

ATTACHMENT 2



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHILIP D. MURPHY
Governor

DIVISION OF WATERSHED PROTECTION AND RESTORATION
BUREAU OF NJPDES STORMWATER PERMITTING & WATER QUALITY MANAGEMENT

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January 6, 2022

W. Scott Gorneau, P.E.
Vice President
Convergent Water Technologies
13810 Hollister Road, Suite 100
Houston, TX 77086

Re: MTD Lab Certification
FocalPoint High Performance Modular Biofiltration System
Offline Installation

TSS Removal Rate 80%

Dear Mr. Gorneau:

The Stormwater Management rules under N.J.A.C. 7:8-5.2(f) and 5.2(j) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by the New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP). Convergent Water Technologies has requested a Laboratory Certification for the FocalPoint High Performance Modular Biofiltration System (FocalPoint HPMBS).

The project falls under the "Procedure for Obtaining Verification of a Stormwater Manufactured Treatment Device from New Jersey Corporation for Advance Technology" dated January 25, 2013. The applicable protocol is the "New Jersey Department of Environmental Protection Laboratory Protocol to Assess Total Suspended Solids Removal by a Filtration Manufactured Treatment Device" dated January 25, 2013.

NJCAT verification documents submitted to the NJDEP indicate that the requirements of the aforementioned protocol have been met or exceeded. The NJCAT letter also included a recommended certification TSS removal rate and the required maintenance plan. The NJCAT Verification Report with the Verification Appendix (dated November 2021) for this device is published online at <http://www.njcat.org/verification-process/technology-verification-database.html>.

The NJDEP certifies the use of the FocalPoint HPMBs by Convergent Water Technologies at a TSS removal rate of 80% when designed, operated, and maintained in accordance with the information provided in the Verification Appendix and the following conditions:

1. The maximum treatment flow rate (MTFR) for the manufactured treatment device (MTD) is calculated using the New Jersey Water Quality Design Storm (1.25 inches in 2 hrs) in N.J.A.C. 7:8-5.5. The MTFR is calculated based on a verified loading rate of 1.6 gpm/ft² of effective filtration treatment area.
2. The FocalPoint HPMBs shall be installed using the same configuration reviewed by NJCAT, and sized in accordance with the criteria specified in item 7 below.
3. This device cannot be used in series with another MTD or a media filter (such as a sand filter) to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.
4. Additional design criteria for MTDs can be found in Chapter 9.5 of the New Jersey Stormwater Best Management Practices (NJ Stormwater BMP) Manual, which can be found online at www.njstormwater.org.
5. The maintenance plan for a site using this device shall incorporate, at a minimum, the maintenance requirements for the FocalPoint HPMBs. A copy of the maintenance plan is attached to this certification. However, it is recommended to review the maintenance website at <https://convergewater.wpengine.com/wp-content/uploads/2021/06/focalpoint-operations-maintenance-guide.pdf> for any changes to the maintenance requirements.
6. For an MTD to be considered “green infrastructure” in accordance with the March 2, 2020 amendments to the Stormwater Management rules at N.J.A.C. 7:8, the MTD must meet the GI definition noted at amended N.J.A.C. 7:8-1.2. Specifically, the MTD shall (1) infiltrate into the subsoil; and/or (2) treat stormwater runoff through filtration by vegetation or soil. Any configuration that uses a bio-filtration media and can be configured "above ground" and incorporate a tree box, planter box, or shrubs, etc., would meet the GI definition. Any MTD with bio-filtration media that would be placed "below ground" as a vault without any vegetation can be considered GI (for NJ purposes) only if the device infiltrates the entire Water Quality Design Storm into the subsoil. Further, the below ground device (vault) would need to meet the NJDEP Stormwater BMP Manual conditions of having the soil below the MTD meet the minimum tested infiltration rate of one inch per hour, have at least two feet of separation from the seasonal high water table, and infiltrate into the subsoil.
7. Sizing Requirement:

The example below demonstrates the sizing procedure for the FocalPoint HPMBs:

Example: A 0.25-acre impervious site is to be treated to 80% TSS removal using an FocalPoint HPMBs. The impervious site runoff (Q) based on the New Jersey Water Quality Design Storm was determined to be 0.79 cfs or 354.58 gpm.

The selection of the appropriate model of an FocalPoint HPMBs is based upon both the maximum inflow drainage area and the MTFR. It is necessary to calculate the required model using both methods and to use the largest model determined by the two methods.

Inflow Drainage Area Evaluation:

The drainage area to the FocalPoint HPMBS in this example is 0.25 acres. Based upon the information in Table 1 below, the FocalPoint HPMBS model FP-42 would be the smallest model able to treat the runoff without exceeding the maximum allowable drainage area of the model selected.

Maximum Treatment Flow Rate (MTFR) Evaluation:

The site runoff (Q) was based on the following:

time of concentration = 10 minutes

i = 3.2 in/hr (page 21, Fig. 5-10 of Chapter 5 of the NJ Stormwater BMP Manual)

c = 0.99 (runoff coefficient for impervious)

$Q = ciA = 0.99 \times 3.2 \times 0.25 = 0.79$ cfs (354.58 gpm)

(Note: 1 cfs = 448.83 gpm)

Given the site runoff is 0.79 cfs and based on Table 1 below, multiple units would be required. For example, two FP-120 FocalPoint HPBMS models could be used to treat the impervious area without exceeding the MTFR of the individual model. The units should be configured such that the flowrate to each unit does not exceed 0.428 cfs and the entire 0.25-acre area is treated.

Example: two FP-120 FocalPoint HPBMS models at 0.428 cfs = 0.856 cfs

The MTFR evaluation results will be used since that method results in the highest minimum configuration determined by the two methods.

The sizing table corresponding to the available system models is noted below. Additional specifications regarding each model can be found in the NJCAT Verification Report in the Verification Appendix under Table A-1.

Table 1. FocalPoint High Performance Modular Biofiltration System Model MTFRs and Maximum Allowable Drainage Area.

FocalPoint HPMBS Model	Filter Bed Area (ft²)	MTFR (cfs)	Maximum Allowable Drainage Area (acres)
FP-20	20	0.071	0.12
FP-30	30	0.107	0.18
FP-42	42	0.150	0.25
FP-50	50	0.178	0.30
FP-55	55	0.196	0.33
FP-70	70	0.249	0.42
FP-80	80	0.285	0.47
FP-83	83	0.297	0.49
FP-90	90	0.321	0.53
FP-100	100	0.356	0.59
FP-120	120	0.428	0.71
FP-140	140	0.499	0.83
FP-160	160	0.570	0.95
FP-166	166	0.592	0.98
FP-220	220	0.784	1.31

Be advised a detailed maintenance plan is mandatory for any project with a Stormwater BMP subject to the Stormwater Management Rules, N.J.A.C. 7:8. The plan must include all of the items identified in the Stormwater Management Rules, N.J.A.C. 7:8-5.8. Such items include, but are not limited to, the list of inspection and maintenance equipment and tools, specific corrective and preventative maintenance tasks, indication of problems in the system, and training of maintenance personnel. Additional information can be found in Chapter 8: Maintenance and Retrofit of Stormwater Management Measures.

If you have any questions regarding the above information, please contact Lisa Schaefer of my office at lisa.schaefer@dep.nj.gov.

Sincerely,

A handwritten signature in blue ink that reads "Gabriel Mahon". The signature is written in a cursive, flowing style.

Gabriel Mahon, Chief
Bureau of NJPDES Stormwater Permitting & Water Quality Management
Division of Watershed Protection and Restoration
New Jersey Department of Environmental Protection

Attachment: Maintenance Plan

cc: Richard Magee, NJCAT