



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

Fax: 804-698-4019 - TDD (804) 698-4021

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Molly Joseph Ward  
Secretary of Natural Resources

David K. Paylor  
Director

(804) 698-4020  
1-800-592-5482

August 13, 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-Swirl®. 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-Swirl® has a removal rate of 50% total suspended solids. Consistent with Guidance Memo Number 14-2009, Aqua-Swirl® is receiving an event mean concentration percent TP removal efficiency of 20%. 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](mailto: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