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September 27, 2017

Attention: Jesse Maines
City of Alexandria
301 King Street
City Hall 3000
Alexandria, VA 22314

Subject: SWEMA's Response to "Proposed Use of Structural Stormwater BMPs in Alexandria" document

Mr. Maines,

The Stormwater Equipment Manufacturer's Association (SWEMA) represents a diverse group of stormwater solutions providers as well as supporting associate and professional members. Due to the diverse perspective and expertise of its membership, SWEMA is uniquely qualified to provide a professional prospective on the "Proposed Use of Structural Stormwater BMPs in Alexandria" document that is currently being considered for implementation within the jurisdiction of Alexandria, Virginia.

SWEMA believes that all Stormwater BMPs, manufactured treatment devices and generic green infrastructure BMPs, have appropriate and suitable applications. To remove one sector of BMPs limits a designer's ability to provide sound engineering solutions to solve complex environmental conditions. In the past, the City of Alexandria has been one of the most innovative jurisdictions in the country by promoting the use of sand filters and various underground stormwater devices. We commend the City of Alexandria for its unique history with respect to advancing stormwater management (SWM) both regionally and nationally.

SWEMA would assert that the incurred cost and number of MTDs that the City of Alexandria and state of Virginia have implemented and installed is significant. These efforts should be considered for inclusion/recognition with respect to the EPA Chesapeake Bay Program and any credit program with respect to MS4 permitting or TMDL allocations. To receive no credit is counterproductive and does a disservice to the work that has been done to date advancing stormwater management.

It is true that the EPA's Chesapeake Bay Model does not give removal credits for all Stormwater BMPs. It is ironic that the State of Virginia has assigned removal credits for manufactured treatment devices (MTDs), but that the EPA has decided not to recognize these credits in the Bay model or TMDL calculations. Credits have been assigned for other innovative practices that do not reduce runoff (e.g., street sweeping). SWEMA will continue to pursue the future adoption of MTD credit since they offer proven pollutant removal efficiencies for both the State and National levels. We would encourage all Virginia jurisdictions to pursue the same course of

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action and influence the USEPA Bay Program to address this shortcoming in their modeling and pollution reduction credits.

SWEMA would like the opportunity to address some of the statements listed in the referenced document. When Low Impact Development (LID) or Green Infrastructure (GI) has an infiltration component incorporated in its design it does offer a valuable runoff reduction credit. Unfortunately, in both northern Virginia and Virginia as a whole, we have seen the majority of LID/GI infrastructure installed with underdrains built into their function. They do not account for the use of infiltration due to poorer soil types (i.e., C and D soils) and are limited by various codes and regulations in existence by local jurisdictions that require underdrains for most LID techniques. When these types of practices are not using infiltration they are acting similarly to MTDs that don't have infiltration components and are not impacting runoff reduction.
We can discuss the merits of O&M costs, installation costs, etc., between LID/GI and MTDs, but existing data is often dependent on the site and situation. It is not uniform. We believe that maintenance costs for both stormwater management techniques (GI and MTDs) fluctuate depending on the given project. Sometimes it even depends on the effort and validity of the data being entered and who is collecting that data.

When all BMPs go into service they should be at 100% performance on day one. All BMPs degrade or drop in removal efficiencies over time and as they treat stormwater. When a MTD is maintained, it is generally accepted that it goes back to its top performance/removal rate (i.e., as if was on the first day of service). Conversely, while GI does have some "good housekeeping maintenance performed on a periodic basis, it is rarely totally replaced or remediated. Even with this maintenance it would be hard to argue that the system would be back to its original performance like it was on the first day it was brought into service. SWEMA believes that future monitoring will show that unless the GI is totally remediated within a given period (e.g., 7-10 years), its removal efficiencies will not be close to their published and accepted removal rates used in the Bay Program.

SWEMA believes that a "treatment train" approach is typically the best approach to achieve the pollutant goals needed to improve our receiving waters. No one technique can handle it all. Merging of GI and MTDs can and does give a better performance than just using one SWM technique/sector. Additionally, with increasing land costs, most developers and engineers are looking for underground solutions to save and use valuable lands for multi-use conditions (e.g., parking as well as SWM). When GI is the only option, many projects will be deemed uneconomical and the return on investment may not warrant a developer continuing with a project. Restrictive development options have proven to promote urban sprawl and cause development in newer "greenfield" locations further outside a geographical urban base.

We believe that the City of Alexandria as well as the State of Virginia should not take such limiting steps with its development. SWEMA is up to the challenge to address the shortcomings in the EPA's Chesapeake Bay program/model. We ask that the City of Alexandria join our effort and not step back in its stormwater management approach. Thank you for your consideration

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on this subject and we would welcome further discussions on the topic with all appropriate parties (City of Alexandria, State of Virginia, USEPA-Bay program).

Respectfully submitted,

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Government Affairs Regulatory Committee (GARC) Member, SWEMA

Derek Berg, President SWEMA