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February 21, 2020

Luke Martinkosky
BMP Inspector
Capitol Region Watershed District

RE: MTD Research Enhanced Filtration Credit Draft for Comment

Dear Mr. Martinkosky,

The Stormwater Equipment Manufacturers Association (SWEMA) represents stormwater technology manufacturers as well as affiliated associate and professional members. Our members strongly support stormwater management strategies and regulations that incorporate advances in stormwater science, encourage innovation, and successfully protect and restore receiving waters at an affordable cost for our communities. We also represent a great deal of expertise and experience in stormwater treatment.

Our Government Affairs and Regulations Committee (GARC) has reviewed the MTD Research Enhanced Filtration Credit Draft for Comment prepared by Wenck & Associates and we would like to ask some questions and make some comments and recommendations.

Our first comment is that the Technical Memo is very thorough and well thought out. Many issues that get missed when considering stormwater rules have already been addressed. Even so, there are a few technical issues we would like to address. The first one is the phosphorous (P) removal credit given to iron enhanced sand filters (IESF). While the memo provides data for the performance of MTDs there is no data for IESF. This makes it impossible to judge if the treatment solutions are being evaluated on a similar basis.

We would like to confirm that this memo means the state will allow for materials other than iron to be given credits for phosphorous removal. One commonly used, and highly effective, compound is alumina. Many other compounds that perhaps contain iron or alumina are also very effective and there are numerous non-ferrous materials with at least some ability to capture dissolved phosphorous. Additionally, a more inclusive requirement would allow for future innovative solutions that prove effective. Of course the inclusion of any new media or material should be supported by robust performance data.



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Finally, we will comment on the use of the TAPE average phosphorous removal efficiencies as opposed to the bootstrap efficiencies. The reason the data is bootstrapped is that the distribution is highly skewed and classic statistics only apply to normal distributions. A non-parametric analysis is more appropriate for skewed distribution. This is a common issue with field data where smaller storms tend to dominate the dataset. As a result, the classic mean is usually not a statistically valid parameter for field data. There is no harm in adopting a conservative sizing methodology, but it is better to use a valid number and build in a deliberate safety factor than to use a number which is just conservative to an unknown degree. Even if the bootstrap value is discounted to the mean value at least there is a line of reasoning that can be followed.

The remaining comments are part technical and part policy. With respect to a maintenance requirement based on a 48-hour drawdown time, it makes sense in principle but could be very difficult in practice. One problem is that it will require up to 2 days of monitoring to confirm if maintenance is required or not and this will discourage maintenance, which is already often lacking. In addition, there is very little data on filters at that state of clogging so it could create instances of unknown behavior towards the end of life of the filter. We expect that the STEPP national BMP verification program currently being developed will address maintenance, in the meantime we suggest a different metric, one that is easier to track and manage. Allowing the storage volume to be 50% full is reasonable while we await better data.

Finally, please clarify that the owner is responsible for financial surety. As equipment vendors we have no control over maintenance, and we do not have the capacity to enforce maintenance contracts. Other than those vendors who offer one-year maintenance as part of a product sale, BMP maintenance is ultimately the responsibility of the property owner, as it would be if they choose to install a public domain BMP.

We thank you for establishing a route for including MTDs for use in the Capitol Region Watershed District. While the technical memo considers several MTDs, there are many more that have received GULDs from Ecology. We'd like to see a process that allows other MTDs to be added to Table 5 included here. Please consider adding a methodology to ensure a pathway to approval and inclusion for other MTDs.

Sincerely,



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