for Rulemaking pursuant to N.J.S.A. 52:14B-4(f). Our requested modifications to the Rules are as follows:

1. LINERS/ALTERNATIVE BMP APPROVAL

The regulations, at NJAC 7:8-5.2(g), require "alternative BMP approval" for the use of liners below stormwater features, which are often required for environmentally contaminated sites and sites with groundwater/stormwater feature separation issues. The DEP response to such requests has been varied and inconsistent. It has often been suggested to import fill and raise sites, which is costly, requires a lot of resources (soil sourcing/movement, additional trucking, and equipment to place), and may pose other challenges for development (steeper driveways, ADA compliance, seepage through retaining structures and slopes, etc.).

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We suggest the regulations be clarified to reflect:

- If a site is contaminated and stormwater features are required to have liners per the requirements of the Site Remediation Program, a liner should not be a trigger for an alternate BMP approval. The DEP should instead simply request calculations and details to ensure that the liner, underdrain, and liner-cover system have been properly designed to resist buoyancy.

- Provided that a site meets its groundwater recharge requirement, the use of liners and underdrains on water quality and quantity basins where the minimum groundwater separation cannot be met should not be a trigger for an alternate BMP approval.

2. BASIN SIZE CAP BASED ON CONTRIBUTING DRAINAGE AREA

For large warehouse/distribution facilities, the biggest GI compliance hurdle is the 2.5-acre limit on basin watersheds (7:8-5.3(b)). The 2.5- acre limit is intended to result in multiple basins scattered throughout a site, creating a more natural distribution of recharge areas. The problem is that large warehouse/distribution facilities have expansive roof and loading areas that cannot be reasonably divided to create a scattered distribution of basins. To comply with the GI rules, the basins are clustered in groups along the perimeter of the site, creating the effect (from a recharge perspective) of one large basin. Since the regulations require the basins to be hydraulically independent, adjacent basins are separated by side walls and each basin has its own outfall structure and outlet pipes. Each cluster of basins requires far more earthwork and material than a single basin and does not have a better distribution of recharge than a single basin. Since the 2.5-acre watershed limit is not practical for large warehouse/distribution facilities, the limit should be increased.

On industrial sites such as large warehouses, distribution centers, e-commerce centers, the Rules should be modified to provide that the size of stormwater basins will be controlled not by the contributing drainage area, but rather by an approved "loading ratio". This change will eliminate the 2.5-acre drainage area cap found at N.J.A.C. 7:8-5.3(b). This is a far more workable method and achieves the same goal. This change would also eliminate the need for additional material needed to construct berms around numerous smaller basins. **Note**: We understand that the City of Philadelphia uses a 16:1 loading ratio of impervious coverage to basin size, which doubles the limit and is more reasonable.

3. SEPARATION OF STORMWATER FEATURES

The regulations, at NJAC 7:8-5.3, require that basins be broken down into smaller features, but do not specify a minimum horizontal separation distance between those features. The DEP has frequently commented on applications that small-scale green infrastructure features are too close together and need to be spread further apart on the site. The absence of a standard with regard to a separation requirement is problematic.

We suggest the regulations be clarified to reflect:

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- A mounding analysis, showing no impacts to proximate features, may be provided as justification for the separation of features; in no case shall features be closer than 10 ft to one another, as measured from the top of the feature.

- Large-scale (quantity only) BMPs may overlap with small-scale green infrastructure features, provided any applicable recharge and water quality requirements of small-scale green infrastructure features and the above separation requirement is met. An overlap of small-scale and large-scale features would allow for a more natural method to manage runoff from a site (close to the source), reduce the reliance on control structures and piped conveyance between management features, and still meet the intent of the GI requirements.

4. TESTING FOR GROUNDWATER RECHARGE/SOIL CLASSIFICATIONS

There are many challenges with the prescribed testing requirements for groundwater recharge calculations and seasonal high groundwater determination found in the New Jersey Stormwater Best Management Practices (BMP) Manual referenced at NJAC 7:8-5.7. The more notable challenges are:

- The timing of when the testing can be done (January to April). If testing is performed outside of that window, the applicant is reliant on finding mottling (soil staining indicative of soils that are frequently inundated) as evidence of seasonally high groundwater. This can delay a project's design for months to align with a limited window, which has challenging weather and puts a strain on availability of resources to perform and oversee the field testing.

- The groundwater recharge calculation is based on the published soil data from the Web Soil Survey (website). Field testing often finds that infiltration rates in supposedly highly permeable soil types (Hydrologic Soil Groups (HSG) A and B soils) do not meet the minimum requirement for recharge design (0.5 inch/hr for design from a minimum field measurement of 1 inch/hr).

The regulations only allow an adjustment of the HSG in the recharge calculation if the field measurement is found to be 0.2 in/hr or less, leaving soils that have a field infiltration rate of between 0.2 in/hr and 1 in/hr in a no-man's land of "not good enough for recharge, not poorly-infiltrating enough to reclassify the soil to be HSG D/non-infiltrating." In this case, the DEP has suggested a solution to meet the recharge requirement is to excavate the non-draining soils from below the proposed recharge features on a site and replace them with well-draining sand. Aside from the cost to source, import and place this sand, and excavate and place the non-draining soil elsewhere on site or truck it offsite, this solution essentially creates a bathtub of permeable sand surrounded by naturally impermeable soils. This is not a desirable result. The regulations allow for additional field testing to reclassify the HSG of a soil group, but the amount of additional testing can easily be several times greater than the testing required for recharge design. Essentially, a significant amount of site-specific testing is required to disprove the accuracy of a soil survey/HSG mapping, which was done at a very high/regional level and with generalized soil characteristics that are not site specific.

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- The amount of testing, coupled with the highly variable nature of soils, often results in multiple rounds of testing with mixed results. Some sites with sandy-silt materials have had infiltration tests performed 10 to 20 feet apart, at the same elevation in the same strata of material, result in a passing test (>1 in/hr) and a failed pre-soak attempt.

- There is no reliable method to perform a 'deep' infiltration test (i.e. next to a road) without a multi-benched test pit and/or support of excavation. The cased borehole test is suggested however the field results need to be on the order of 75 in/hr to get a minimum design rate (0.5 in/hr) and be considered passing.

The requirements described above cause significant uncertainty, expense, and delays to the orderly design and permitting of a project.

We suggest the regulations be clarified to reflect:

- Geotechnical engineers may provide a professional recommendation on the depth to seasonal groundwater if/when tests are performed outside of the January-April window and no mottling is found.

- Infiltration tests less than 1 in/hr in the field should be eligible for use in reclassifying a soil's HSG value for purposes of recharge calculations or a lower design infiltration rate should be permitted (less than 0.5 in/hr) and "no-man's land" between a passing infiltration rate and the rate to reclassify the HSG eliminated.
- Upon completion of infiltration tests that fail, the geotechnical engineer may provide a professional recommendation that based on this information and additional tests performed, the soils within the site or a portion of the site are sufficiently homogenous in nature to conclude that further infiltration tests in the soils would result in similar (failing) results and the HSG may be re-classified.

5. EXEMPT PROJECTS

The list of exempted projects included in 7:8-1.6(b) is narrow and should be expanded to include sites with approved regional stormwater management systems, even if site plan approval is still required for individual sites. In the past, municipalities encouraged developers to construct regional stormwater basins that accommodated multiple properties and future development. The GI regulations do not allow this infrastructure to be used for newly approved projects, because it does not comply with new GI regulations. The fact that the NJDEP regularly changes their rules without reasonable exemptions discourages long-term planning and infrastructure investment by developers.

6. WAIVERS/VARIANCES

Section 7:8-4.6 contains provisions for waivers/variances from GI rules but requires offsite mitigation. The mitigation must be performed in accordance with a municipal mitigation plan and must offset any deficits

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created by the granting of the waiver/variance. A warranted waiver/variance would not be permitted if the municipality does not have a mitigation plan or does not have a plan with a project that has benefit that is consistent with the deficit associated with the waiver/variance. This is all very subjective and creates the burden of a second set of required approvals and permits. The requirement of mitigation should be eliminated. (Additionally, this rule is inconsistent with land use law which allows municipalities to grant hardship variances without mitigation.)

7. **SMALL SCALE BIORETENTION SYSTEMS – GI BMP MANUAL**

Chapter 9.7 of the GI BMP manual requires soil at the bottom of bioretention basins to have 85-95% sand (with no more than 25% of the sand as fine or very fine sand), no more than 15% silt and clay (with no more than 2-5% clay) and an organic content of 3-7%. This requirement is so specific that few sites will be able to use onsite soil. Large projects will need to import hundreds of truckloads of mined and enhanced soil to meet this requirement. The environmental impact of importing mined and altered soil from offsite locations will likely greatly outweigh the use of onsite soil that deviates from the specifications. These soil specifications should be waived when onsite soil is used.

8. **GENERAL**

It appears that the NJDEP did not fully assess the overall environment impacts of complying with the current GI rules. GI systems require significantly more materials (plastic pipes, concrete headwalls, outlets, and manholes, etc.), earthwork, and testing than traditional stormwater management systems. The soil testing requires multiple mobilizations of large diesel-powered drill rigs and extensive field and laboratory testing. The basin construction requires extensive earthwork by diesel-powered equipment that can go on for months. Most sites require special basin bottom soil that is imported from other locations. The material is mined and processed off-site. Hundreds of truckloads are often required. The entire process generates significant amounts of dust and diesel exhaust that can travel miles. Significant amounts of energy and materials are expended. It is very possible that the GI impacts to air quality alone outweigh any stormwater quality benefits. (This is particularly impactful since everyone benefits from cleaner air to breathe, but most people are not directly impacted by lower stormwater quality.)

We look forward to hearing from you within 60 days of the receipt of this Petition, as required by the Administrative Procedure Act.

Sincerely,

Michael McGuiness
Chief Executive Officer