



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Molly Joseph Ward
Secretary of Natural Resources

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Director

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August 18, 2014

Mr. Mark Miller, P.G.
Research Scientist
AquaShield™, Inc
2733 Kanasita Drive, Suite 111
Chattanooga, Tennessee 37343

Re: Assignment of Percent Removal Efficiencies for Total Phosphorus

Dear Mr. Miller,

Thank you for your submittal of the Manufactured Treatment Device (MTD) Registration Form and supporting documentation for the Aqua-Filter®. The MTD information provided was reviewed for the purpose of assigning a pollutant removal efficiency for total phosphorus (TP). This review was performed in accordance with the Guidance Memo Number 14-2009 titled "Interim Use of Stormwater Manufactured Treatment Devices (MTDs) to meet the new Virginia Stormwater Management Program (VSMP) Technical Criteria, Part IIB Water Quality Design Requirements". The review process included the analysis of the documents submitted and any other publically available reports.

In addition to the registration form, a performance study was also submitted for review. This study is in support of the approval letter from the State of New Jersey that certifies Aqua-Filter® has a removal rate of 80% total suspended solids. This rating is based on a treatment train approach which utilizes a pre-treatment hydrodynamic separator (Aqua-Swirl® Stormwater Treatment System) upstream of the filtration chamber. The combination of the hydrodynamic separator located upstream of the filtration chamber defines the Aqua-Filter™ Stormwater Filtration System. The assigned percent TP removal efficiency of 40% represents that both units are used in this configuration. This assignment is consistent with Guidance Memo Number 14-2009. If in the future TP data is submitted, the Department will review and determine if an increase in the removal efficiency is justifiable to the maximum allowable removal efficiency of 50%. As stated in the guidance memo, this information will be posted on the Virginia Stormwater Clearinghouse website. This MTD and the assigned removal efficiency can be manually added into Virginia Runoff Reduction spreadsheet to demonstrate compliance with Runoff Reduction Method.

If you have any questions regarding this information, please contact Robert E. Cooper, P.E. at (804) 698-4033 or e-mail at Robert.Cooper@deq.virginia.gov.

Sincerely;

A handwritten signature in blue ink that reads "Fred K. Cunningham".

Fred K. Cunningham

Director

Office of Water Permits